

Graphic User Interface FAQ

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\cpython-main [Doc] [faq]gui.rst, line 7)

Unknown directive type "only".

```
.. only:: html
```

```
.. contents::
```

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.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\cpython-main [Doc] [faq]gui.rst, line 20); [backlink](#)

Unknown interpreted text role "ref".

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.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\cpython-main [Doc] [faq]gui.rst, line 45); [backlink](#)

Unknown interpreted text role "envvar".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\cpython-main [Doc] [faq]gui.rst, line 45); [backlink](#)

Unknown interpreted text role "envvar".

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 libtkbam (you might include the Tix libraries as well).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\cpython-main [Doc] [faq]gui.rst, line 54); [backlink](#)

Unknown interpreted text role "c:func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\cpython-main [Doc] [faq]gui.rst, line 54); [backlink](#)

Unknown interpreted text role "file".

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](#).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\[cpython-main] [Doc] [faq]gui.rst, line 63); [backlink](#)

Unknown interpreted text role "c:func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\[cpython-main] [Doc] [faq]gui.rst, line 63); [backlink](#)

Unknown interpreted text role "ref".

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.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\faq\[cpython-main] [Doc] [faq]gui.rst, line 73); [backlink](#)

Unknown interpreted text role "meth".

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).