

Graphic User Interface FAQ

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General GUI Questions

What GUI toolkits exist for Python?

Standard builds of Python include an object-oriented interface to the Tcl/Tk widget set, called `ref:`tkinter`<Tkinter>`. This is probably the easiest to install (since it comes included with most [binary distributions](#) of Python) and use. For more info about Tk, including pointers to the source, see the [Tcl/Tk home page](#). Tcl/Tk is fully portable to the macOS, Windows, and Unix platforms.

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Depending on what platform(s) you are aiming at, there are also several alternatives. A [list of cross-platform](#) and [platform-specific](#) GUI frameworks can be found on the python wiki.

Tkinter questions

How do I freeze Tkinter applications?

Freeze is a tool to create stand-alone applications. When freezing Tkinter applications, the applications will not be truly stand-alone, as the application will still need the Tcl and Tk libraries.

One solution is to ship the application with the Tcl and Tk libraries, and point to them at run-time using the `envvar:`TCL_LIBRARY`` and `envvar:`TK_LIBRARY`` environment variables.

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To get truly stand-alone applications, the Tcl scripts that form the library have to be integrated into the application as well. One tool supporting that is SAM (stand-alone modules), which is part of the Tix distribution (<http://tix.sourceforge.net/>).

Build Tix with SAM enabled, perform the appropriate call to `c:func:`Tclsam_init``, etc. inside Python's `file:`Modules/tkappinit.c``, and link with libtclsam and libtkjam (you might include the Tix libraries as well).

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Can I have Tk events handled while waiting for I/O?

On platforms other than Windows, yes, and you don't even need threads! But you'll have to restructure your I/O code a bit. Tk has the equivalent of Xt's `:cfunc:XtAddInput()` call, which allows you to register a callback function which will be called from the Tk mainloop when I/O is possible on a file descriptor. See [:ref:tkinter-file-handlers](#).

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I can't get key bindings to work in Tkinter: why?

An often-heard complaint is that event handlers bound to events with the `:meth:bind` method don't get handled even when the appropriate key is pressed.

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The most common cause is that the widget to which the binding applies doesn't have "keyboard focus". Check out the Tk documentation for the focus command. Usually a widget is given the keyboard focus by clicking in it (but not for labels; see the `takefocus` option).