

TEACHING_TOOL_FAQ File

Installing the Raquel GUI/Teaching Tool

Q: I received the error '`/usr/bin/ld: cannot find -ltcl`' when performing the make command. What is this and how can I fix it?

A: This is thrown because the compiler cannot find the Tcl runtime libraries in either '`/usr/lib`' or '`/usr/local/lib`'. It is usually caused by one or more of the following :

1. The Tcl runtime library package has *not* been installed.
2. The Tcl runtime library package *is* installed but the wrong file name is used to access it. Different versions of the package have different names, these being intended to reflect the version in question of Tcl. They are typically of the form '`libtclX.Y.so.0`' or '`libtclX.Y.so`', where X and Y are major and minor version numbers respectively.
3. The Tcl runtime library package *is* installed but not in either '`/usr/lib`' or '`/usr/local/lib`'. The evolution of computers from 32-bit to 64-bit machines has particularly given rise to this problem.

These issues were fixed in the latest version of the RaquelTeachingTool zip file by including in it a bash script called '`SoftlinkToTclTk.sh`'. This script checks to see if the Tcl runtime library package is installed, and if so under what file name and in what directory location. (It will also find multiple installations if they exist). It can also create a Linux softlink that maps '`libtcl.so`' (which is now treated as a *de facto* standard name for the Tcl runtime library package) to a Linux pathname that identifies the specific installed library in its specific directory location. The compiler will automatically use the softlink to access that library and generate code as normal.

Therefore '`SoftlinkToTclTk.sh`' should be run *before* attempting to install the RaquelTeachingTool. The following are possible consequences of running it :

1. The Tcl runtime library package is found *not* to have been installed. You should then install it (together with the Tk runtime library package – see next Q and A). It can either be downloaded from the Tcl/Tk website (www.tcl.tk) or through your Linux package manager. Check on the Tcl/Tk website to ensure that you download the appropriate version of Tcl/Tk. The installation is automated and straightforward.
2. One version of the Tcl runtime library package *is* found to be installed. '`SoftlinkToTclTk.sh`' will create a softlink to it.
3. Two or more versions of the Tcl runtime library package are found to be installed. The user chooses their preferred one and '`SoftlinkToTclTk.sh`' creates a softlink to it.

Previous versions of the RaquelTeachingTool zip file omitted '`SoftlinkToTclTk.sh`', and so the installer had to manually check for the Tcl runtime library package and create a softlink to it using the Linux '`ln`' command.

See also the TCLTK_ON_LINUX documentation file for further details.

Please read the next Q and A before proceeding, as they are linked issues.

Q: I received the error '`/usr/bin/ld: cannot find -ltk`' when performing the make command. What is this and how can I fix it?

A: This is caused by the equivalent problem to the above one : the compiler cannot locate the Tk runtime libraries. The solution is the same. Run '`SoftlinkToTclTk.sh`' first. It creates a softlink to the Tk runtime library package at the same time as it creates one to the Tcl package. (It also checks that both the Tcl and Tk packages are there and both have the same version number, which is necessary to ensure that they are compatible).

Please read the previous Q and A before proceeding, as they are linked issues.

Q: I received the error '*cannot find tk.h in the reference...*' while trying to compile the program. How can I fix this?

A: This issue was fixed in the latest version of the RaquelTeachingTool. Please refer to the download section and download the latest version. tk.h is part of the Tk development package and as such is not included as part of the runtime files. This can be solved by downloading the Tk development package from the Tcl website (www.tcl.tk).

Q: What packages are required to compile the RaquelTeachingTool?

A: From a basic installation of Debian the following packages were required to install the tool (all of which are readily available from the inbuilt 'Synaptic Package Manager') :

- binutils
- g++-4.3
- gcc
- gcc-4.3
- libc6-dev
- libgomp1
- libstdc++6-4.3-dev
- linux-libc-dev
- make
- tcl8.4.19 or later (tcl8.7 versions have not been checked).
- tk8.4.19 or later (tk8.7 versions have not been checked).

Later versions of many of the above are now available and may be used.