

## CPE 353 Practice Problem 0019\_UDP Sensors

### 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/p0019
```

### Project Objectives

- Additional practice locating help pages within **Qt Assistant** and practice understanding the contents of those help pages
- Practice using **QUdpSocket** objects to receive text transmissions
- Append all messages received to a **QTextBrowser** object for viewing

### Project Specifications

Use the **qtcreator** integrated development environment to implement a widget-based application that will allow you to view UDP sensor packets broadcast at 1Hz intervals from four different environmental sensor stations located around the server room.

Notes:

- You must be logged into **blackhawk** to receive the transmissions from the sensors
- The four sensors distribute their packets by UDP broadcast
- Each message is sent as uncompressed text (so do not use **QDataStream** objects)
- When configuring your UDP socket object, use
  - port **8888**
  - host address **QHostAddress::AnyIPv4**
  - bind mode **QUdpSocket::ShareAddress**

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