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1. GLib is a lower-level library that provides many useful definitions and functions available for use

when creating GDK and GTK applications. These include definitions for basic types and their limits, standard macros, type conversions, byte order, memory allocation, warnings and assertions, message logging, timers, string utilities, hook functions, a lexical scanner, dynamic loading of modules, and automatic string completion. A number of data structures (and their related operations) are also defined, including memory chunks, doubly-linked lists, singly-linked lists, hash tables, strings (which can grow dynamically), string chunks (groups of strings), arrays (which can grow in size as elements are added), balanced binary trees, N-ary trees, quarks (a two-way association of a string and a unique integer identifier), keyed data lists (lists of data elements accessible by a string or integer id), relations and tuples (tables of data which can be indexed on any number of fields), and caches.

1. **GTK+** (formerly **GIMP Toolkit**) is a [cross-platform](https://en.wikipedia.org/wiki/Cross-platform) [widget toolkit](https://en.wikipedia.org/wiki/Widget_toolkit) for creating [graphical user interfaces](https://en.wikipedia.org/wiki/Graphical_user_interfaces). It is licensed under the terms of the [GNU Lesser General Public License](https://en.wikipedia.org/wiki/GNU_Lesser_General_Public_License), allowing both [free](https://en.wikipedia.org/wiki/Free_software) and [proprietary software](https://en.wikipedia.org/wiki/Proprietary_software) to use it. It is, along with [Qt](https://en.wikipedia.org/wiki/Qt_(software)), one of the most popular tool-kits for the [Wayland](https://en.wikipedia.org/wiki/Wayland_(display_server_protocol)) and [X11](https://en.wikipedia.org/wiki/X_Window_System_core_protocol) [windowing system](https://en.wikipedia.org/wiki/Windowing_system). GTK+, or the GIMP Toolkit, is a multi-platform toolkit for creating graphical user interfaces. Offering a complete set of widgets, GTK+ is suitable for projects ranging from small one-off tools to complete application suites.
2. **GDK** ([GIMP](https://en.wikipedia.org/wiki/GIMP) Drawing Kit) is a [library](https://en.wikipedia.org/wiki/Library_(computing)) that acts as a [wrapper](https://en.wikipedia.org/wiki/Wrapper_pattern) around the low-level functions provided by the underlying windowing and graphics systems. GDK lies between the [display server](https://en.wikipedia.org/wiki/Display_server) and the [GTK+](https://en.wikipedia.org/wiki/GTK%2B) library, handling basic [rendering](https://en.wikipedia.org/wiki/Rendering_(computer_graphics)) such as drawing primitives, [raster graphics](https://en.wikipedia.org/wiki/Raster_graphics) (bitmaps), [cursors](https://en.wikipedia.org/wiki/Cursor_(computers)), [fonts](https://en.wikipedia.org/wiki/Font), as well as [window events](https://en.wikipedia.org/wiki/Event_(computing)) and [drag-and-drop](https://en.wikipedia.org/wiki/Drag-and-drop) functionality.
3. **GStreamer** is a [pipeline](https://en.wikipedia.org/wiki/Pipeline_(computing))-based [multimedia framework](https://en.wikipedia.org/wiki/Multimedia_framework) that links together a wide variety of media processing systems to complete complex workflows. For instance, GStreamer can be used to build a system that reads files in one format, processes them, and exports them in another. The formats and processes can be changed in a plug and play fashion. GStreamer supports a wide variety of media-handling components, including simple [audio](https://en.wikipedia.org/wiki/Audio_frequency) playback, audio and video playback, [recording](https://en.wikipedia.org/wiki/Sound_recording_and_reproduction), [streaming](https://en.wikipedia.org/wiki/Streaming_media) and editing. The pipeline design serves as a base to create many types of [multimedia](https://en.wikipedia.org/wiki/Multimedia) applications such as [video editors](https://en.wikipedia.org/wiki/Video_editing), [transcoders](https://en.wikipedia.org/wiki/Transcoding), streaming media broadcasters and [media players](https://en.wikipedia.org/wiki/Media_player_(application_software)).
4. **Pango** is a text layout engine [library](https://en.wikipedia.org/wiki/Library_(computing)) which works with the [HarfBuzz](https://en.wikipedia.org/wiki/HarfBuzz) shaping engine for displaying multi-language text. Full-function rendering of text and cross-platform support is achieved when Pango is used with platform APIs or third-party libraries, such as [Uniscribe](https://en.wikipedia.org/wiki/Uniscribe) and [FreeType](https://en.wikipedia.org/wiki/FreeType), as text rendering [backends](https://en.wikipedia.org/wiki/Front_and_back_ends). Pango-processed text will appear similar under different operating systems. Pango is a special-purpose library for text and not a general-purpose graphics rendering library such as [Cairo](https://en.wikipedia.org/wiki/Cairo_(graphics)), with which Pango can be used. The Cairo documentation recommends Pango be used to "render" text rather than Cairo for all but the simplest text "rendering.
5. **Cairo** (stylized as **cairo**) is an [open source](https://en.wikipedia.org/wiki/Open-source_software) [programming library](https://en.wikipedia.org/wiki/Library_(computing)) that provides a [vector graphics](https://en.wikipedia.org/wiki/Vector_graphics)-based, device-independent [API](https://en.wikipedia.org/wiki/Application_programming_interface) for [software developers](https://en.wikipedia.org/wiki/Software_developer). It provides primitives for [two-dimensional](https://en.wikipedia.org/wiki/Two-dimensional_space) drawing across a number of different [back ends](https://en.wikipedia.org/wiki/Front_and_back_ends). Cairo uses [hardware acceleration](https://en.wikipedia.org/wiki/Hardware_acceleration)when available. There is a formal proposal to standardize a [C++](https://en.wikipedia.org/wiki/C%2B%2B) 2D graphics API based on a mechanical transformation of Cairo