Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

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KUBUNTU 25.10
AND FURNACE REVIEWED

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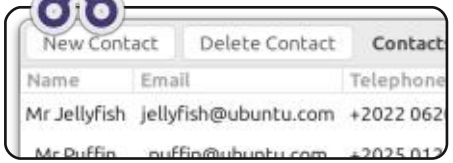
THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

HowTo



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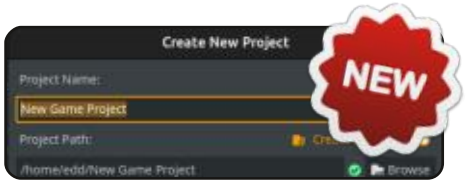

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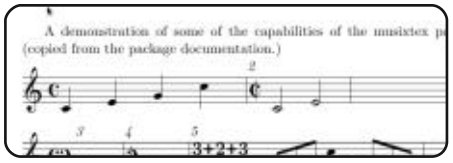

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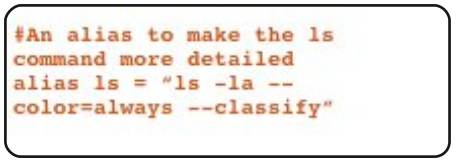

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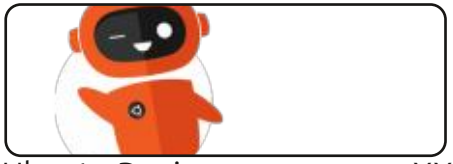
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EDITORIAL

Welcome to the latest issue of Full Circle

We bring you more GTK, Latex, and Inkscape. Not only that, but we bring you the start of a new series on Godot! Godot is a very user-friendly game creation software. We also continue the new release cycle with Kubuntu 25.10.

Apologies for being absent on Telegram, if I've missed your email, or the issues seem a bit sloppy the past month or two. My dad is in hospital and I'm trying to get him home ASAP without having to jailbreak him. If I need a getaway driver I'll let you know...

Remember: the ***Full Circle Weekly News*** is available on ***Spotify*** and ***YouTube***. The more upvotes and reviews you give it on those platforms the more exposure we get. And, we have a Table of Contents which lists every article from every issue of FCM. Huge thanks to ***Paul Romano*** for maintaining: https://goo.gl/tpOKqm and, if you're looking for some help, advice, or just a chinwag: remember that we have a **Telegram** group: https://t.me/joinchat/24ec1oMFO1ZjZDc0. I hope to see you there. Come and say hello.

All the best!
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NEW

Devuan 6.0:

03/11/2025

Devuan 6.0 "Excalibur" is released. It's a fork of Debian GNU/Linux, that ships without the systemd system manager. This new branch is notable for its switch to Debian 13 Trixie. Live builds (1.7 GB) and installation ISO images for the amd64 architecture are available for download. Packages are available for many other architectures too.

The project maintains forks of approximately 400 Debian packages, which have been modified to remove dependencies on systemd, rebranded, or adapted to the specifics of the Devuan infrastructure. Two packages (devuan-baseconf and jenkins-debian-glue-buildenv-devuan) are unique to Devuan and are related to repositories and the build system. Otherwise, Devuan is fully compatible with Debian and can be used as a basis for creating specialized Debian builds without systemd. Devuan-specific packages can be downloaded from the packages.devuan.org repository .

The default desktop is based on Xfce and the Slim display manager. Instead of systemd, the classic SysVinit init system is provided, along with the optional openrc and runit systems. A D-Bus-less option is available, allowing for minimalist desktop configurations based on the blackbox, fluxbox, fvwm, fvwm-crystal, and openbox window managers. Network configuration is provided using a non-systemd NetworkManager configuration tool. Instead of systemd-udev , eudev , a fork of udev from the Gentoo project, is used. Xfce and MATE use consolekit for user session management , while the other desktops use elogind, a non-systemd variant of logind.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://lists.dyne.org/lurker/message/20251102.123902.df70c1e1.en.html

TidesDB 1.0:

03/11/2025

The first stable release of the TidesDB project, a library for storing key/value data, has been published. The project can be used as a standalone engine or embedded into applications. Key features include support for ACID transactions and optimizations for efficient data storage on flash drives and in RAM. The code is written in C and distributed under the MPL 2.0 license. Bindings have been developed for C++, Go, Java, Python, Rust, Lua, and JavaScript.

The LSM-tree (log-structured merge tree) data storage structure ensures high performance not only for reading but also for writing and updating data. Read operations are lock-free, while write operations lock only the column family to which the write is performed. Indexes and Bloom filter-based caching are supported for additional read speed (they allow for set matching, allowing for false positives for missing elements, but excluding the omission of existing elements).

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://github.com/tidesdb/tidesdb/releases/tag/v1.0.0

DistroWatch.com
Put the fun back into computing. Use Linux, BSD.

The ASIO protocol has been open sourced:

04/11/2025

Steinberg, a manufacturer of hardware and software systems for the music industry, has opened the source code for its ASIO (Audio Stream Input/Output) protocol tools and changed the license for the SDK used for developing VST 3 (Virtual Studio Technology) plugins. VST SDK 3.8 has been upgraded to the MIT license (previously, the VST SDK was licensed under the GPLv3 and a commercial license). An open-source version of the ASIO SDK, licensed under the GPLv3, has also been released.

VST 3 technology enables the creation of cross-platform plugins implementing audio effects and virtual musical instruments that can be used across various music production and digital audio processing platforms. VST is currently the most widely used plugin format for audio software and is supported by open-source projects such as OBS Studio, Ardour, and Audacity, among others.

The VST SDK includes an implementation of the VST 3 API , a supporting C++ class library to simplify plugin development, bindings for the AAX (Avid Audio eXtension), AUv3 (Audio Unit v3), and AU (Audio Unit) plugin formats, a set of examples, and the VSTGUI toolkit for using a graphical interface in plugins. In addition to the licensing model change, VST SDK 3.8 is notable for adding experimental support for Wayland on the Linux platform.

The ASIO SDK includes an open implementation of the ASIO (Audio Stream Input/Output) protocol, used for interfacing applications with sound cards. ASIO is designed for use in professional systems for recording and playing audio with low latency, consistent quality, and high bandwidth. The protocol supports features such as variable bit depth , variable sampling rate, multichannel operations, and audio stream synchronization.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://forums.steinberg.net/t/vst-3-8-0-sdk-released/1011988

Debian drops support for the armel and mips64el:

04/11/2025

Debian project developers announced the removal of ports for the mips64el and armel (ARM EABI) architectures from the unstable and experimental repositories. These architectures will not be supported in the next branch of Debian 14. Boards that used the armel architecture include the Raspberry Pi 1, Raspberry Pi Zero, and Raspberry Pi Zero W.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://lists.debian.org/debian-devel-announce/2025/11/msg00001.html

Cozystack 0.37:

05/11/2025

Cozystack, a free PaaS platform built on Kubernetes, is now available in version 0.37. The project aims to provide a ready-to-use platform for hosting providers and a framework for building private and public clouds. The platform installs directly on servers and covers all aspects of infrastructure preparation for delivering managed services. Cozystack allows you to launch and provision Kubernetes clusters, databases, and virtual machines. The platform code is available on GitHub and is distributed under the Apache 2.0 license.

The platform includes an open-source network infrastructure (fabric) based on Kube-OVN and uses Cilium for service mesh organization and MetalLB for service advertising. Storage is implemented on LINSTOR , which offers ZFS as the underlying storage layer and DRBD for replication. A pre-configured monitoring stack based on VictoriaMetrics and Grafana is included. KubeVirt technology is used to launch virtual machines, enabling the launch of classic virtual machines directly within Kubernetes containers and already includes all the necessary integrations with the Cluster API for launching managed Kubernetes clusters within a bare-metal Kubernetes cluster.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://t.me/aenix_io/265

LXQt 2.3.0:

05/11/2025

After six months of development, LXQt 2.3.0 (Qt Lightweight Desktop Environment) has been released. It continues the development of the LXDE and Razor-qt projects. The LXQt interface follows the classic desktop organization but introduces a modern design and techniques that enhance usability. LXQt is positioned as a lightweight, modular, fast, and user-friendly environment that incorporates the best features of LXDE and Razor-qt. The code is hosted on GitHub and is licensed under the GPL 2.0+ and LGPL 2.1+ licenses. Builds are expected for Ubuntu (LXQt is offered by default in Lubuntu).

Noteworthy in the new version :

Wayland protocol support has been improved. The lxqt-wayland-session component, which allows running LXQt with various Wayland compositing managers (LabWC, WayFire, kwin_wayland, Sway, Hyprland, River, and Niri), has been updated with the lxqt-qdbus handler. This handler provides a universal wrapper for various qdbus commands that is independent of the compositing manager. Automatically launched applications are now placed in the correct categories. The global zoom level can now be set only for X11; in Wayland, changing the zoom level should be done using compositing managers or external utilities such as kanshi.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://lxqt-project.org/release/2025/11/05/release-lxqt-2-3-0/

SLES 16:

06/11/2025

SUSE has released SUSE Linux Enterprise Server 16. The SUSE Linux Enterprise 16 branch marks seven years since the release of SUSE 15. SUSE 16 packages are already used as the basis for the community-supported openSUSE Leap 16 distribution. The distribution is free to download and use, but access to updates and fixes is limited to a 60-day trial period. The release is available in builds for the aarch64, ppc64le, s390x, and x86_64 architectures.

The SUSE Linux 16 branch will feature a more predictable and flexible release cycle. Service Pack (SP) updates will be replaced by a system of interim releases (16.1, 16.2, etc.) and Long Term Support (LTS). The total maintenance period for the SUSE Linux 16 branch will be 16 years. A total of seven interim releases are planned—from 16.0 to 16.6—each of which will be published annually in November. Updates for each interim release will be supported for five years: two years of General Support and three years of Extended Support (LTS).

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://www.suse.com/c/blog/

The ROSA Mobile 2.2:

06/11/2025

ROSA has unveiled its mobile operating system, ROSA Mobile 2.2 (ROSA Mobile), adapted for the Russian R-FON smartphone. ROSA Mobile is based on the open-source Plasma Mobile platform, developed by the KDE project. ROSA Mobile features a redesigned interface, a custom icon set and additional apps.

The system environment is compiled from a proprietary package repository. The kwin_wayland composite server is used for graphics output. The platform utilizes the ModemManager telephony stack and the Telepathy communications framework . Mobile applications are based on the Plasma Mobile Gear suite and utilize the Qt library, the Mauikit component set , and the Kirigami framework . Android applications can be run using the Waydroid project .

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://rosa.ru/rosa-predstavila-obnovlenie-rosa-mobail-2-2-s-uluchshennoi-kameroi-uskorennoi-rabotoi/

Firewalld 2.4.0:

07/11/2025

Firewalld 2.4.0 , a dynamically managed firewall built around the nftables and iptables packet filters, has been released. Firewalld

runs as a background process, allowing dynamic packet filter rule changes via D-Bus, without reloading packet filter rules or interrupting established connections. The project is already deployed in many Linux distributions, including RHEL 7+, Fedora 18+, and SUSE/openSUSE 15+. Firewalld is written in Python and licensed under the GPLv2 license.

The firewall is managed using the firewall-cmd utility. When creating rules, it uses service names rather than IP addresses, network interfaces, and port numbers. The firewall-config graphical interface (GTK) and the firewall-applet (Qt) can also be used to change the firewall configuration. Support for managing the firewall via the firewalld D-BUS API is available in projects such as NetworkManager, libvirt, podman, docker, and fail2ban.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://github.com/firewalld/firewalld/releases/tag/v2.4.0

UDisks 2.11.0 with Redesigned ATA SMART Support:

07/11/2025

After two years of development, UDisks 2.11.0 has been released. It includes a system background process, libraries, and tools for accessing and managing disks, storage devices, and related technologies. UDisks provides a D-Bus API for working with disk partitions, configuring MD RAID, working with block devices in a file (loop mounting), manipulating file systems, and more. Additionally, modules are provided for monitoring and managing BTRFS, iSCSI, libStorageManagement, LVM2, and LVM Cache. For example, UDisks is used in GNOME applications for working with GNOME disk partitions and various graphical configuration tools.

Noteworthy in the new version:

Support for ATA SMART technology has been reworked. Drive diagnostics using ATA SMART have been moved to the libblockdev library, which implements two plugins: one based on the libatasmart library (default) and the other based on the smartmontools toolkit (experimental). The code for monitoring drive temperature has been reworked, and an additional layer for checking SMART attributes has been added.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://github.com/storaged-project/udisks/releases/tag/udisks-2.11.0

KDE's memory usage has been reduced by 100 MB:

08/11/2025

The latest KDE weekly development report has been published. The most notable changes being developed for the release of KDE Plasma 6.6, scheduled for February 12th, they include:

Optimizations have been implemented that reduce RAM consumption in KDE Plasma by over 100 MB by unloading unused images generated for desktop wallpapers from memory. The tradeoff for this optimization is the inability to use tiled wallpaper display mode, which is used to recreate the retro look of KDE 1. The functionality for working with tiled wallpapers has been moved from the main image-handling code to a separate "Tiled" plugin.
The "KWin Scripts -> Enable Virtual Desktops Only on Primary" setting has been implemented, allowing windows to be linked to virtual desktops only on the primary display - on secondary displays, windows always remain visible, regardless of the active virtual desktop. A button has been added to the network connection control widget for connecting to a network and obtaining Wi-Fi parameters by scanning a QR code.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://blogs.kde.org/2025/11/08/this-week-in-plasma-virtual-desktops-only-on-the-primary-screen/

IncusOS:

08/11/2025

Stéphane Graber, the Linux Containers project leader, co-creator of the LXC toolchain, member of the Ubuntu Technical

Governing Board and member of the Ubuntu release teams, unveiled a new Linux distribution, IncusOS. IncusOS provides an atomically updated system image for creating servers centrally managed using the Incus toolchain (a fork of LXD). The distribution is developed under the auspices of the Linux Containers project, which is responsible for the development of the LXC and Incus toolchains. The project is written in Go and distributed under the Apache 2.0 license.

System images are available for x86_64 and ARM64 architectures and are based on a stripped-down Debian 13 environment and the Linux kernel from the Zabbly repository, which packages vanilla kernel versions for Debian and Ubuntu, supplemented with patches and configuration changes to optimize container launches in an Incus-based environment. ZFS is used as the file system.

The system environment is stripped down to the bare minimum, containing only the components necessary to run Incus. The environment lacks a command shell and traditional command-line management or remote SSH connections. Instead, all management and configuration operations are performed exclusively through the Incus system's REST API, authenticated by a client TLS certificate or via OIDC (OpenID Connect). All servers are managed centrally via the Operations Center web interface or the Incus CLI interface. Migration Manager is provided for migrating containers and virtual machines from other systems, like VMware vCenter.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://discuss.linuxcontainers.org/t/announcing-incusos/25139

Hyprland 0.52:

09/11/2025

The Hyprland 0.52 compositing server, which uses the Wayland protocol, is now available. The project focuses on tiling windows, but also supports classic free-form window placement, tabbed window grouping, pseudo-tiling mode, and full-screen window expansion. The code is written in C++ and distributed under the BSD license.

Features for creating visually appealing interfaces include gradients in window frames, background blur, animation effects, and shadows. Plugins can be added for expanded functionality, and socket-based IPC is provided for external control. Configuration is handled via a configuration file, with changes updated on the fly without restarting. Other notable features include dynamically created virtual desktops; on-screen layout modes; global hotkey handling; and touchpad/touchscreen gesture control.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://hypr.land/news/update52/

OpenMW 0.50:

09/11/2025

OpenMW 0.50 , a free implementation of the engine for the fantasy role-playing game The Elder Scrolls 3: Morrowind, has been released. Compared to the original engine, OpenMW features a modernized user interface, improved graphics, a native OpenMW-CS editor for creating new games and mods, the Bullet physics simulation engine, support for macOS and Linux, and improved bot behavior.

The project code is written in C++ and distributed under the GPLv3 license. The OpenMW-CS editor and launcher interface uses Qt, while the in-game interface utilizes MyGUI. SDL is used for input devices, and OpenAL is used for audio output. Pre-built binaries are available for Linux (PPA , flatpak), Windows, and MacOS.

https://translate.google.com/website?sl=auto&tl=en&hl=en-US&client=webapp&u=https://openmw.org/2025/openmw-0-50-0-released/

Trinity 14.1.5:

10/11/2025

After six months of development, the Trinity R14.1.5 desktop environment has been released, continuing the development of the KDE 3.5.x and Qt 3 code base. Binary packages will soon be prepared for Ubuntu, Debian, RHEL/CentOS, Fedora,

Arch, openSUSE and other distributions.

Trinity's features include native display management tools, a udev-based hardware layer, a new hardware configuration interface, a switch to the Compton-TDE composite manager (a fork of Compton with TDE extensions), an improved network configurator and user authentication mechanisms. Trinity can be installed and used alongside more recent KDE releases, including the ability to use KDE applications already installed on the system. Trinity also includes features for correctly displaying GTK program interfaces without disrupting the unified design style.

https://www.trinitydesktop.org/newsentry.php?entry%3D2025.11.09

MX Linux 25:

10/11/2025

MX Linux 25, a lightweight distribution created through collaboration between the antiX and ex-MEPIS communities, has been released. The release is based on Debian with improvements from the antiX project and packages from its own repository. The distribution uses the sysVinit init system and its own tools for configuration and deployment. Available for download, are 64-bit builds (x86_64) with the Xfce desktop (2.8 GB), builds with the KDE desktop (3.3 GB), and builds (2.2 GB) with the Fluxbox window manager.

https://mxlinux.org/blog/mx-25-infinity-isos-now-available/

Easyeffects 8.0.0:

10/11/2025

Easyeffects 8.0.0 (formerly known as PulseEffects) has been released. The project develops a collection of plugins for PipeWire, a system service and a graphical interface with an equalizer, spectrum analyzer, and various audio effects, such as limiting maximum volume, reducing dynamic range, leveling volume, filtering out specific frequencies, and eliminating noise. Effects can be configured and linked to individual applications. The project code is written in C++ and is distributed under the GPLv3 license.

https://github.com/wwmm/easyeffects/releases/tag/v8.0.0

KDE Plasma Mobile 6.5:

11/11/2025

The developers of the KDE Plasma Mobile project have released the KDE Plasma 6.5 edition of the desktop environment for mobile devices. Pre-built builds of KDE Plasma Mobile 6.5 are available for download from the postmarketOS distribution's testing repository. You can also try out KDE Plasma Mobile using the Fedora KDE Plasma Mobile Spin build.

The suite includes applications such as KDE Connect for connecting your phone to your desktop, the Okular document viewer, the VVave music player, the Koko and Pix image viewers, the buho note-taking system, the calindori calendar manager, the Index file manager, the Discover application manager, the Spacebar SMS program, the plasma-phonebook address book, the plasma-dialer phone call interface, the plasma-angelfish browser, and the Spectral instant messenger.

https://plasma-mobile.org/2025/11/10/plasma-6-5/

Apache OpenOffice 4.1.16 bugfix:

12/11/2025

Almost two years since the last update, a patch release of Apache OpenOffice 4.1.16 has been released, fixing seven vulnerabilities and several bugs. Ready-to-use packages are available for Linux, Windows, and macOS.

https://openoffice.apache.org/blog/announcing-apache-openoffice-4-1-16.html

Tribblix 38:

12/11/2025

Tribblix 38, a distribution based on the work of the Illumos project, has been released. The project continues to develop the kernel, network stack, file systems, drivers, libraries, and core system utilities for OpenSolaris. The project strives to preserve the classic retro style of Solaris while

using modern software versions. The kernel and command-line tools are borrowed from Illumos, while everything else is rebuilt using its own build system. SVR4 packages are used for software distribution. Xfce, MATE, and Enlightenment are offered as graphical environments. Pre-built builds are available for x86_64 systems.

http://www.tribblix.org/

GNU Taler 1.1:

12/11/2025

After six months of development, the GNU Project released their GNU Taler 1.1, an open-source electronic payment system. The platform has been deemed ready for the implementation of working payment services and can now be legally used for selling goods in Switzerland. Businesses wishing to set up sales payments using GNU Taler simply need to have an account with any Swiss bank and launch the platform's sales backend.

The GNU Taler code is written in C and distributed under the AGPLv3 and LGPLv3 licenses. It includes core components for running a bank, exchange, marketplace, wallet, and auditor. The system identifies sellers for tax reporting purposes while maintaining anonymity for buyers. Funding for the development is provided by grants from the European Commission and the Swiss State Secretariat for Education, Research, and Innovation (SERI).

Already completed transactions in GNU Taler remain authentic even if the private keys of clients, merchants, and exchange points are leaked. The database format allows for verification of all completed transactions and confirmation of their consistency. Payment confirmation for merchants is provided by a cryptographic proof of the transfer within the contract concluded with the client and a cryptographically signed confirmation of the presence of funds at the exchange point. The system does not allow the client to know how the money is spent, but it does allow the recipient to track the funds' receipt while maintaining the sender's anonymity. This approach solves the tax audit issues inherent in Bitcoin.

https://www.taler.net/en/news/2025-10.html

yt-dlp & JavaScript engine:

12/11/2025

The developers of the yt-dlp project, which continues to develop the youtube-dl tool for downloading audio and video from online services, announced that starting with today's yt-dlp release 2025.11.12, an external JavaScript engine is required to fully download content from YouTube. The use of a JavaScript engine is due to the introduction of checks in YouTube that require JavaScript code to be executed.

Support for accessing YouTube without JavaScript has been deprecated in yt-dlp. While some videos may still load without JavaScript, the supported formats are limited and are expected to worsen over time. The yt-dlp developers will now treat failures that occur when loading YouTube content without JavaScript as issues, rather than bugs. Going forward, accessing YouTube without JavaScript is expected to become impossible.

Supported JavaScript runtimes include Deno (recommended), Node.js , QuickJS , QuickJS-ng , and Bun. Additionally, working with the JavaScript runtime in yt-dlp requires installing the yt-dlp-ejs component, which is included in the official builds. To use it, simply install the desired JavaScript runtime through the distribution's package manager and then activate it using the "--js-runtimes [deno|quickjs|bun|node]" option. The Deno engine is activated by default, so "--js-runtimes" is optional. When installing the JavaScript runtime manually, the path to the engine can be passed as "--js-runtimes deno:/path/to/deno".

https://news.ycombinator.com/item?id%3D45898407

Miracle-wm 0.8:

13/11/2025

Matthew Kosarek, a developer at Canonical, has released version 0.8 of the miracle-wm compositing manager, which uses the Wayland protocol and Mir

compositing manager components. Miracle-wm supports tiling windows, similar to those in the i3 and Sway projects. A Waybar can be used as a panel. The project's code is written in C++ and distributed under the GPLv3 license. The finished builds are available in snap format, as well as rpm and deb packages for Fedora and Ubuntu .

The goal of miracle-wm is to create a composite server that utilizes tiled window management, but is more functional and stylish than products like Swayfx. The project also supports classic floating window techniques, such as placing individual windows on top of a tiled grid or pinning windows to a specific location on the desktop. It supports virtual desktops, with the ability to set a default window management mode for each desktop (tiled layout or floating windows).

Miracle-wm is intended to be useful for users who prefer a tiled layout but desire visual effects and a more vibrant graphical design with smooth transitions and colors. Configuration is defined in YAML format. To install miracle-wm, use the command "sudo snap install miracle-wm --classic."

https://github.com/miracle-wm-org/miracle-wm/releases/tag/v0.8.0

Ubuntu LTS support period extended to 15 years:

13/11/2025

Canonical announced a 15-year update tier for Ubuntu LTS releases. This extension applies to all current LTS releases, starting with Ubuntu 14.04. This means Ubuntu 14.04 will receive support until April 2029, Ubuntu 24.04 will receive updates until 2039, Ubuntu 22.04 until 2037, Ubuntu 20.04 until 2035, and so on. Public updates will continue to be published for five years after release, and for the remaining 10 years, fixes will be provided only to Ubuntu Pro users.

Ubuntu Pro is a paid service for commercial use. Personal users can sign up for a free Ubuntu Pro subscription to receive extended updates for up to 5 machines. Official Ubuntu Community members can receive free extended updates for up to 50 machines.

https://ubuntu.com//blog/canonical-expands-total-coverage-for-ubuntu-lts-releases-to-15-years-with-legacy-add-on

Vivaldi 7.7:

13/11/2025

Vivaldi 7.7, a proprietary browser developed using the Chromium engine by former Opera Presto developers, has been released. Vivaldi builds are available for Linux, Windows, and macOS. The project distributes changes to the Chromium codebase under an open source license. The browser interface is written in JavaScript using the React library, Node.js, Browserify, and various ready-made NPM modules. The interface implementation is available in source code, but under a proprietary license.

The project aims to create a customizable and functional browser that preserves user privacy. Key features include a tracking and ad blocking, note, history, and bookmark managers, a private browsing mode, end-to-end encrypted sync, tab grouping, a sidebar, a highly customizable configurator, a horizontal tab display mode, and, in test mode, a built-in email client, RSS reader, and calendar.

https://vivaldi.com/blog/vivaldi-on-desktop-7-7/

Thunderbird 145:

13/11/2025

Thunderbird 145.0, the community-developed email client based on Mozilla technologies, is now available. Thunderbird 145 is built on the Firefox 145 codebase and is considered an interim release, with updates released until the next release. Thunderbird 140.5.0 has been released on the ESR branch, a long-term support branch with updates released throughout the year.

Key changes in Thunderbird 145:

Microsoft Exchange support has been added using the EWS (Exchange Web Services) API. Support is currently limited to email only; support for calendar and address book applications will be

added later. The built-in implementation of the Microsoft Exchange protocol is written in Rust and can be used without installing third-party add-ons.

https://www.thunderbird.net/en-US/thunderbird/145.0/releasenotes/

CRIU 4.2:

14/11/2025

After six months of development, CRIU 4.2 (Checkpoint and Restore in Userspace), a toolkit designed for saving and restoring processes in user space, has been released. The toolkit allows saving the state of one or a group of processes and then resuming execution from the saved state, including after a system reboot or on a different server, without disrupting existing network connections. The project's code is written in C and distributed under the GPLv2 license. CRIU is used in container management systems such as OpenVZ, LXC/LXD, and Docker. The changes required for CRIU to work have been incorporated into the mainline Linux kernel.

The areas of application of CRIU technology include ensuring OS reboot without disrupting the continuity of long-running processes, Live migration of isolated containers, accelerating the launch of slow processes, performing kernel updates without restarting services, periodically saving the state of long-running computing tasks to resume work in the event of an abnormal termination, load balancing on nodes in clusters, duplicating processes to another machine (fork to a remote system), creating snapshots of user applications during operation for their analysis on another system or in case it is necessary to cancel further actions in the program.

https://github.com/checkpoint-restore/criu/releases/tag/v4.2

Proton 10.0:

14/11/2025

Valve has released Proton 10.0-3, a project based on the Wine codebase that aims to enable Windows-based Steam gaming applications to run on Linux. 10.0-3 is the first stable release of the 10.0 branch (previous updates in this branch were test versions). The project's code is distributed under a BSD license.

The package includes implementations of DirectX 8/9/10/11 (based on the DXVK package) and DirectX 12 (based on vkd3d-proton), which work by translating DirectX calls to the Vulkan API. It provides improved support for game controllers and the ability to use fullscreen mode regardless of the game's supported screen resolutions. To improve the performance of multithreaded games, the "esync" (Eventfd Synchronization) and "futex/fsync" mechanisms are supported.

https://github.com/ValveSoftware/Proton/releases/tag/proton-10.0-3

Debian 13.2:

15/11/2025

The second corrective update for Debian 13 has been released, incorporating accumulated package updates and fixes to the installer. This release includes 123 updates addressing stability issues and 55 updates addressing vulnerabilities.

Changes in Debian 13.2 include updates to the latest stable versions of the following packages: 7zip, ansible-core, dkms, epiphany-browser, evolution, fonts-noto-color-emoji, mailmindr, nextcloud-desktop, openssl, patroni, postfix, qemu, quicktext, samba, systemd, tbsync, ublock-origin, and xnote. The " rust-profiling-procmacros " package has been removed from the distribution and marked as unused.

Debian 13.2 installation builds will be available for download and installation from scratch soon. Previously installed and maintained systems receive updates included in Debian 13.2 through the standard update system. Security fixes included in new Debian releases are available to users as updates are released through security.debian.org.

https://www.debian.org/News/2025/20251115

Servo 0.0.2:

16/11/2025

https://github.com/servo/servo/releases/tag/v0.0.2

Servo 0.0.2, the browser engine developed alongside ServoShell, a demo browser developed in Rust, has been released. This release is functionally identical to the November 14 nightly build, which has undergone additional manual testing. Complete builds are available for Linux, Android, macOS, and Windows.

The engine was originally developed by Mozilla but later came under the wing of the Linux Foundation. Servo features support for multi-threaded web page rendering, parallelization of DOM (Document Object Model) operations, and the use of safe programming mechanisms provided by the Rust language. Servo was built from the ground up to support splitting DOM and rendering code into smaller subtasks that can be executed in parallel and more efficiently utilize multi-core CPUs. Firefox already integrates some parts of Servo, such as the multi-threaded CSS engine and the WebRender rendering system.

Special Characters

We have talked about quite a few things in our CnC articles so far. However, there is one, even I struggle with sometimes, mainly because I don't get to use it often. So as a refresher, let's talk about grep. As an Ubuntu newbie, it will not be high on your priority list, however, it is something you will use if you ever work in an environment that is Linux-based. Even if you never do, it is a rather weird thing to master. When you use it, to untrained eyes, it will seem like magic.

In the last issue, I gave you some examples before explaining and the eagle eyed may have noticed a "^" that I did not mention. Let's continue where we left off...

Special characters let you match wider patterns than we did before. For example, you can find lines that, contain a number "[0-9]", or maybe start with a capital letter "^[A-Z]", or end with a full stop "\.$".

The caret (^), matches the start of a line. For example, to find lines starting with "For", like this one:

```
egrep "^For" <filename>
```

This will ignore matches like "with For" where "For" itself doesn't *start the line.

Also square brackets are not only ones we use, curly braces and parenthesis are valid too.

Those curly braces {} give you a specified amount of matches. For example, to match lines containing the letter "w" repeated 3 times, as in a URL: egrep "w{3}" <filename>

You can also provide a range. The first parameter being the low end: grep "w{3,9}" <filename> - matches "w" repeated 3 up to 9 times:

Like in school, parenthesis group things together. In the last issue we mentioned the "+", egrep "fcm+" <filename> matches fcmmmm, for instance, but by using the parenthesis, we can surround fcm in that query, like so: egrep "(fcm)+" <filename> to find more instances of fcm.

OK, looking at the "special characters sentence again. You also may have noticed that I passed over the dollar sign ($). Yep, the quick ones will say it is the opposite of the caret and you would be correct! The dollar sign ($) matches the end of a line. For example, to find lines ending with a "fcm": egrep "fcm$" <filename>

It sounds weird, so here is an example: if I was looking for org. ending a line, I find none, even if the pattern can be matched, multiple times.

I could even search for "\." and find hundreds, but if I were to search for a full stop *ending a line, ("\.$") I'd find none, as it is a JSON file not a sentence. If I perform it on a file containing sentences, the result speaks for itself:

```
end of the line
```

We can combined what we have learned so far, so if we wanted to find a word that is on its own, I can use both the caret and the dollar sign.

The -i is just case insensitive, but I found the header FCM, but not the line following it, saying: "FCM is an online... blah blah"

If you are a newbie, I want you to try it.

Here we can see that Bash does not appear alone or at the beginning or at the end of the output of inxi.

Homework, I want you to pipe the output of inxi -F to grep and see if "CPU:" appears on its own line. Does "drivers:" ? Does "info:" ?

Now just output inxi -F and see if you were correct.

Now comes the challenges, using what you have learned, I want you to find your MAC address from the output of inxi -F, using egrep.

Secondly, I want you to find your cpu temperature, from the output of inxi -F, using egrep.

Thirdly, I want you to find the uptime hours (only!) from the output of inxi -F, using egrep.

Lastly I want you to use egrep to tell me if you have a desktop or a laptop, from the output of inxi -F (or server).

If you can do all these, grep should be imprinted with you for at least a month! :)

So like I used -i for case insensitive searches you can use -v to invert said searches. With that knowledge, I want you to undertake a small challenge.

Challenge

use egrep to filter the output of df to exclude temporary filesystems and show only your real drives.

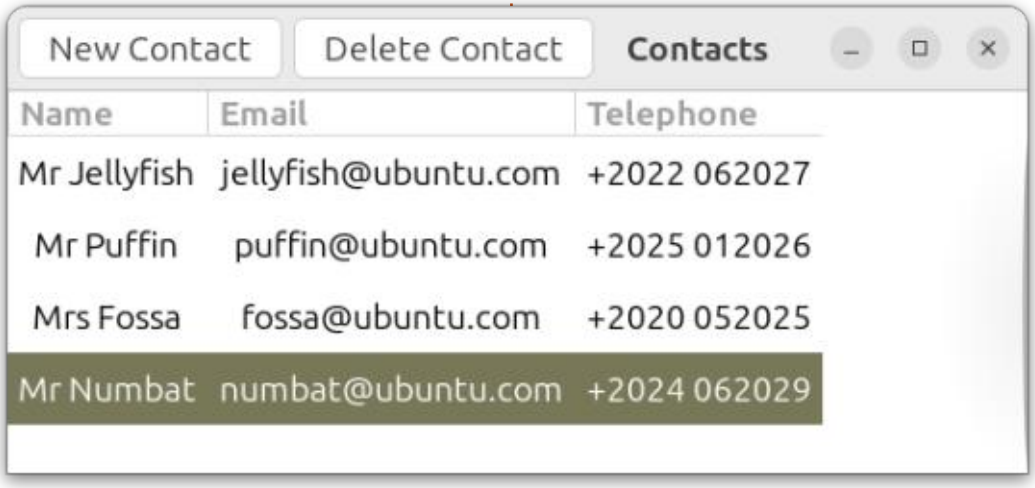
Comments: misc@fullcirclemagazine.org

Erik has been in IT for 30+ years. He has seen technology come and go. From repairing washing machine sized hard drives with multimeters and oscilloscopes, laying cable, to scaling 3G towers, he's done it.

GTK4 Programming in C - Pt.4

In the previous article a contact class which inherited from GObject was created and used to add some fictitious contacts to a GListStore so that they could be viewed using GtkColumnView. This article shows how to expand the application into a simple address book. This requires that a new contact can be created and a selected contact deleted. A contacts list needs to be maintained which can be automatically saved to disk and opened when the application is restarted.

A screenshot of the application is shown below which has been developed using Ubuntu 24.04. Again fictitious individuals, Mr Jellyfish, Mr Puffin, Mrs Fossa and Mr Numbat named after Ubuntu releases will be used.



The full source code for this project and can be downloaded using the web link: https://github.com/crispinprojects/fullcircle

Open and view the files person-contact.h, person-contact.c and main.c file to follow the explanation below. The main.c file is updated from the last article.

Saving Contacts

A way is needed to save contacts stored in the GListStore so that when the application is closed data has been saved to disk. In this example contact details will be saved to a .csv file. The extension "csv" stands for comma-separated value. With a .csv file each line in the file represents a contact record and the values (e.g. the name, email and phone fields) within each record are separated by commas. This format is easily viewed using a text editor or spreadsheet. However, in a data-intensive system a database would be used as these are more efficient. With a .csv file all the data has to be read in before it can be used but with a database a query can be made to read in a portion of the data that is required.

The code for saving a GListStore of contacts to a .csv file is shown on the next page. GFile is an identifier for a file and is constructed using g_file_new_for_path() which takes one parameter, a string containing the path for the file to be opened. In this case a file called "contacts.csv" is saved to the current working directory. A data output stream is created for writing data directly to a file output stream. This is done using GDataOutputStream and GFileOutputStream. The code iterates over the store getting each item from the store, extracting the name, email and phone values using g_object_get() and then concatenates these to a single line of text separating each value with a comma. Each line is then saved using GDataOutputStream.

Creating New Contacts

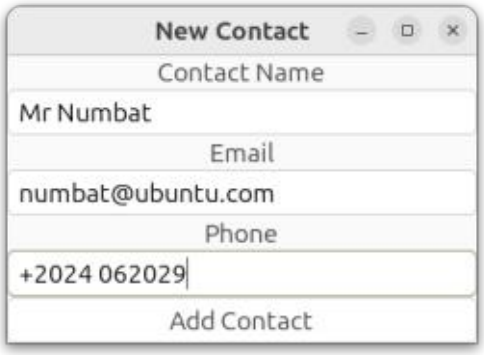
A new button called button_new_contact is created within the activate() function and then added to the window header. The g_signal_connect() function connects the button clicked signal to the callback called "callbk_new_contact" using the store as the gpointer parameter.

```
GtkWidget
*button_new_contact;

button_new_contact =
gtk_button_new_with_label("Ne
w Contact");

g_signal_connect(button_new_c
ontact, "clicked",
G_CALLBACK(callbk_new_contact
), store);
```

Within “callbk_new_contact” a dialog window is created and entry widgets are used for capturing the contact name, email and phone.



Inspecting the code in the download shows that the positioning of widgets is handled with a box container. Widgets are appended to a box container which is a child of the dialog window. Pressing the “Add Contact” button invokes the callback called “callbk_add_new_contact”.

```
void save_contacts(GListStore *store)
{
GFile *file;
gchar *file_name ="contacts.csv";
guint n_items;

GFileOutputStream *file_stream;
GDataOutputStream *data_stream;
file = g_file_new_for_path(file_name);
file_stream = g_file_replace(file, NULL, FALSE, G_FILE_CREATE_NONE, NULL, NULL);
if (file_stream == NULL) {
g_object_unref (file);
g_print("error: unable to save contacts.csv file\n");
return;
}
data_stream = g_data_output_stream_new (G_OUTPUT_STREAM (file_stream));
GListModel *model = G_LIST_MODEL(store);
n_items = g_list_model_get_n_items(G_LIST_MODEL (model));
char *line = "";

for (int i=0; i<n_items; i++)
{
line="";
gchar *name_str = "";
gchar *email_str = "";
gchar *phone_str = "";

PersonContact  *contact = g_list_model_get_item(model, i);
g_object_get(contact, "name", &name_str, NULL);
g_object_get(contact, "email", &email_str, NULL);
g_object_get(contact, "phone", &phone_str, NULL);

line =g_strconcat(line,
name_str,",",
email_str,",",
phone_str,",",
"\n", NULL);
g_data_output_stream_put_string (data_stream, line, NULL, NULL);
} //for
g_object_unref (data_stream);
g_object_unref (file_stream);
g_object_unref (file);
}
```

The function g_object_set_data() allows an association to be made between the "button_add" and the entry called "entry_name" using the key parameter named "entry-name-key" as shown below.

```
g_object_set_data(G_OBJECT(button_add), "entry-name-key",entry_name);
```

This allows the GtkWidget pointer called entry_name to be obtained in the add new contact callback using the code line shown below.

```
GtkWidget *entry_name = g_object_get_data(G_OBJECT(button), "entry-name-key");
```

The same approach is used to make associations between the "button_add" and the email and phone entries.

A new contact is created using g_object_new(). Then g_object_set() is used to set the values for the person name, email address and phone details from the text retrieved from the entry widgets. The code snip below shows how this is done.

```
PersonContact *contact_new= g_object_new(PERSON_TYPE_CONTACT,0);

g_object_set (contact_new, "name", name, NULL);

g_object_set (contact_new, "email", email, NULL);

g_object_set (contact_new, "phone", phone_str, NULL);


g_list_store_append(store,contact_new);

save_contacts(store);
```

The new contact is appended to the GListStore and the "save_contacts()" method is called to update the saved contacts.

Opening Contacts

When the application is closed the contacts remain saved in the "contacts.csv" file located in the working directory. When the application is restarted a method is needed within activate() to open the saved contacts and load them into a GListStore so that they can be displayed using the GtkColumnView widget. Inspecting the code in the download shows that this is done using the open_contacts() method which returns a pointer to a GListStore.

The g_file_read() function is used with the GFile pointer to open the "contacts.csv" file for reading. The "contacts.csv" file is assumed to be located in the working directory. A GFileInputStream is used to read the contents of the file. A check is made to ensure that the file stream exists and, if not, NULL is returned.

A GListStore pointer called store is declared and g_list_store_new() is used to create a new GListStore with items of type G_TYPE_OBJECT which is the fundamental type for GObject. Then g_data_input_stream_new() is used to create a new data input stream for the file input stream. This allows g_data_input_stream_read_line() to be used to read a line from the data input stream.

A while loop is used to read the data lines one by one from the "contacts.csv" file. The C string token function called strtok() is used to break each line string into pieces representing the name, email and phone fields. Each piece of data is separated by a comma and so a comma is used as the delimiter i.e. break character. With strtok() the first parameter is the string and the second is the delimiter and it returns a char pointer to the occurrence of each piece of data. There are three pieces of data which are the field's name, email and phone and so strtok() is called three times for each line. Notice in subsequent strtok() calls the first parameter is a null pointer to ensure that the position after the end of the last token is used as the new starting location for scanning. See the strtok() documentation in the external links for more information.

Selection

Everything can now be glued together to create a simple address book application to store contacts. A GtkSingleSelection *selection pointer can be created and used to select a single contact in the column_view so that it can be deleted. This is done by passing the selection pointer to a callback. An example is shown below for a button to delete a selected contact when clicked.

```
button_delete_contact =
gtk_button_new_with_label("De
lete Contact");

g_signal_connect(button_delet
e_contact, "clicked",
G_CALLBACK(callbk_delete_cont
act), selection);
```

The selection pointer allows the index position “p” of a contact to be obtained as shown below.

```
guint p =
gtk_single_selection_get_sele
cted((GtkSingleSelection*)
selection);
```

The index position can then be used to remove a contact from the GListStore using g_list_store_remove(). The save_contacts() method is called after a contact has been removed so that it is no longer saved in the “contacts.csv “ data file.

The same selection approach can be used to expand the application so that a contact can be edited.

Use the Makefile in the download to build the application which produces an executable called “addressbook”.

Hopefully these articles and code examples have provided enough information to get started with GTK4 programming in C.

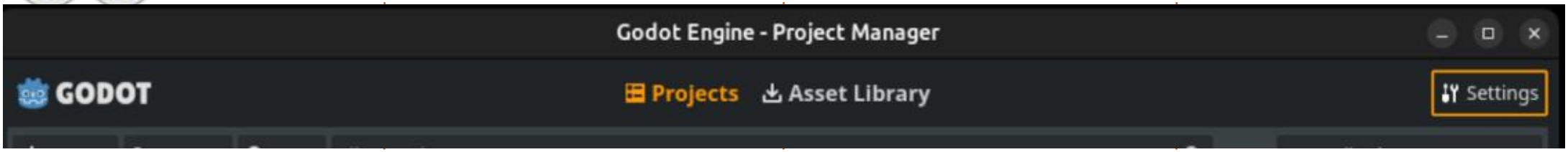
External Links

GListStore
https://docs.gtk.org/gio/class.ListStore.html

strtok to split a string into tokens
https://cplusplus.com/reference/cstring/strtok/

Alan is retired and a Linux enthusiast. He has worked in education and industry and has used many programming languages including C, C++, Delphi and Java. His Linux projects can be found on his Github: https://github.com/crispinprojects.

Godot Intro Pt.1



I just got myself a few books on Godot and found them lacking. I went onto Youtube and looked at a few "basic" tutorials. I copied down Brackey's 2D tutorial and ended up with a mini game. But(!), copypasta is not learning. (I want to know why!) Though I can say that this Brackeys tutorial *did work, unlike another I tried, I still felt "left out". Things I wanted were not explained and things I did not need were explained. I headed back to my book, but that was a mess, with instructions like this: Open a node3d, look at it, delete it, open a node2d, look at it, delete it.

You can understand my frustration. That's when it hit me. If I'm having issues like these, others may too... This article series is aimed at complete n00bs – no experience required! This is mainly because **I am a n00b too!** I'm using this series as a way to explain what I understand, so that I can be sure that I know, the bit that I know, you know?

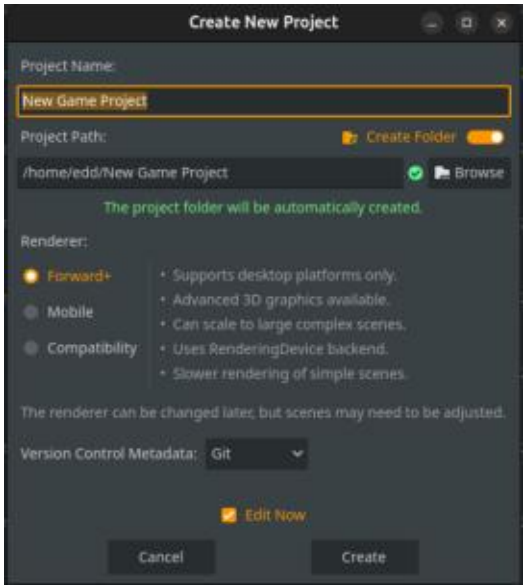
So here is a tutorial on the Godot interface. Though I'm going to show you around, initially, we will also tackle some "why's". I'll make a separate article on GDScript, I first want the foundation right. I want to help others that may be stuck like me, so don't expect expert matter.

Fire up Godot and let's get to grips with it. This article series may be a bit image heavy, but bear with me.

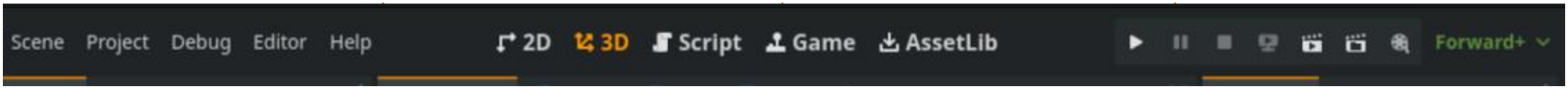
When you open Godot for the first time, you are greeted with a window with a header like the one shown above.

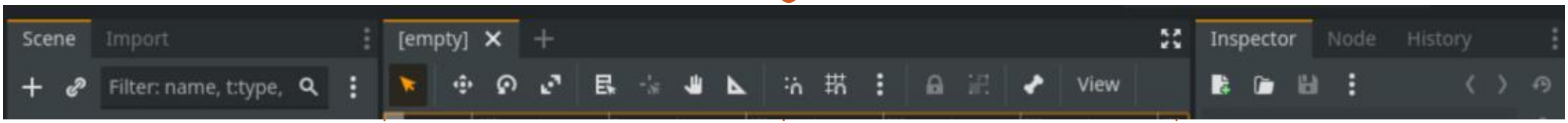
Before you do anything, I want you to click on the "settings" button on the right. Here you can set the interface language and change the theme, as well as the scaling – important if you are a bit sight impaired. You also get to change the "Directory naming convention". By default it is "kebab case", I prefer to have my directories in "Title Case", like a normal person, but there are other options for your preference.

That was the first thing none of the books or tutorials covered, but I think one should know about. Now we can go and create a new project.



At the first field of entry, we can name our project, be it a game or application. The project path gives you a new folder in your home folder, but if you are like me and set up a folder with sub-folders already, you *will get a warning when browsing to said folder, containing





say, another folder with your assets. ("The selected path is not empty") If you are 100% sure your path is correct, you can ignore this warning. The next part, the renderer, does not matter and I'll show you *why in a bit. For "Version control Metadata" we will be setting ours to "none", as we are all home users and do not intend on training someone's AI for free, just to put you out of a job, later. Once you click "Create", we will be taken to the main Godot interface that we will be spending our time in. We start at the top (shown below).

On the left, we have our menu items, followed by our views, which has icons next to the names and are in bold, then comes the controllers, allowing us to play the scenes and lastly the renderer. Remember that I told you "renderer" did not matter on the previous screen? That is because you can come and change it here any time you like.

Though Godot is a "game" engine, there is nothing stopping you making applications with it. In fact, there are a few applications made with Godot, and even other game engines! So don't write off Godot as 'just' a game engine. Much like Lazarus or Visual Basic, it excels at making "windows" and buttons and labels for people to interface with.

Let's move on. Going down, we find what's shown above.

Please note, I'm using the default layout for this article and you can change the layout to suit your needs.

Let's concentrate on the centre, as the columns on either side can be moved. You will see that there is a pointer, highlighted, by default. This is our "Select" pointer. If you need it, simply press "Q" or "q". This allows you to select things. The next icon is the "Move" pointer and you can get to it via the short-cut key, "W" or "w". This is like moving a sheet of paper that you are drawing on. If you are brand new to Godot, this will trip you up. Everything you see on screen is placed via a vector. To keep it simple, we will stick with 2D for now. (2 vectors) When you create objects on the screen, they are usually overlaid with something else, say, a collision shape, or they don't interact. The trick is to create scenes with every object and then *link them to your main scene – more on this in the future. Why I mentioned vectors is that everything is relative... to 0,0! This (0,0) is the origin point of your screen, top left, not bottom left! This means that if you drag one layer off by a few pixels and you don't realise it, things can go horribly wrong in your game, for instance. (I know! Like five years ago, when I first tried Godot, I tried the "Pong" and "Avoid the creeps" tutorials and got bitten.) Don't worry though, we have ways of fixing those errors. For now, just know that you need to be careful when moving things, first check which icon is highlighted, before you move. The next two icons are "Rotate" and "Scale", both these will add "handles" to your objects for you to manipulate the objects with. As with all things computer, there is more than one way to do things, and you can also do this in the side panels, or via code.

While we are on the topic of making mistakes, at any time, you can press CTRL+z to undo! As a newbie, this will be your saving grace a lot of times. OK - the next two buttons I have never used, and you are welcome to click them. You will see that nothing changes and no handles appear. We don't need them as of now, so we leave them be. (for now...)

Next, we have "Pan mode" (middle mouse button move or G) that is not to be confused with move mode (second icon). One moves the canvas on the screen, while the other one moves the screen or viewport. You can try it out, but without something to reference it against, you will not "see" it move. (You know, like relativity, if there is nothing to move relative to, are you moving anything?) So drag the Godot icon to the screen before testing! Than brings me to my next point, play,

play play. You cannot break anything in an empty project. Even if you manage to do so, you discard it and open a new one, so feel free to try out anything and see what it does! The next icon is the "Ruler" "R" or "r". Not as in king, but as in measurement. When you are in this mode, you can drag a ruler out of the margins and it will measure, in pixels, as you move it. This can be handy when you need to do some maths, like say, you are making Pong and you don't want your paddle to go out of the playing area. You have no idea how big your paddle is, so you measure it and then subtract half from the edge of the screen, for your stopping position.

The next two icons are for snapping. When you need to snap things to a grid layout, for instance, when you are painting a level, you will use these. They are "Smart Snap" and "Snap to Grid" and we will see them in action a bit later in this series. On an empty project, you won't see anything. The upright ellipses are for configuring the snapping behaviour. The next two are for nodes you are working on. The first locks the node, for when you have something just so, and you don't want it to change and the next one is "Grouping" the node and it's children, for instance, if you want to move the lot at once. Like before, there are other ways to achieve this too, though, I used to use it often in the beginning when I first used Godot, I now seldom do. I suspect it will be the same for you. The bone icon is just that, options for skeletons, if you use models. For now, we will be sticking to the simple things, getting you to do stuff. If there is interest, we can move on to more in-depth things. The thing I want you to take home is try, plop the Godot icon on the screen by dragging it to the centre pane and try out the buttons on it, (with it selected) to see what they do. I'll leave "View" to you, as it is just that, viewing options.

Join us next issue as we explore further!

Complaints?
misc@fullcirclemagazine.org

Erik has been in IT for 30+ years. He has seen technology come and go. From repairing washing machine sized hard drives with multimeters and oscilloscopes, laying cable, to scaling 3G towers, he's done it.

Latex - some M packages

Written by Robert Boardman

This time I will take a look at some of the packages in the "M" topic at ctan.org. I would really like to know if these walk-throughs of selected packages is of interest to anyone. I wonder if a project-oriented column would be of more use. Now I am at M I am more than half way through the alphabet. I know there are not as many packages featured in M – Z as there was in the A – L topics. I have been wondering what would be useful after the next ten or so columns are published. Let me know, send me a note, send something to the editor. This column is to help you learn about some of the capabilities of the immensely complex typesetting software called Latex.

By the way I hope this column is more useful than most of the videos about Latex available on Youtube. Most of them are quite basic. Some are poorly formatted and difficult for me to understand. Many show how to use one of the commercial Web-based front ends for Latex. As a personal aside I do not understand why people pay for a front end to software that is free for all to use. It would be possible to make a set of videos from these columns to help people learn about various Latex packages. I think short videos about specific packages and their uses would be better than most of what is available about Latex on the Internet. Let me know if that is of interest since it would be additional work.

Opening up the M topic there are about forty-eight different sets of packages. As usual I will ignore the packages for languages other than English. Under M there is: Macedonian, Maltese, Manju, Marathi and Mongolian. Marathi is a language of western India. Manju is an alternate spelling for Manchu, an almost-extinct language of northeast China; it has only a few thousand speakers. Manchu is written vertically, a major challenge to typesetting. The functionality of the Manju package has be transferred to the montex package which is used for Mongolian as well as Manchu. Mongolian is also written in vertical columns.

As you can imagine the M topic area includes packages to do with mathematics and with macros. There is a small collection of packages in the magazine topic. There are three packages to help with formatting minutes of meetings, a few packages which will convert units of one kind into units of another kind. (Useful in Canada where we deal with both Imperial units and metric units.) There is one package which formats PDF files so they can be used with a smart phone. This one is probably not necessary any more, phones have easy access to apps that read PDF files. There are packages to deal with the typesetting needs of molecular biology and Materials Science. There is a multimedia topic (six packages) and two topics for music (many packages).

In the maths topic there are many packages. One package I have used often is amsmath: the American Mathematical Society package, useful to typeset many math symbols and structures. (There is a corresponding amsfonts package which should be used with it.) The amsmath package has its own chapter in The Latex Companion, see volume 2, chapter 11. I can demonstrate a few of the capabilities of amsmath. If you regularly use math in your Latex - PDF documents I strongly suggest you review the documentation for amsmath plus the chapter in The Latex Companion.

Equations can be very complicated. Latex can satisfy almost all needs for mathematical expressions without resorting to generating the expression in other software and importing a graphic. Multi-line equations, special alignments, adjustments to vertical and horizontal spacing, text in equations, matrix math, commutative diagrams, arrows of many kinds, limits, integrals and many others I cannot pretend to understand. The amsmath package has broad application any time an equation is needed, not only math but physics, chemistry, biology, economics, etc. I wish I had this set of tools when I was teaching college math and chemistry.

Shown right is the code for the

sample page.

In addition to the many packages related to amsmath and others related to specific math applications there is a package called calculator which can generate solutions to math calculations in a document. There is an 87-page document describing how to use calculator. I have included a short example of the code for you to try. The calculator package simulates a scientific calculator and can solve many problems with both integers and real numbers. It has lists of built-in constants (like pi and e). It calculates the values of regular, hyperbolic and inverse trigonometric functions in radians and degrees, handles matrices, vectors and scalars and more. I have not shown in the sample but calculations can be chained together so the result of one is the starting point of the next.

```
\usepackage{calculator}
\begin{document}
     A demonstration file
for the calculator package.
(The dollar signs are
necessary to indicate a math
operation in Latex.)
     \MULTIPLY{8}{7}{\sol}
$8\times7=\sol$
     \POWER{2.256}{7}{\sol}
$2.256^7=\sol$
```

```
\usepackage{amsmath}
\begin{document}
     A demonstration of some capabilities of the amsmath package.
     \begin{equation}
          (a+b)^2 = a^2 + 2ab + b^2
     \end{equation}
Equation numbers are placed at the right margin by default. Use the package option
[leqno] to move the numbering to the left margin. Equations are numbered by default with
amsmath. Use begin{equation*} to eliminate the numbering.
\begin{equation*}
     x^2+y^2=z^2
          \end{equation*}
\begin{equation}
          2HCl + Mg \rightarrow MgCl_2 + H_2\uparrow
     \end{equation}
\begin{equation*}
     \text{The roots of a quadratic equation are: } \frac{-b\pm\sqrt{b^2-4ac}}{2a}
\end{equation*}
```

At the end of the M topics are the two topics related to typesetting music. If you are even remotely familiar with how music appears on a printed page you can imagine the challenges faced by a developer trying to build a package to print music scores. You might be familiar with the common five-line staff used for orchestral music. There are other ways to display music for specific instruments or specific kinds of music. Bagpipes, Byzantine music, guitars, Gregorian chant, jazz chords, recorders, shape note singing, fingering diagrams for various instruments all have separate packages. I am not a musician so I include an example from the lengthy documentation

A demonstration of some capabilities of the amsmath package.

$$(a+b)^2 = a^2 + 2ab + b^2 \quad (1)$$

Equation numbers are placed at the right margin by default. Use the package option [leqno] to move the numbering to the left margin. Equations are numbered by default with amsmath. Use beginequation* to eliminate the numbering.

$$x^2 + y^2 = z^2$$

$$2HCl + Mg \rightarrow MgCl_2 + H_2\uparrow \quad (2)$$

The roots of a quadratic equation are: $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

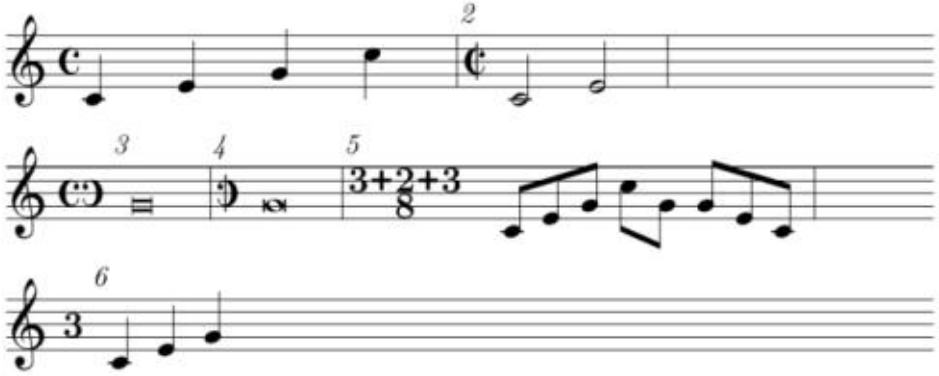
for the MusixTex package to show the flexibility of this system of macros.

This is a complicated example. Obviously there are many commands to be learned to use this system well. As a non-musician I can understand a little of the code. In MusixTex pitches from the A

below six ledger lines below the bass clef to E above six ledger lines above the treble clef can be represented by letters of the alphabet. Learning MusixTex is probably somewhat less complicated than learning a programming language. I suspect if you want to generate music for the piano you would need to learn a subset of the MusixTex command set. There is a "cheat sheet" on p. 156 of the manual which contains the code for the pitches, notes and accidentals (without and with dots) plus clefs, rests and a variety of miscellaneous symbols. There is a subset of MusixTex for generating tablature for guitars. Lyrics can be added and positioned so syllables will be placed correctly in relation to notes. There are thirty-eight extensions which can be used with MusixTex, all can be loaded using the \input command in the preamble to the document. The MusixTex package could easily be called the MusixTex system. If you produce music in PDF files or printed music I strongly recommend you take a look at MusixTex.

That is all from me this time. I hope you are enjoying pleasant weather where you are. In the Northern Hemisphere autumn has started. Cold wet autumn weather usually encourages us to work inside. Perhaps this is the time when you will experiment with Latex. If you have questions please ask. I will do what I can to help.

```
\usepackage{musixtex}
\begin{document}
      \generalmeter\meterC
      \nostartrule
      \parindent0pt\startpiece
      \NOTes\qa{cegj}\en
      \generalmeter\allabreve\changecontext
      \NOTes\ha{ce}\en
      \generalmeter\reverseC\changecontext
      \NOTes\zbreve g\en
      \generalmeter\reverseallabreve\changecontext
      \NOTes\zwq g\en
      \generalmeter{\meterfrac{3\meterplus2\meterplus3}8}\changecontext
      \notesp\Tqbu ceg\Dqbl jg\Tqbu gec\en
      \generalmeter{\meterN3}\meterskip4pt\changecontext
      \NOTes\qa{ceg}\en\setemptybar
      \endpiece
```

A demonstration of some of the capabilities of the musixtex package (copied from the package documentation.)

Inkscape - Part 163

I've finally reached the last item on the list of new features in Inkscape 1.4 that I plan to cover in this column. Having written last month about the new Dash icon set, it's time to look at another new option for customising the UI. Specifically, version 1.4 brings with it the ability to somewhat alter the on-canvas handles via a CSS file.

There are several steps to achieving this, which I've listed below to make the overall process a little clearer. It's not particularly difficult, but different installation methods for Inkscape, across different operating systems and distributions means that it's not possible to give a simple set of steps, with file paths and names, that will work for everyone. Instead, you'll have to do a little detective work to find the relevant locations on your own system. Here's what we're going to do:

- Find the User UI directory
- Find the relevant System UI directory
- Copy the template CSS file to the User UI directory
- Edit the new file and watch the effect within Inkscape
- Repeat step 4 until you're happy with the result
- Optionally delete the file from the User UI directory to return to the default styles

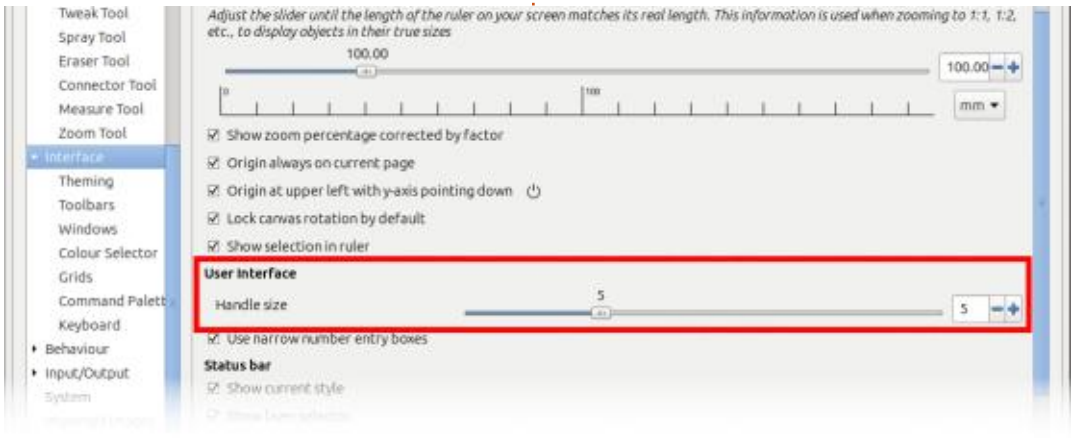
For reference, I'm using Ubuntu Mate 22.04 LTS with the Inkscape 1.4.2 AppImage file downloaded from the official Inkscape site.

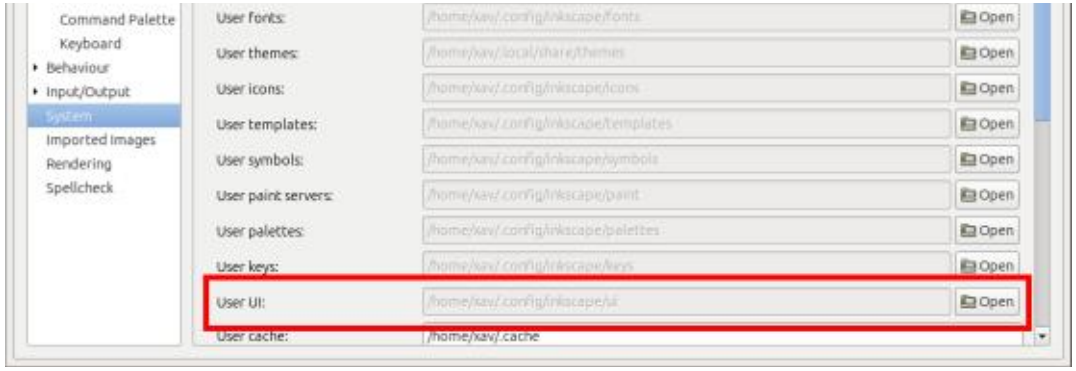
One important note, though: if all you want to do is to make the handles a bit larger, you can skip all this nonsense. The 'Interface' pane of the Preferences dialog (Edit > Preferences) provides a slider for precisely this purpose. The canvas updates in real time as it's adjusted, so make sure you've got some handles visible, then modify this to suit your taste and needs.

1. Find the User UI directory

Most users probably don't realise that there's a whole lot of user-specific configuration that can be done to Inkscape, outside of the options presented in the Preferences dialog. For example, you can create your own templates, symbols and palettes, dropping the relevant files into specific directories from which Inkscape will read them when it next starts. Typically these directories are inside your home directory, hidden inside '.config' or '.local' subdirectories on a Linux system. The dot at the start of these directory names causes them to be hidden from the default view of most file management tools.

To find these directories, the simplest approach is simply to let Inkscape tell you where it's looking. Launch Inkscape, then go to Edit > Preferences, and select the System pane from the list on the left. You'll be presented with a page full of the directories Inkscape looks in for

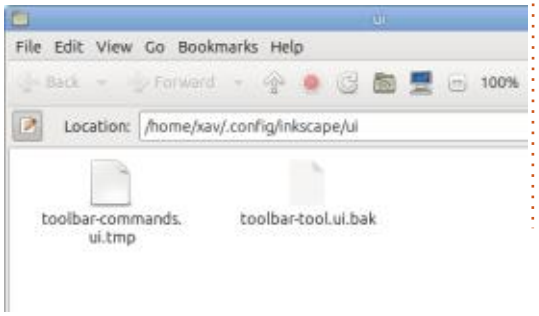




various things, many of them likely disabled as the actual directory path isn't something you are expected to edit as a user.

In this screenshot you can see that the majority of these subdirectories live inside '/home/xav/.config/inkscape' on my machine. For this change we're interested in the "User UI" path: '/home/xav/.config/inkscape/ui'. Unfortunately you can't copy the paths from these read-only fields, but it's not really required anyway: just click on the 'Open' button to the right of the User UI entry to open your default file browser directly at the right directory.

There's a good chance this directory will be completely empty for you. In my case there are a couple of unused toolbar-related files kicking around, most likely as a result of the column in FCM #163, in which I looked at how to reorder the icons in the main toolbox.

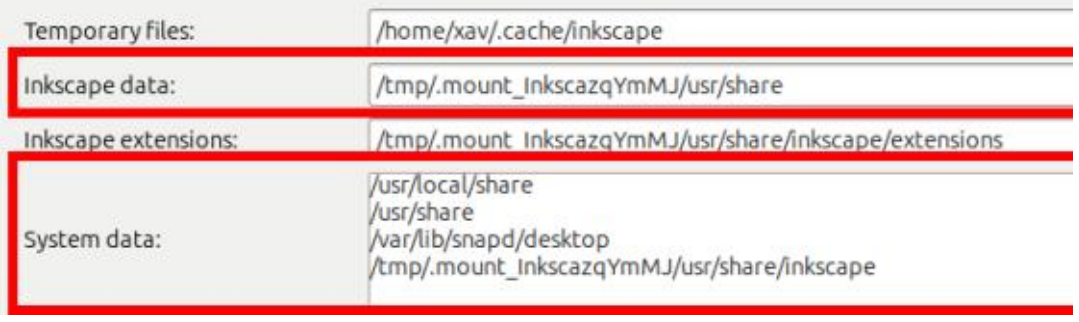


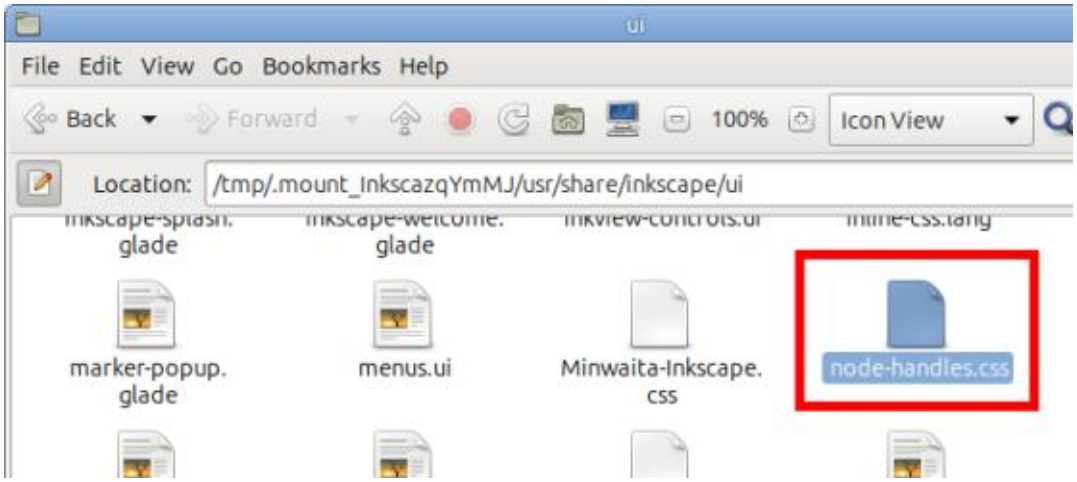
Leave that file browser window open, and return to the Inkscape Preferences dialog to look for the next directory…

2. Find the relevant System UI directory

Next we're on the hunt for the 'node-handles.css' file in Inkscape's system UI directory. Unfortunately for us, this directory isn't specifically listed with an 'Open' button, so we'll need to do a little more detective work. First of all, scroll down in the Preferences dialog to find the likely candidate directories – those in the 'Inkscape data' and 'System data' fields (shown below).

Note that these fields are not read-only, so you should be able to copy their contents. Starting with the 'Inkscape data' entry, copy the path and paste it into the URL,





Location or Path field in a new file browser window. In my case this brought me to a general 'share' directory in the AppImage, inside of which was an 'inkscape' directory. Depending on how you installed Inkscape this could equally be a system-level share directory for your operating system, or somewhere else entirely.

What we're looking for is a 'ui' directory (shown above), which is most likely inside an 'inkscape' directory. In my case I navigated into the aforementioned 'inkscape' directory and, sure enough, the 'ui' directory I was seeking lay within. Drilling in further, I found the 'node-handles.css' file that is our ultimate goal. Note that it's likely to be buried among a lot of other files, so sort alphabetically and look carefully to see if it's present or not.

If you're not so lucky with the 'Inkscape data' entry, try again with each separate entry in the 'System data' field. As a last resort, you could even do a search of your whole drive for the filename. Hopefully one of these methods will yield the file we're looking for.

If you can't find the file on your system – or just don't want to go hunting – there is another alternative. Inkscape is, of course, FOSS software, so all its source files are publicly available in the

project's GitLab repo. This includes the 'node-handles.css' file, which you can download directly with this link: https://gitlab.com/inkscape/inkscape/-/raw/master/share/ui/node-handles.css

3. Copy the template CSS file to the User UI directory

This part shouldn't be too tricky. Copy the 'node-handles.css' file you found from the System UI directory (or your download location) into the User UI directory window that we left open earlier.

IMPORTANT: Make sure to **copy** the file from the System UI directory, not move it. This ensures that there's an unadulterated original available if you make a mistake when editing the file. It also means you can revert to the default configuration by simply deleting the copy from your User UI directory at any time.

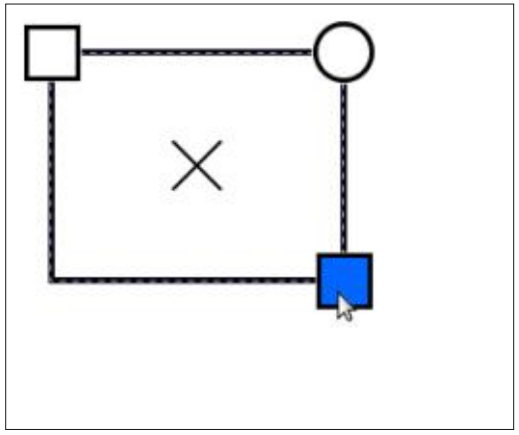
4. Edit the new file

Open the file that's now in your User UI directory using a text editor of your choice. If it supports syntax highlighting for CSS files, then so much the better, as common errors such as missing quotes or semicolons will be easier to spot. It's also worth noting that editing this file will be a lot easier if you're familiar with CSS syntax, but regardless of your level of competence I advise saving frequently and checking the changes you make in Inkscape as you go along. Remember, if you break things so badly that no amount of Ctrl-Z will save you, you always have the option of deleting the file to revert to Inkscape's system settings. Then just copy a fresh file and try again.

At the top of the file are some instructions which describe exactly which CSS properties you can use in this context. This covers almost all the things you're likely to want to change with handles – though it would have been nice to have 'rotate' available.

Following that is a list of the available shapes that each handle can have. There's no option to draw your own custom handle shapes, I'm afraid. You're strictly limited to the available list. This is perhaps the most limiting aspect of this feature, because swapping the standard shape for a particular handle is likely to encroach on that shape's use elsewhere, potentially adding confusion. To avoid this, therefore, it's probably best to limit your modifications to the fill color, stroke width and opacity of the handles, at least in the most part. Changing the scale globally is best done via the Preferences dialog, but this file can also be useful if you just want to change the scale of some specific handles, relative to the others.

Let's take a look at some example changes. To make things clearer, I've used the Preferences dialog to scale the handles up to 15, the maximum value available on the slider. Here's how the editing handles for a rectangle look by default, with the mouse pointer hovering over one of the sizing handles.



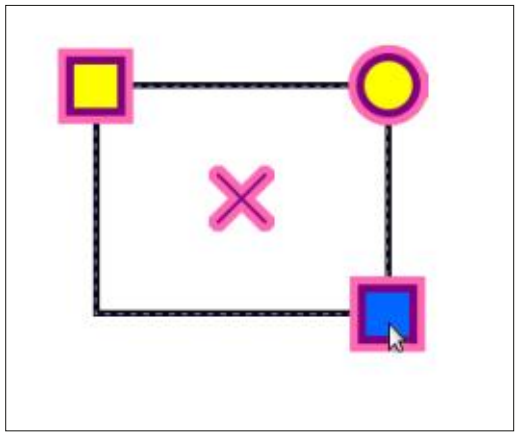
Let's focus first on the default rules that are used for all handles, unless specifically overridden later in the file. It's the block that starts with a single asterisk – the universal selector in CSS:

```
* {
    fill: white;
    stroke: black;
    outline: white;
    stroke-width: 1.0px;
    outline-width: 1.0px;
    outline-opacity: 60%;
    scale: 2.0;
    size-extra: 1px;
    stroke-scale: 0.10;
}
```

Let's see what happens when we edit some of these values. We'll set the fill to yellow, the stroke to purple and the barely-visible outline to 'hotPink'. Color names are case-insensitive, but other aspects of the file are not, so best to stick to lower case, in general. We'll also make the stroke and outline thicker, and remove the transparency on the outline by setting the opacity to 100%.

```
* {
    fill: yellow;
    stroke: purple;
    outline: hotPink;
    stroke-width: 2.0px;
    outline-width: 5.0px;
    outline-opacity: 100%;
    ...
}
```

One extremely nice feature that the developers included is that Inkscape will detect changes to this file and immediately update its UI without any need to reload. This makes it very convenient to create a small test drawing like this, leave the handles visible, and just keep experimenting with edits to the file. Save after each edit, and Inkscape will reflect your changes straight away. After saving the tweaks above, we're faced with this result.



It's certainly a more… erm… distinct look. I'm not sure I'd want to work with it on a daily basis, but it serves to show some of the possibilities available to you. That blue on the hovered handle definitely clashes with the new theme though, so let's see what we can do about that.

A little further down the file we can find the CSS rule that applies by default to any hovered or clicked handles:

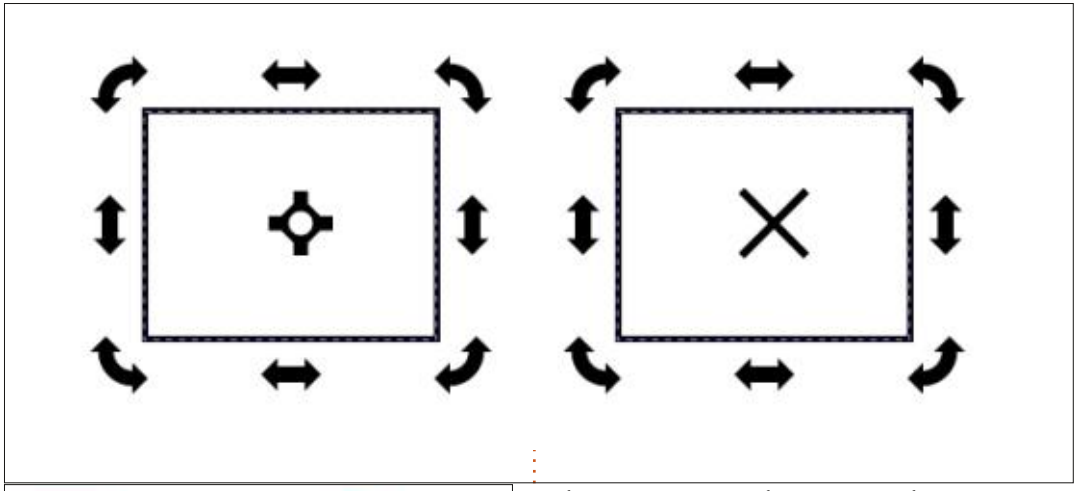
```
*:hover,
*:click {
    fill: #0066ff;
}
```

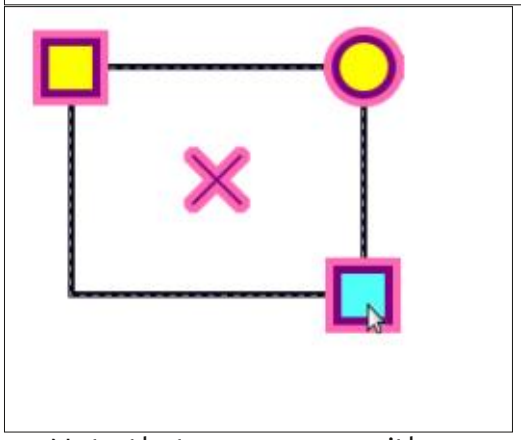
This time the color has been defined as an RGB value using 6 hexadecimal digits. If you've been using Inkscape for a while then you're probably familiar with this format. Suffice to say that you can use the Fill & Stroke dialog in Inkscape to find the color you want, then copy the color from the RGBA field at the bottom-right. Note, however, that the CSS file won't work with an 8-digit RGBA value, so you'll need to remove the last two digits (and ensure there's a hash (#) character at the start), if you want to use this format.

Perhaps cyan would work better for this hover color?

```
*:hover,
*:click {
    fill: #4ffff8;
}
```

It's an improvement, of sorts, I guess.





Note that you can use either hexadecimal RGB values, or CSS color names. The latter cover the main "obvious" color names – so our highlight above could have just used 'fill: cyan;' – but there are also a wealth of oddities, such as the 'hotPink' we used in the first example. You can have 'dodgerBlue', 'chocolate', 'honeydew' and 'lemonChiffon. But while 'lightGreen' and 'lightBlue' both exist, there's no 'lightRed', so don't assume that any color name will work. If you're not already familiar with the weirdness of CSS color names, there are many sites online that will show you color swatches for each of them. Or just stick with RGB values if you want precise control.

The rest of the file is mostly overrides for specific handles. If you want to replace the odd shape that Inkscape uses for the center of rotation with a simple cross, for example, then poking around with the '.inkscape-adj-center' CSS ruleset is the way to go.

```
.inkscape-adj-center {
    shape: "cross";
    stroke-width: 5px;
}
```

Before and after shown above.

Just bear in mind that not every handle in Inkscape is amenable to the full scope of the changes available, even in this limited subset of CSS. There's a comment in the '.inkscape-guide-handle' section that states that guide handles are deliberately small and unobtrusive. Personally I find them too small, so nudging the scale value here lets me increase their size without affecting the other handles. But trying to change the handle shape to a diamond (or any of the other supported shapes) doesn't work in this case.

Most users will probably only ever use the default handle shapes and colors in Inkscape, perhaps adjusting their size in the Preferences dialog, but that's all. As I've shown, if you really want to go overboard with a mish-mash of colors and stroke thicknesses, this custom CSS file lets you do that. But, more usefully, it can be used to make more subtle changes that might perhaps make your life with Inkscape just a little easier – whether that's changing the size or shape of some specific handles, or globally changing colors the suit your taste and needs. It's great that Inkscape offers this capability, even if it does require a little technical skill to achieve.

Just remember, if you manage to break things completely, simply throw the file away and start again. With that safety net in place, you can't go far wrong.

Mark uses Inkscape to create comics for the web (www.peppertop.com/) as well as for print. You can follow him on Twitter for more comic and Inkscape content: **@PeppertopComics**

THE DAILY WADDLE

shells.com

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BODHI CORNER

Written by Moss Bliss

BACK NEXT MONTH

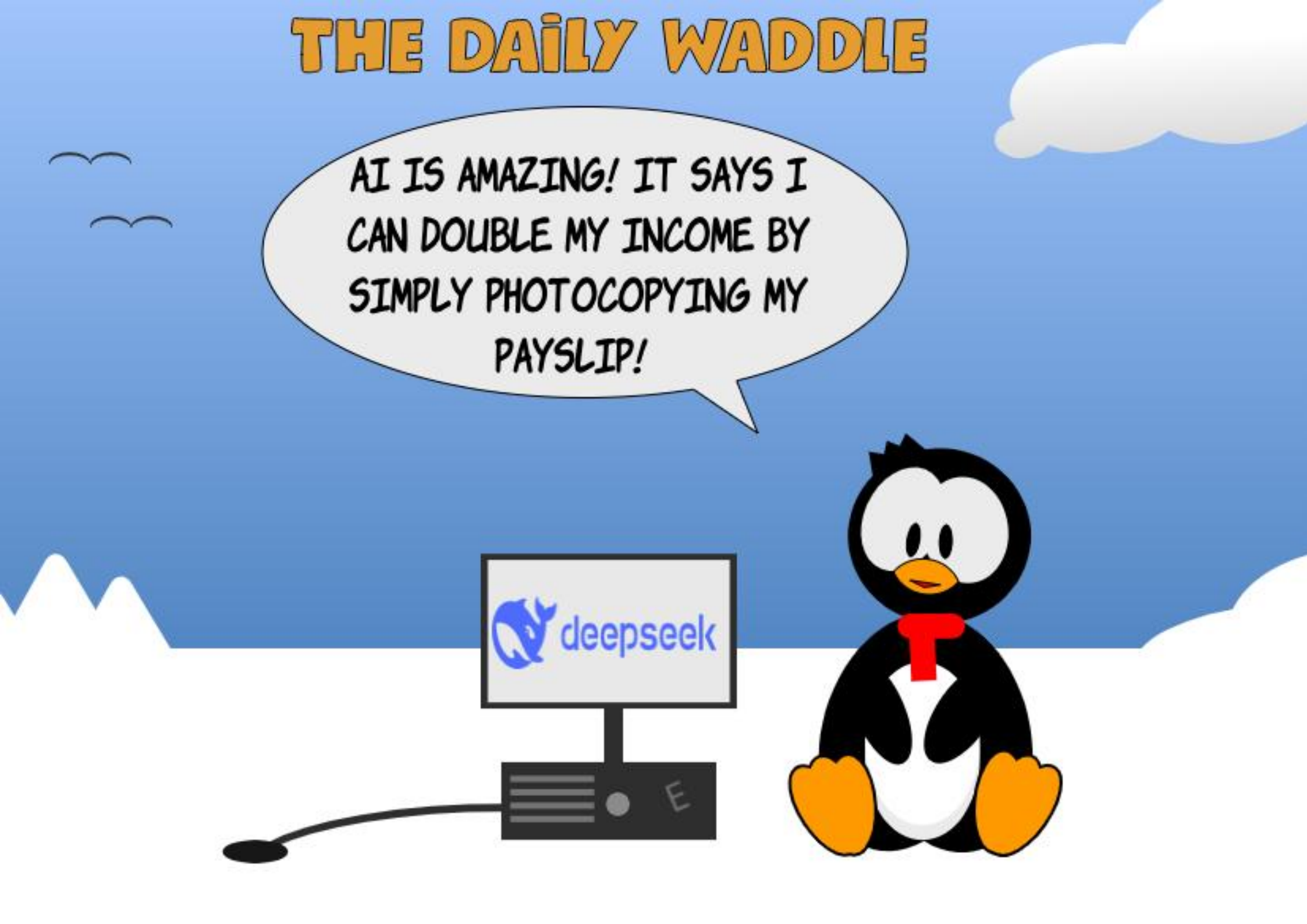
Moss has been using Linux since 2002, and has been co-host of mintCast since Oct 2018, Distrohoppers Digest from 2019 to 2024, and host of Full Circle Weekly News since April 2021. He is retired but works as a substitute teacher, and lives in Eastern Tennessee.

UBPORTS DEVICES

Written by UBports Team

BACK NEXT MONTH

THE DAILY WADDLE



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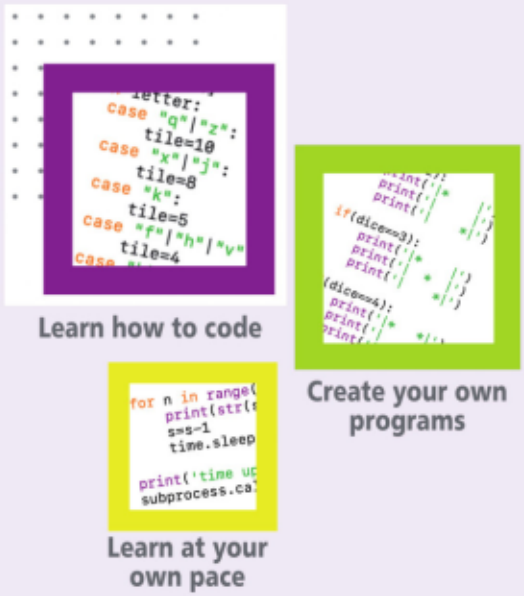

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MY OPINION

Written by Erik

BACK NEXT MONTH

Write For Full Circle Magazine

Guidelines

The single rule for an article is that **it must somehow be linked to Ubuntu or one of the many derivatives of Ubuntu (Kubuntu, Xubuntu, Lubuntu, etc).**

Rules

• There is no word limit for articles, but be advised that long articles may be split across several issues.

• For advice, please refer to the **Official Full Circle Style Guide**: http://bit.ly/fcmwriting

• Write your article in whichever software you choose, I would recommend LibreOffice, but most importantly - **PLEASE SPELL AND GRAMMAR CHECK IT!**

• In your article, please indicate where you would like a particular image to be placed by indicating the image name in a new paragraph or by embedding the image in the ODT (Open Office) document.

• Images should be JPG, no wider than 1200 pixels, and use low compression.

• Do not use tables or any type of **bold** or *italic* formatting.

If you are writing a review, please follow these guidelines :

When you are ready to submit your article please email it to: articles@fullcirclemagazine.org

Translations

If you would like to translate Full Circle into your native language please send an email to ronnie@fullcirclemagazine.org and we will either put you in touch with an existing team, or give you access to the raw text to translate from. With a completed PDF, you will be able to upload your file to the main Full Circle site.

REVIEWS

Games/Applications

When reviewing games/applications please state clearly:

- title of the game
- who makes the game
- is it free, or a paid download?
- where to get it from (give download/homepage URL)
- is it Linux native, or did you use Wine?
- your marks out of five
- a summary with positive and negative points

Hardware

When reviewing hardware please state clearly:

- make and model of the hardware
- what category would you put this hardware into?
- any glitches that you may have had while using the hardware?
- easy to get the hardware working in Linux?
- did you have to use Windows drivers?
- marks out of five
- a summary with positive and negative points

You don't need to be an expert to write an article - write about the games, applications and hardware that you use every day.

Kubuntu 25.10 is the 42nd Kubuntu release and the third one with the Qt toolkit-based Plasma 6 desktop. It came out with all the other Ubuntu flavors on 9 October, 2025.

This is the final of the three interim releases which make up this development cycle which will lead to the next LTS version, Kubuntu 26.04 LTS, due out on 23 April, 2026.

Because it is an interim release, Kubuntu 25.10 will have nine months of support, running until July 2026. As the last interim release in this cycle, it also gives us a final window into what we can expect in that upcoming LTS.

Installation

I downloaded the Kubuntu 25.10 ISO file via BitTorrent from the official source and did a command line SHA256 sum check on it to confirm that the file integrity was good. I always recommended this step to make sure you have an accurate download.

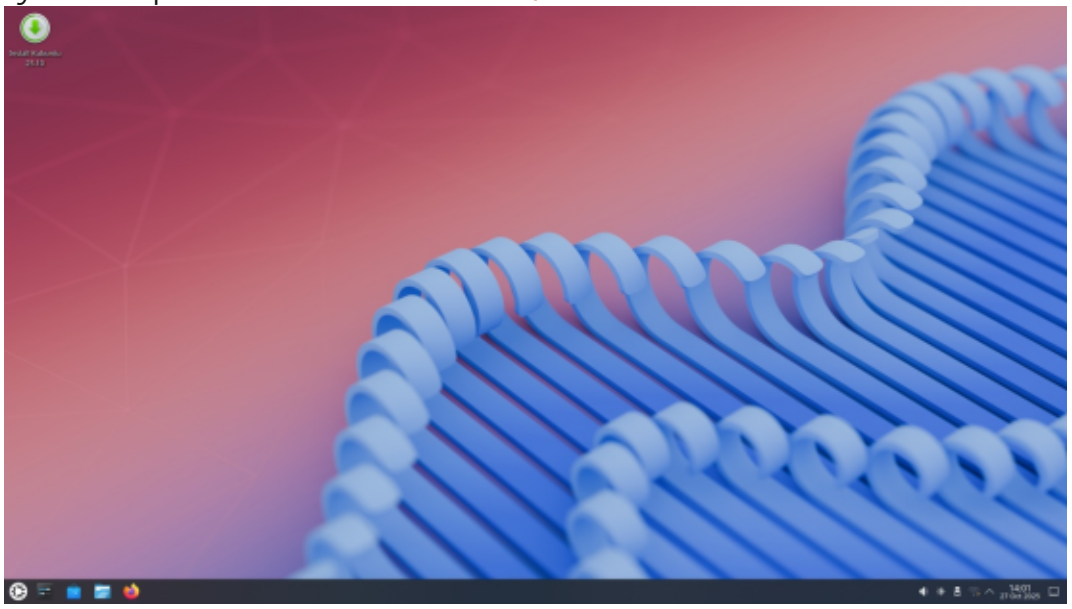
This Kubuntu ISO file turned out to be 4.9 GB in size which is 200 MB bigger than the last release.

I dropped the ISO file onto a USB stick equipped with Ventoy 1.1.07 and it booted up without any problems, as expected, given that Kubuntu is listed as officially supported by Ventoy.

System requirements

The recommended minimum system requirements for Kubuntu 25.10 are the same as for Ubuntu. They have not changed for this release and remain:

2 GHz dual-core processor
4096 MiB RAM (system memory) for physical installs
2048 MiB RAM for virtualised installs
25 GB (8.6 GB for minimal) of hard-drive space (or USB stick, memory card or external drive but see LiveCD for an alternative approach)
3D acceleration-capable GPU with at least 256 MB of VRAM
1024x768 or higher resolution display



USB flash drive or DVD drive or for the installer media
Internet access is helpful

That recommended 4 GB of RAM is probably a bit light if you plan on doing much web browsing, 8 GB or greater is more realistic.

New

The Kubuntu development team says "this release emphasizes Wayland adoption, modern security, and seamless integration with the open source world."

Kubuntu 25.10 brings a lot of small and incremental changes, most of which will be invisible to desktop users. It uses the Qt 6.9 toolkit, KDE Frameworks 6.17.0, has refreshed applications from KDE Gear 25.08 and features the KDE Plasma 6.4 desktop. It also comes with Linux kernel 6.17 for newer hardware support and uses systemd 257.9 for its initialization system. All of these are upgrades from the last release, Kubuntu 25.04.

This version is the third one using a Wayland display server session as the default. What is different is that in Kubuntu 23.10 the old X11 server is no longer installed as a boot option, although plasma-session-x11 can be installed if needed. I think most users will like how Kubuntu performs with Wayland and are not going to miss X11. Wayland not only means a more smooth and responsive display but those odd X11 screen flickers are a thing of the past.

Like Ubuntu 25.10, Kubuntu also introduces sudo-rs, a new Rust-based sudo system. This has some behind-the-scenes advantages, like improved memory safety and reduced vulnerabilities. Most users will not notice the difference in daily use, though.

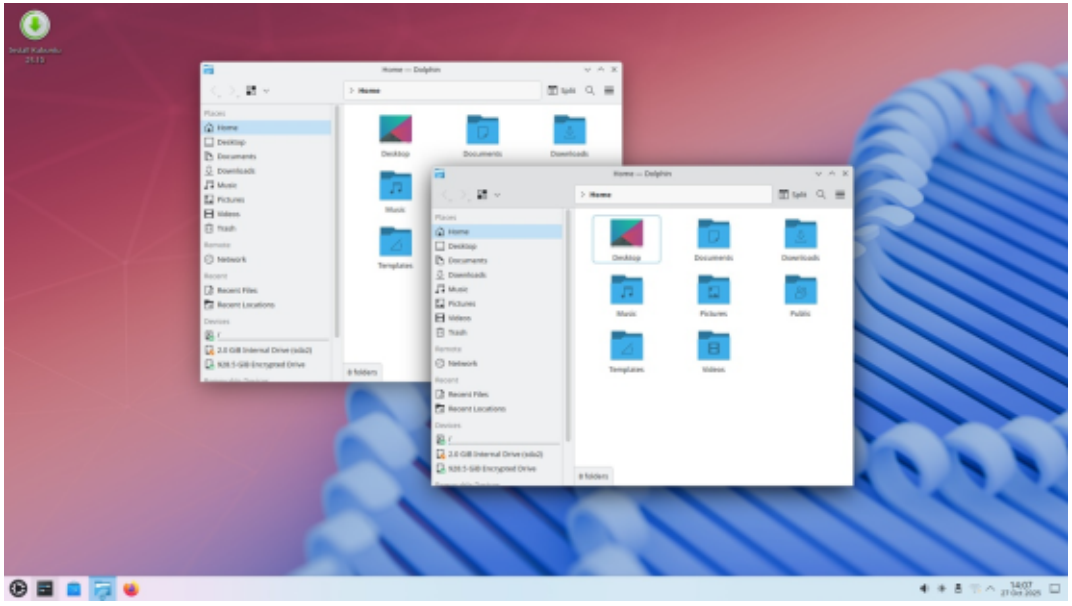
Settings

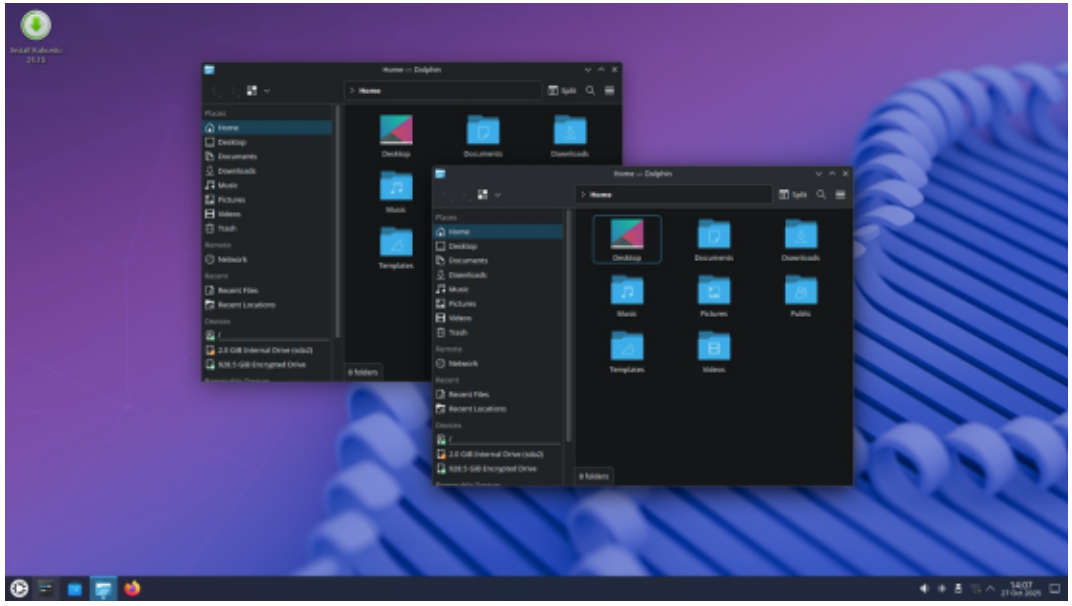
Kubuntu has always given its users a really wide range of customization choices and Kubuntu 25.10 with the Plasma 6 desktop maintains this philosophy. It offers:

- Five global themes (Breeze, Breeze Dark, Breeze Twilight, Kubuntu & Oxygen)
- Four application styles (Breeze, Fusion, MS Windows 9X & Oxygen)
- Five Plasma styles (Breeze, Breeze Dark, Breeze Light, Kubuntu Focus & Oxygen)
- Five window color schemes (Breeze Classic, Breeze Dark, Breeze Light, Oxygen & Oxygen Cold)
- Three window decoration styles (Breeze, Oxygen & Plastik)
- Two icon sets (Breeze & Breeze Dark)
- Eight cursor styles (Breeze Dark, Breeze Light, KDE Classic, Oxygen Black, Oxygen Blue, Oxygen White, Oxygen Yellow & Oxygen Zion)
- Three system soundscapes (Ocean, Oxygen & FreeDesktop)
- Three splash screens(Breeze, Oxygen & None)
- Two login screens (Breeze & Kubuntu)
- Ten boot splash screens (BGRT, Breeze, Breeze (Text Mode), Details, Kubuntu Logo, Kubuntu Text, Spinner, Text, Tribar & Ubuntu Text)
- 47 wallpapers

As always, these are just the options which are installed with most of the settings pages have one-button downloads to get lots more.

Like the last release, Kubuntu 25.10 has 68 preinstalled widgets. These widgets are small applications that can be added to the panel and display on the desktop, including things like clocks and weather reports. Hundreds more of them can be downloaded for installation, limited only by your tolerance for panel icon clutter. On the Plasma 6 desktop, the widget installation options are hidden





away in the panel's right-click menu and not where you might expect them to be, in settings, so they are easy to miss. Widgets in Plasma 6 are also displayed differently from Plasma 5. On the former desktop most of them appeared as boxes on the desktop itself whereas now they appear as panel icons until clicked to open, making them less intrusive at least.

As has been the case with most Kubuntu releases, this one comes with a new default wallpaper, “Coast” by Krystian Zajdel. Zajdel has designed Kubuntu's wallpapers for a long time now and always comes up with something distinctive for each release. Coast comes in light and dark versions and changes from one to the other depending on the theme selected. There are 47 wallpapers provided, the same number as in the last release, many being favorites from past Kubuntu releases. As usual with Kubuntu, the developers have ignored the code name for this family of Ubuntu releases, "Questing Quokka", and there are no marsupial-themed wallpapers.

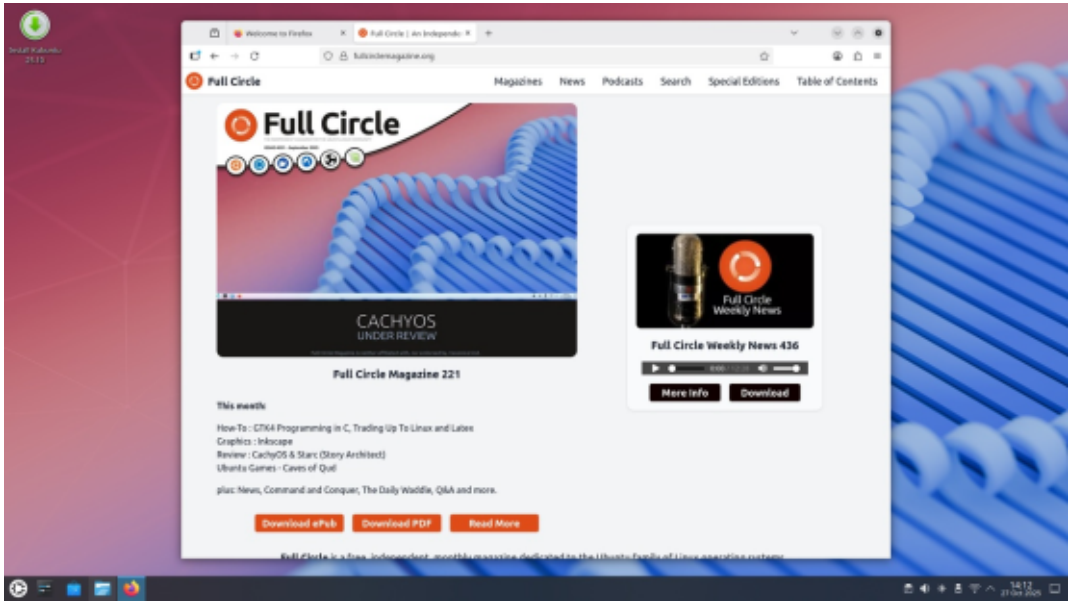
Applications

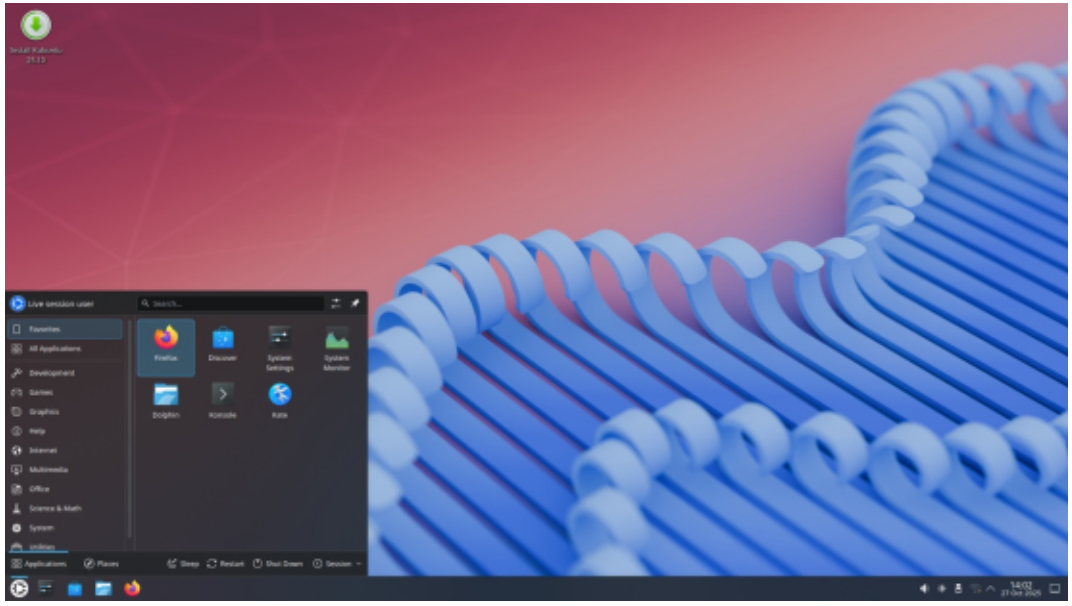
Some of the applications included with Kubuntu 25.10 are:

Ark 25.08.1 archive manager
CUPS 2.4.12 printing system*
Discover 2.1.2 software store*
Dolphin 25.08.1 file manager
Elisa 25.08.1 music player
Firefox 143.0.4 web browser**
Gwenview 25.08.1 image viewer
Haruna 1.4.0 video player
Kate 25.08.1 text editor
Kcalc 25.08.1 calculator
KDE Connect 25.08.1 smartphone connection
KDE Partition Manager 25.08.1 partition editor
Kmahjongg 25.08.1 game
Kmines 25.08.1 game
Konsole 25.08.1 terminal emulator
Kpatience 25.08.1 game
Ksudoku 25.08.1 game
LibreOffice 25.8.1 office suite, less only LibreOffice Base database
NeoChat 25.08.1 Matrix client
Okular 25.08.1 PDF viewer
PipeWire 1.4.7 audio controller
Plasma System Monitor 6.4.5 system monitor
Skanlite 25.08.1 scanning utility
SkanPage 25.08.1 multi-page scanning utility
Spectacle 6.4.5 screenshot tool
Startup Disk Creator 0.4.1 (usb-creator-kde) USB ISO writer*
Systemd 257.9 init system
Thunderbird 140.3.0 ESRr email client**
Vim 9.1.0967 console text editor*

* indicates same application version as used in Kubuntu 25.04
** supplied as a Snap, so version depends on the upstream package manager

Most of the KDE applications provided have been updated to





their KDE Gear 25.08.1 versions, but there is no change to the actual mix of default applications provided.

This list of applications is quite complete and will let most desktop users get right to work after installation.

LibreOffice 25.8.1 is only missing LibreOffice Base, the office suite's database application, which is omitted because few people use it these days. it is in the repositories for installation, if needed.

The included Dolphin 25.08.1 file manager is even more refined and slick than past iterations. It lacks the clean, simple look of the GNOME desktop's GNOME Files (nautilus) 49.0 file manager, but it does feel less technical and more user-friendly than past versions, including how it shows file transfers in progress.

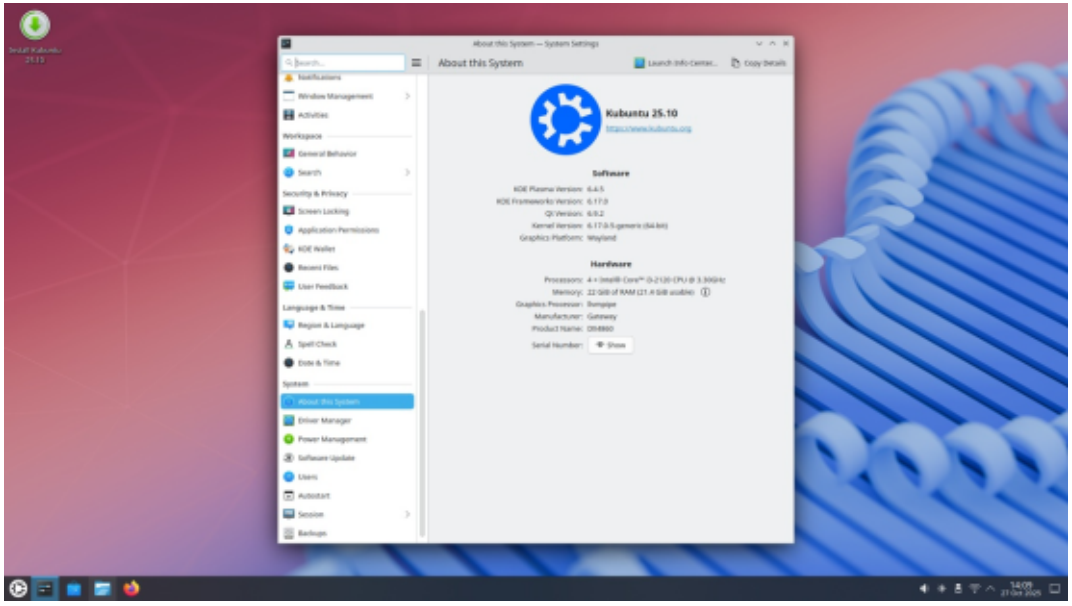
Conclusions

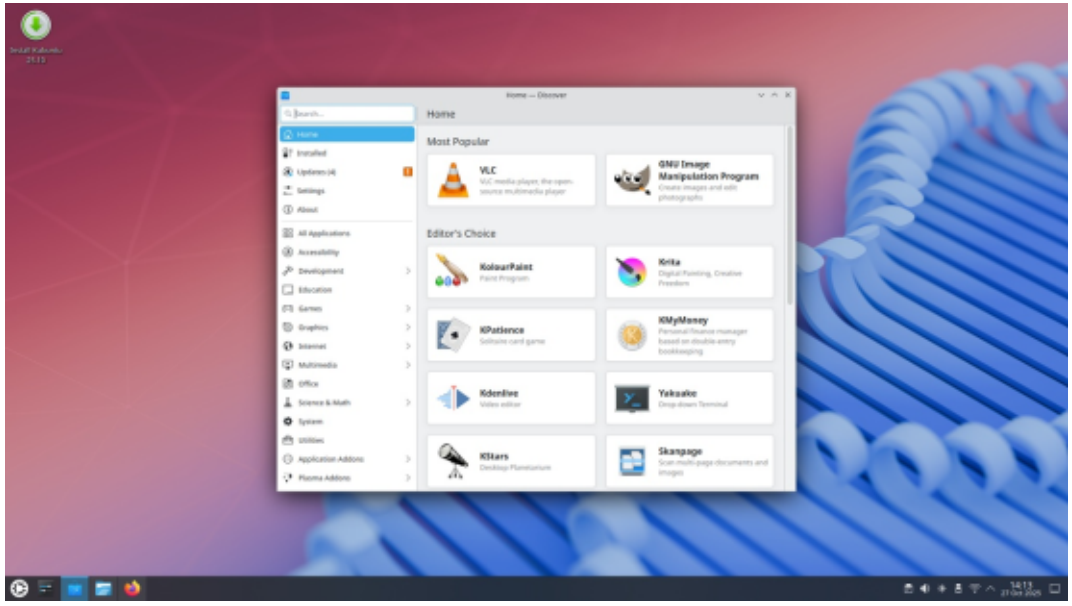
Kubuntu 25.10 builds on the two earlier releases in the cycle, 24.10 and 25.04, with incremental upgrades to the software. As the final interim release of three in this development cycle, this probably indicates that Kubuntu 26.04 LTS, due out on 23 April 2026, will bring some improvements over the previous LTS release, Kubuntu 24.04 LTS, but without much drama. The most notable changes in this whole development cycle so far are the Plasma 6 desktop replacing Plasma 5 and the introduction of a Wayland display server, both of which came in the first release of the cycle, which is the way it should be done. The two following releases, including this one, have allowed enough testing to bring confidence to include these in the LTS.

I think Kubuntu users will pleased with Kubuntu 25.10 and with the direction that this development cycle is taking the distribution. The progression over time is careful and well thought out.

External links

Official website:
https://kubuntu.org/





Adam Hunt started using Ubuntu in 2007 and has used Lubuntu since 2010. He lives in Ottawa, Ontario, Canada, in a house with no Windows.

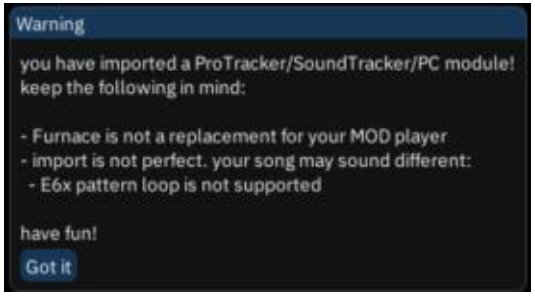
Website: - https://tildearrow.org/furnace/

Price: Free!

Blurb: "*the ultimate chiptune music tracker.*"

I like Alternative.to as they always have reasonable Linux alternatives listed. The cross referencing, however is broken. Say notepad had fifty alternatives, and I click on one of those, I may only get back ten alternatives for that one, instead of fifty. I was looking for a SID player, when I short circuited and searched for MilkyTracker alternatives and only found two alternatives for Linux. That can't be right, I thought? I squirrelled for a moment and I ended up with Furnace. Furnace turned out to be so much more than a SID file player. I think it is an amazing find and while I do not buy the infinite monkeys at typewriters will type Shakespeare, (anything times zero is still zero, even infinity) it was lucky to run across this.

So what is Furnace then? In essence it is a sound chip (audio processor) emulator and a sound tracker. That would mean it should be able to play back files too, right? I immediately tried and was greeted by a warning:



Warning aside, it played the file like a champ!

To understand why I like MOD and SID files and the like, you need to consider the size. If I take the C64 file for: "There's a computer in my backpack and a chiptune in my heart", it is 5k in size, versus the .mp3-file that is 100% the same, at 3MB!! While that does not seem impressive when people have 30Mb .flac-files, you need to realise I can store 600 of those for every .mp3-file and have no audio loss. Yep, there is no audio loss, because instead of being a recording, it is a "recipe" for the song to be generated, every time you play it.

Installation

Unfortunately, since the project is still in the pre- 'version 1.0' stage, there is no installer, you can download the project as a zip file and unzip and run the executable. For a project that is still so early in its development, it is well rounded, with documentation, demo's and instruments all bundled in the zip file.

Terminology

If at any stage, any of the terminology like 'ADPCM' is foreign to you, you can simply look it up in the provided manual, in PDF format.

Usage

Before I started, I looked at the list of supported sound chips / systems that it emulated and the list is truly impressive! If you load up a file, the

system auto detects the system that the file is from and I have yet to find a file to fool it. Even early Amiga MOD files, before pro tracker, got detected correctly. That said, I'm sure none of you reading this wants to hear about my playback escapades. (For those of you familiar with Milky Tracker, this is similar.)

Furnace is a tool for creators! I can hear some of you now, "have four channels, will travel". While I have about as much musical flair as my neighbour's cat, I'll try to guide you as best I can. To understand what we are working with, we need to identify the main parts. The application is clearly delineated into a top and bottom half. The top has four blocks, the bottom half has numbered rows with dots in a large block and a helpful panel listing effects. The large window is where you will be spending most of your time, composing your music. If you pay attention to the helpful panel to the right of the main one, you may have noticed that all the effects have odd numbering. That is because the tool works in hexadecimal. Yes, that hexadecimal, as in, base sixteen. If you cannot do hexadecimal, then count on your fingers! How do you do that?

Simple! Using your thumb, palm towards you, point it at your pinky finger. It has three joints, the first being zero, then one, then two. Now move to the next finger and continue from the top down until you have reached the bottom of your index finger, then count the four fingers themselves, still using only your thumb and you have 0-15. Mentally mark 10 as 'A' (meaning that your pinky by itself is C) and you are set!

The first line in the main window is line 0. Go ahead and click anywhere on that line. Now, using your arrow keys, move the little highlight you placed, around like you are playing 'snake'. Now hit the space bar. The line will turn red, indicating that you are in recording mode. Hit space bar again to turn it off. Easy, no?

Before we move any further, I want to explain that time moves 'down' in our main window. If I play a note, the note following it will be below that one. (though there are clever ways to jump around, I just want you to understand how time flows inside Furnace)
Right, navigate to zero again and hit the space bar to record.

Now press: zxcvb and press the space bar again. (If you know music, don't judge, I'm trying to make people excited for something they can do themselves, rather than making "twinkle twinkle") You heard the tones coming from your keyboard presses. Your keyboard acted as a piano and you laid down your first notes. Those of you that are on the ball, may have tried to press the play button, to find that there was no sound and the lines just kept running down, regardless of where you moved the highlighted block. This is because the player plays the whole 'pattern' from 0 to 63, before either looping or moving on to the next. You will need to hit one of the "repeat" buttons to get it to play. So now you know the "flow". So to play what you just laid down, use the arrow keys to move the highlighted block over a note or pattern and hit Enter. ;)

You may have noticed that the "notes" you recorded only appeared in one column. Each column is a "channel" capable of only playing one note per row. You add multiple channels, with different (or the same!) instruments to make up a tune.

The amazing part of tracker software is that you don't have to lay down each note perfectly, it just has to be there to be manipulated, after the fact. Post-processing, if you will. If you listen to our notes we just laid down, the first will play, then the second cuts in a split second later, taking over, and so on. If you look at the oscilloscope output while it plays, you would see sine waves getting tighter, but other than that, remain the same. If we take it at face-value, if there is a note on every line, we play 16 notes per second. Now move your highlighted block to the second note and hit the delete key. Skip the next and remove the one after that, Now we have a knit one, slip one pattern. When you play those, note that each note keeps playing until the next one starts. The blank lines did not equal silence.

While we did not touch on samples and instruments and building patterns to make songs and the like, you now now enough to be dangerous. If you want us to run an article or two on making a tune, let us know at:
misc@fullcirclemagazine.org, or reach out to me on Telegram on the group, otherwise we end it here.

LETTERS

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ubuntuforums.org/forumdisplay.php?f=270

Full Circle Needs You!

Without reader input **Full Circle** would be an empty PDF file (which I don't think many people would find particularly interesting). We are always looking for articles, reviews, anything! Even small things like letters and desktop screens help fill the magazine.

See the article **Writing for Full Circle** in this issue to read our basic guidelines.

Have a look at the last page of any issue to get the details of where to send your contributions.

Q&A

Compiled by EriktheUnready

If you have a Linux question, email it to: questions@fullcirclemagazine.org, and Erik will answer them in a future issue. Please include as much information as you can about your query.

Welcome back to another edition of Questions and Answers! In this section, we will endeavour to answer your Ubuntu questions. Be sure to add details of the version of your operating system and your hardware. I will try to remove any personally identifiable strings from questions, but it is best not to include things like serial numbers, UUIDs, or IP addresses. If your question does not appear immediately, it is just because there are many waiting, and I do them first-come-first-served.

I was chatting with a neighbour who asked me about reviving his old laptop. Naturally, I proposed Linux. He said sure, but Linux always has 'stupid' names. I thought about it for a second. It's true there are things like Slackel or Stacer or Suse, (Sssomebody, Ssstop me...) but they need to be searchable and more importantly, findable, specially on the internet. I recall looking for a good book I once read, "Invisible man", but I forgot the author's name. Trying to find it only brought up H.G. Wells and when I read that, it was disappointing. Nowhere near what I remembered, had I dreamt it all? Then I found another one written by Ralph Elison and that was worse. When I couldn't find it, I realised I had the name wrong, it was "Memoirs of an Invisible Man" by H.F Saint, which incidentally was the first time I heard the name "Epstein", before it was all over the news. I understand the naming of Linux apps and distro's may sound funny, but to me it is simply a way to try stand out? Taking the books example, of how difficult it was to find something with "invisible man" in the title, imagine if all the Linux distro's had similar names? Geany is a good example, Genie? Jeanie? ... or aseprite, asprite? Are weird naming conventions holding Linux back from mass adoption or actually bad spelling making things difficult to find?

Q: I use ubuntu in English as the local language is poorly supported, but I noticed another issue, when I choose different languages, my calendar changes too. First day of the week becomes Sunday instead of Monday. I don't see a way to change that?

A: There are a few ways to do that, the easiest is via Gnome extensions, https://extensions.gnome.org/extension/1720/weeks-start-on-monday-again/ or you can simply edit your /etc/default/locale file, but that will require you to reboot for it to take effect.

Q: I have Chromium hang up on me in Ubuntu 24.04. I just installed and run it, I didn't change anything or added any addons yet. It's just dead in the water. <removed>

A: Ok you gave me very little to go on, but if it is the Snap version, I suggest checking the "permissions" settings under "Apps" in your Gnome settings. A bit of digging also revealed this: https://issues.chromium.org/issues/442860477 -so you may just have to wait of a newer version.

Q: I'm still on Unbuntu 18.04 on my PC, as I have power issues and newer versions of Ubuntu does not allow me to easily add forcefsck to the drive to fix it. I'm old and cannot afford a UPS. My issue is with dpkg tho, sudo dpkg -configure -a dpkg: error: unknown option -o I'm using the guake terminal.

A: Honestly in my life, I have never used -configure. However I have used --reconfigure many times. I suspect that the configure option, just like the reconfigure option needs two dashes.

Q: I have been faithfully writing every Ubuntu release to DVD, sometimes I go back to a certain

release to run software that no longer works on Ubuntu 25.04. Thing is, I have noticed that some are not 100%. Is there a way for me to confirm this? I suspect my DVD drive needs a clean or my batch of DVD's are duds. I'm willing to re-write them as I'm retired and have plenty of time.

A: Sure, go to this page: https://old-releases.ubuntu.com/releases/ and scroll all the way down to the directory listing. Find your release, say, 12.04, click on that and again, scroll down until you see a directory listing. You should find the MD5SUM's or SHA256SUMS for you to verify your written DVD's with.

Q: My question is about the Snap store. I have noticed that software list as "confinement: classic" in the case if intellij. Why is it there and should I be concerned? Should I rather install another IDE? How safe is VS Code then?

A: Whoa, hold your horses. Once question per answer, or things get out of hand pretty fast. There is a long explanation here, but a simplistic way to look at it is that when you see that, install your application, like so: sudo snap install <application name> --classic -See our article on Snap packages. (Personally, when Bill Gates says "good moring", I check if the sun is shining)

Q: My PC runs Ubuntu 24.10 "Oracular Oriole" and for some reason, the file roller will not run. I'm too scared to uninstall as people tell me to do. I'm not very computer savvy.

A: Uninstalling file roller will not break Ubuntu. Do yourself a favour and install Engrampa. Use that as the default compression application and leave file roller where it is. The zip or rar file you usually just click on to extract, right click this time and pick "open with" and choose engrampa, and then set it as the default application for files of this type. Just an FYI, Ubuntu 24.10 is end-of-life since June.

Q: When I add https://launchpad.net/~gladky-anton/+archive/ubuntu/lammps to my fresh installation, it says no candidate or something and I'm stressing out. It was just something I have done for the last few upgrades, but what are my options now?

A: I surfed to the documentation for lammps, https://docs.lammps.org/Install_linux.html#ubuntu and I see they say you can just install it with:

```
sudo apt-get install lammps
```

so I'm assuming it is in the general repo's now and does not need a PPA any more? I'm not familiar with the software, but I would say read the documentation provided and if necessary, ping them directly.

Q: How can I bypass cloudflare with Ubuntu? I find https://installati.one/ubuntu/ a valuable resource and they are always in the way. I heard they are 1.1.1.1 but I use 8.8.8.8 as my DNS, so I don't understand how they are always in the middle?

A: Some websites use cloudflare for DDOS protection and to hide their true IP's. If they do this, there is no way for you to bypass that. Should the website come under attack, Clouldflare will block the IP's used. If your IP falls in that range, you will not be able to access the website.

Q: When I use LibreOffice Writer, and I click on my menu to launch a fresh copy of writer, it just brings up my current document. How do I make a new one. Sorry for my English.

A: Do you mean a new instance or a new writer document? (I am confused as to what it is you want) You don't need to launch it from the menu again, you can simply use the keypress, CTRL+N to launch another writer document in its own window. The long way is, in your open writer window, click on file->New->Text document. Since LibreOffice writer is launched from LibreOffice base application, that contains all the "tools" such as writer and calc and so forth, you can't really launch a new instance of writer by itself. Each new "text document" is unto itself.

Book of Hours DLC

Website: https://www.gog.com/en/game/book_of_hours

Price: 14.99 (GOG)

Blurb: "*HOUSE OF LIGHT is a story-focused expansion for occult library management sim and narrative crafting RPG BOOK OF HOURS.*

Europe, 1937. The War in the World is coming, and worse yet, the War in the Sun. In this gathering gloom, the notables of the occult underworld consider new weapons; new alliances; new paths. Who can they turn to for help, if not the Librarian of Hush House?

Explore visitors and their stories in much greater depth. Host exotic feasts and sophisticated soirées. And in your own quiet way, shape the genesis of the controversial Lighthouse Institute."

What is it? (TL;DR)

An elegant, melancholy, combat-free, RPG set in an occult library, from the creator of Fallen London and Sunless Sea. Enjoy the sweet peace of organising books and customising your new home, all while peeling centuries of history from the occult stones about you.

Note: Fallen London and Sunless sea fall under "Failbetter games" and this series falls under "Weather Factory", it seems that that Alexis Kennedy left Failbetter and they have not come up with anything new since he left. I don't keep up to date on industry news, I let the games speak for themselves.

We have looked at one of the games in this series before, Cultist Simulator, however, this is the 2025 August edition, with House of Light (HOL) dlc.

This set included the base game, the house of light dlc, and the perpetual edition dlc, as well as wallpapers and an OST.

So let's start there, the "wallpapers" are bad. There I said it. They remind me of mid nineties computer art by teenagers and the rest are just screen-shots.

Honestly, nothing I'd put on my desktop, but then, in contrast, there is the OST. It hints of 'American Beauty' soundtrack and French choirboys. Some would describe it as serene or calming. There are twenty five tracks with high quality and .mp3-files.

Installation

The GOG installer took a bit longer than usual, but the dlc, installed in a second, each. Once installed you can go ahead and launch the game as usual.

*Whenever I hear "hush house", that is mentioned in the game, my mind immediately goes to "blown house". (If you know, you know.) If you don't know Brian Lumley or Titus Crow, where have you been? The other reason I bring this up, is because this series is crying for some of it!

Graphics

Alexis Kennedy (https://www.alexiskennedy.co.uk/) has found a way to turn a board game, into a computer game and keep it

interesting. I had to lead with that as you need to understand where I'm coming from. So when I say the graphics are serviceable, I mean it. Since the game is 'all about that puzzle', the graphics don't need to be sweet, but I'd still wager that if they were sweeter, the game would be more popular. While the graphics are "better" than Cultist Simulator, it still begs for more. This "seems" to be addressed in their upcoming game, Travelling At Night, but that is not released yet and so far it seems like they are going with "more is better" instead of moving out of 1999-style PC graphics.

Sound

There is not much to say here, other than the OST is what plays during the game and it fits well. You can play the soundtrack outside of the game and not have to scratch your head, unlike the last game I looked at, but it's not "listening music" if you know what I mean. I *can listen to it and I *have listened to it, solo, but I probably won't do it again. Within the game it fits with the setting and (for me at least) *belongs in the game as it enhances the game.

Gameplay

Undoubtedly, this guy knows what he is doing. Book of hours and now house of light, is a very unusual, touching on the esoteric and (maybe) even The Black Circus, but it has a solid gameplay loop. Since we did not review the base game, this dlc just adds more content. More books, more stories, you get the idea. The gameplay is leisurely, but you can now invite guests and the like. While I don't want to give anything away, as the game is about exploration and investigation, I'd probably mess it up for you if I tried, as the game breaks with so many norms when it comes to computer gaming. I'll lump some story in here, to sort-of explain. There is this town that has a great manor house, that is a repository of books, like you would see at a public library. I suppose one could say it was a private library. (but also not) You are taking care of this huge mansion. Like the mansion, the town is also explorable. In the mansion, you need to move from room to room, "tidying up", but the rooms are not accessible until you solve the mystery. The game is meant to be played in your head, (even the character you play does not do concrete things like attack or defend, but 'considers' things) and it is better if you *do live yourself into the lore, (the reason why graphics would not be important) but the lore is fed to you in tiny pieces and *you do the world building, based off that. This is how the game sucks you in...and man...does it do it so well. So, like many games, you start as a shipwrecked survivor with amnesia. (a trope?) The game uses cards to represent your thoughts and actions and the "currency" you need to spend, to perform an action, is similar to Cultist Simulator, with esoteric, astrology-based hocus; cups and hearts and grail etc. It sort of reminds me of how you 'tap' lands in Magic the Gathering? (I've never played, someone tried to explain it to me once.)

Requirements:

OS: Ubuntu 22.04, Ubuntu 24.04 (these are the standard Unity Player requirements; other distros may work; we test on Mint Cinnamon)
Processor: 2GHz or better, x64 architecture with SSE2 instruction set support.
Memory: 1 GB RAM
Graphics: 4GB VRAM, 1600x1024 minimum resolution, OpenGL 3.2+, post-2012 integrated graphics
Storage: 5 GB available space

(My installation, including the DLC took up 2.7GB of space.)

What does the dlc bring to the table?

SOCIAL EVENTS

Host influential dinner parties in the crumbling splendour of Hush House. Choose a location that suits you - the Hall of Division, the Chapter House, or the Physic Garden, perhaps? - and send out invitations. Become tastemaker of the occult demimonde, or curate an exclusive society of only the most select adepts. Get to know the great and the good, encourage discussion around the table, and observe the chemistry - or animus - between your guests. You'll need food, drink, ambience and timing, but a successful soirée will influence the world in subtle ways, sending ripples far beyond your walls.

COOKING

Your guests will grow hungry, and it's up to you to cater to their interesting palates. Bake Sea-Pie and pair it with your vintage of choice. Perfect your Kedgeree. Serve Deep-Sweetened Assam and Poires Belle Hélène, dabble in Mushroom Meringue or jug innocent pheasants. Dive into the dangerous world of 1930s European recipes and influence your attendees with your choice of spices, sweetmeats and dainties.

ADVANCED VISITOR STORIES

You've dabbled in the Affair of the Oriflamme Heist. You've guessed what lies in the Messenger's Casket. Now help your Visitors delve deeper. Encourage alliances between strangers, or convince an ally to help you stymie a foe. Using an innovative new system, influence the wider world with in-depth Visitor stories and see the results between the branches of the Wisdom Tree. Where now does the dappled rose flourish? What did Zuthi hear at the Roost? What is the deeper connection between Rowena, Yvette, and Ys?

Once you've met someone, you'll also be able to add them to your address book and invite them to Hush House to pursue their business at a time of your choosing. When the Librarian calls, the invisible world listens.

THE LIGHTHOUSE INSTITUTE

You've wined, dined and appraised your chosen guests - now decide who might be the worthiest founders of the Lighthouse Institute. Who should be Treasurer?

Who might suit Secretary Vigilant? Does your group all share the same agenda, or does one founder sympathise with the Chandler, while another fears his coming Dawn?

Your selection will found the influential Lighthouse Institute and set its course through the world. So take your time, and choose wisely.

Conclusion

This is much more of a "cozy" game than Cultist Simulator and leans very much less on underlying Cthulhu-type mythos, than Cultist Simulator, but the gameplay loop is similar and that 1930's esoterica permeates the story. While I was looking forward to a Brian Lumley-esque story, the game went in another direction, creating its own personality. Since the dlc just adds more of the game, I'd say, get it, if you enjoyed any of the other games from the Weather Factory. The price is on the border of being too steep if you were to get it on another digital platform, where you don't get a game to download and keep, like GOG.

Erik has been in IT for 30+ years. He has seen technology come and go. From repairing washing machine sized hard drives with multimeters and oscilloscopes, laying cable, to scaling 3G towers, he's done it.

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The Patreon page is to help pay the domain and hosting fees. The money also helps with the new mailing list.

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