

## CPE 353 Practice Problem 0017\_Files

### Executable Sample Solution

The goal is to develop your application such that its appearance and behavior *exactly* matches that of the sample solution. To execute the sample solution, log into **blackhawk.ece.uah.edu**, redirecting the X11 display to your current machine – see the relevant Remote Access Guide on the course web page for assistance with this. Then in a terminal window, type the following command to execute the sample solution for this problem

```
/home/work/cpe353/problems/p0017
```

### Project Objectives

- Additional practice locating help pages within **Qt Assistant** and practice understanding the contents of those help pages
- Practice selecting and opening input files
- Practice loading data from an input file
- Practice creating a pixmap
- Practice displaying a pixmap within a label

### Project Specifications

Use the **qtcreator** integrated development environment to implement a main window application. A single label is displayed within the central widget area. When the user selects the **Load Image** option from the **File** menu, the application should allow the user to select an image file that will be loaded and displayed within the central widget area as a pixmap within the central widget label. The load image action should be accessible via the standard keyboard open shortcut.

Hints:

- More practice with Qt Assistant!
- The **QFileDialog** data type includes a method that will create a pop up file selection dialog. This dialog gives you the name of the file you need to open.
- Create a **QFile** object and open the specified file for input
- Display the filename in the status bar (absolute path should be displayed)
- Once you have opened the image file for input, read all bytes into a **QByteArray** object
- Create a **QPixmap** object using the data stored in the byte array object
- Set your pixmap object to be the central widget label's pixmap
- Close the input file

The desired behavior for each operation is defined by the sample solution.

Be sure to match the look and functionality of the sample solution running on **blackhawk**.