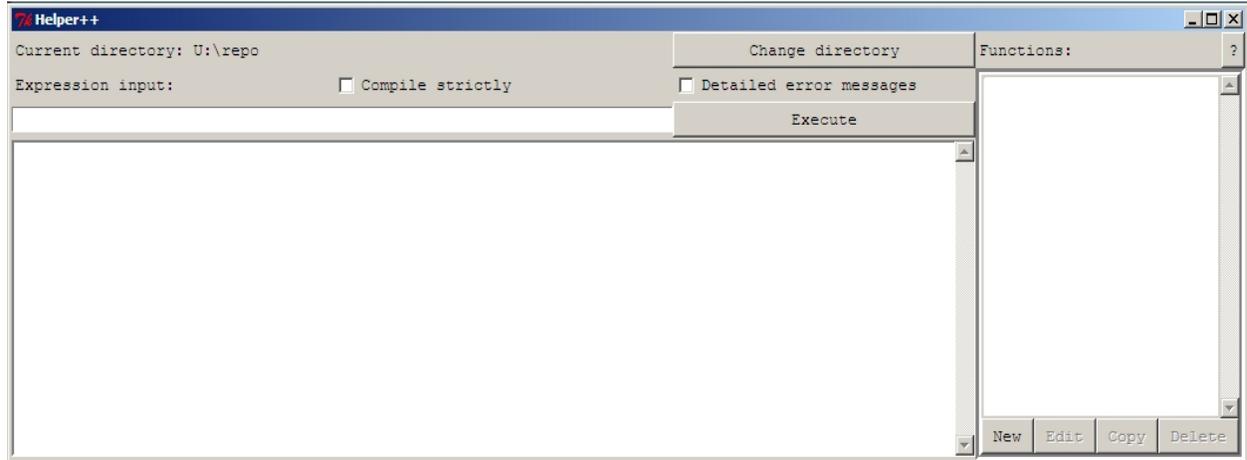


Helper++ User Manual



Getting Started

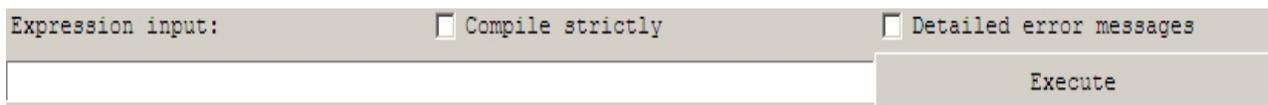
1. Download the Helper++ program from the public course website. Extract the files to your desktop or your preferred location for saving work.
2. Ensure that python version 3 or later is installed on your computer and that a copy of the GNU C++ compiler (g++) is installed on your computer.
 - a. You can download a python version 3 or later from www.python.org
 - b. Windows users: if you download and install the C++ IDE Dev-C++ from www.bloodshed.net, that will also download and install the GNU C++ compiler.
 - c. Max OS X users: (S. Tuttle note: I'm pretty sure this works for Lion, but I'm not sure it works for earlier versions of Mac OS X) Go to the App Store, search for XCode, and download and install that (it should be free). This also downloads and installs the GNU C++ compiler.
3. Open the folder and if using windows double-click the "Windows Start.bat" to start the program.
4. Optionally: Open IDLE using version 3 or greater.
 - a. Start menu -> Programs -> Python 3.2 -> IDLE
 - b. Open theGui.pyw, which can be found in the Helper++ package.
 - c. Click Run, then Run Module. This will open the program.
5. Click Change Directory and select the directory that contains any functions you have previously written or where you would like to save your work. Otherwise the default directory will be used, which is the directory that the program was opened from.

Current directory: U:\repo

Change directory

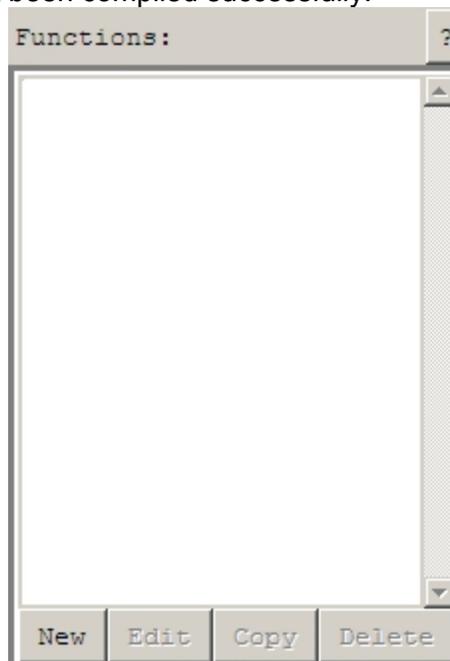
Expression Play

1. Enter a valid c++ expression in the input box. Example: 2+2



The screenshot shows the top part of the Expression Play interface. It features a label "Expression input:" followed by a text input field. To the right of the input field are two checkboxes: "Compile strictly" and "Detailed error messages". Below the input field is a large "Execute" button.

- a. If the expression will be using any external functions check the box next to each function name in the function pane to the right. NOTE: Functions that have red fonts have not been compiled successfully.

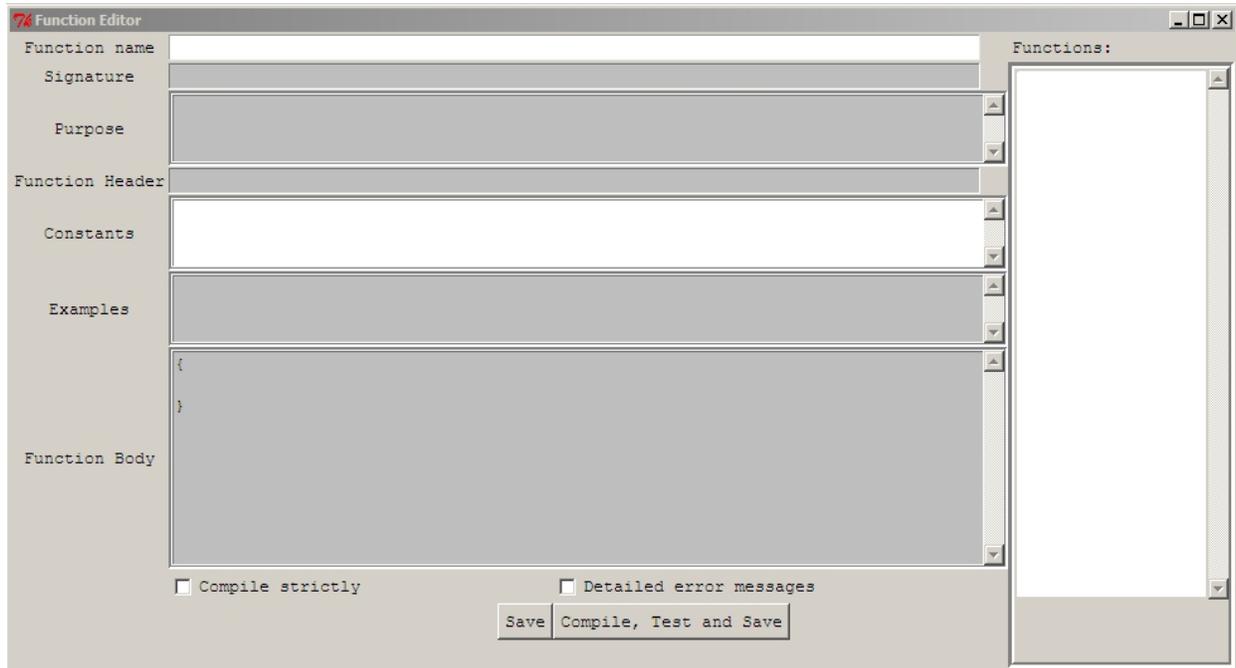


The screenshot shows the "Functions:" pane. It has a title bar with a question mark icon. The main area is a large, empty list box with a vertical scrollbar on the right. At the bottom of the pane is a toolbar with four buttons: "New", "Edit", "Copy", and "Delete".

2. Click the execute button. The results of your expression will be displayed in the result pane.
 - a. If your expression is not valid, "Bad expression" will be displayed.
 - b. If the Compile Strictly check box is checked on the home window the compiler will follow a strict compile option. This forces compiler warnings to become errors, resulting in a unsuccessful compile. Normally warnings would not affect a successful compile.
 - c. If the Detailed Error Messages option is checked, any errors that occur will be displayed in the result pane.

Function Set Up

Creating a New Function:



1. Click the New button below the function pane.
2. Enter the fields from the top-down. After each field is entered the next field will become available for edit.
3. Check the box next to any functions in the function pane that will be used in the current function being created.
4. Click the Compile, Test, and Save button. The file will be saved and the tool will try to compile the function. You will be notified of the outcome.
 - a. The tests will also be ran upon a successful compile.
5. Note that the newly created function appears in the function pane on the home window.
6. Check the box next to the newly created function name to use it in expression play.
7. Optional:
 - a. If the Compile Strictly option is checked, any warnings from the compiler will be treated as errors and compilation will fail.
 - b. If the Detailed Error Messages option is checked, any errors that occur will be displayed in the result pane.

Editing a function:

1. Double click the function name in the function pane or highlight the function and click Edit.
2. The Function Setup window will appear with the function details filled in. Any field can be

edited. Follow the same procedure used for creating new functions.

3. If you do not want to save the changes, close the window and click No when prompted to save.

Deleting a function:

1. Select the function in the home window and click Delete below the function pane.