

Building a GTK+ application on Win32 using MinGW (by example)

This is a step-by-step guide for building a *GTK+* application on *Win32* using *Minimalist GNU for Windows (MinGW)*. I will do that by example, namely *DFCGen (GTK+)*.

1. Download *MinGW* from <http://www.mingw.org> and install it on your *Win32* operating system (i installed *MinGW 20110802*, using the associated installer `mingw-get-inst-20110802.exe`).¹⁾
2. Download an all-in-one *GTK+* bundle from <http://www.gtk.org/download/win32.php> and extract the archive directly into the *MinGW* installation directory. Note: Be careful when overwriting files. I had some problems with `intl/gettext`, because *MinGW* installed `libintl v1.2`, but *GTK* wants to overwrite this with `v1.1`.
3. Start the *MinGW* shell (`MSYS`) and enter `gtk-demo` to verify your installation.
4. Download additional tarball source packages (at this example *GSL* from <http://www.gnu.org/software/gsl>) and extract it into a directory anywhere.
5. In `MSYS` shell change to that directory and do a package build:²⁾

```
./configure --prefix=/mingw; make; make install
```

6. Extract the tarball distribution package, in this example `dfcgen-gtk-0.4.tar.gz` to a directory, which is reachable by the `MSYS` shell.
7. In `MSYS` shell change to that directory and build the package (but do NOT a `make install`):

```
./configure; make
```

8. Now some handy work comes into play:
 - First create a new directory for gathering all *Win32* installation files.
 - Copy the generated executable `dfcgen-gtk.exe` into this directory and change to it.
 - Copy the following directories from *MinGW* into this “gathering” pool:
 - `/mingw/etc` → `./etc`
 - `/mingw/lib/gtk-2.0` → `./lib/gtk-2.0`
 - Create a sub-directory `share` and copy the following directories from `dfcgen-gtk-0.4` in:³⁾
 - `data/filters` → `share/filters`
 - `data/pixmaps` → `share/pixmaps`
 - `data/templates` → `share/templates`
 - Start `dfcgen-gtk.exe` from a `DOS` shell or from the file manager. This will produce an error, stating that a `DLL` is missing. Typically this is a `DLL` from the *GTK+* package, which can be found anywhere under `/mingw` (probably in `/mingw/bin`). Copy the `DLL` also into the directory where `dfcgen-gtk.exe` now resides.
 - Start `dfcgen-gtk.exe` again and repeat the procedure (until no error).
 - If you want another language than English (internationalization, `i18n`, `locale`, `intl/gettext`) copy also the following directories:
 - from the *MinGW* installation: `/mingw/share/locale/de/LC_MESSAGES` → `./share/locale/de/LC_MESSAGES`
 - from the `dfcgen-gtk` build directory: `po/de.gmo` → `./share/locale/de/LC_MESSAGES/dfcgen-gtk.mo` (file renamed).
9. Copy the “gathering” directory to your final *Win32* installation directory, e.g.

C:\programs\dfcgen-gtk. You can start dfcgen-gtk.exe directly from this location (or create a shortcut on your desktop).

1)

Source code is hosted at <http://sourceforge.net/projects/mingw>.

2)

If you enter mount then you will see that C:\MinGW is mounted on /mingw.

3)

The sub-directory name "share" is preset by the Win32 port of GTK.

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