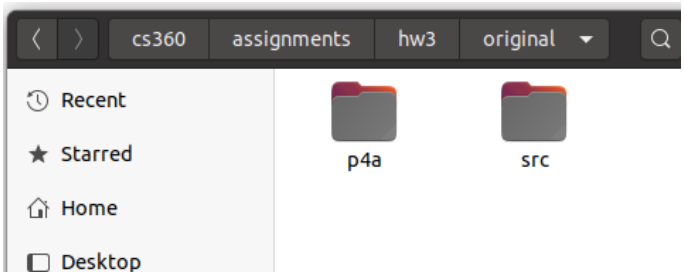
Steps to Test Your Multi-Threaded Implementation of the Web Server

Enclosed is a folder named **p4a**. Follow these steps to test your implementation of the multi-threaded web server.

> NOTE: the test scripts in folder **p4a** were obtained from the CS department at the University of Wisconsin – Madison.

Preparation

1. Copy folder **p4a** and place it at the same directory level as the folder that contains your source code. For example, if your source code is in a folder named **src**, then place **p4a** in the same parent folder of **src**.



2. In folder p4a, open file **runtests** in a text editor (e.g., gedit or vim):

3. Change the value of the **base** variable (on line 2) to point to the absolute path of the **p4a** folder on your machine. For example, on my Ubuntu VM, the p4a folder path is `~/cs360/assignments/hw3/original/p4a`. So I set the base variable value to that (see Figure 1 below).

4. It looks like the scripts require a lower version of Python (it gives errors when Python3 is used). On my VM I have Python 2.7 and Python 3. Change the third line to use the lower version of Python - in my case python2.7 (see Figure 1 below).

Figure 1: Changes you need to make to file runtests.

5. Save the changes you made to file **runtests** and close it.

6. cd to folder **p4a**. Then run this command:

   ```
   chmod 777 runtests
   ```

You only need to do steps 1 to 6 once. You are now ready to test your program.

Testing

1. Open a terminal window and cd to the folder that contains your source code (e.g., the **src** folder).

2. Run these 2 commands:

   ```
   make clean
   make all
   ```

   OK if you have a few warnings. But if you get errors, then fix them before doing step 3.

3. Run the tests by executing this command:

   ```
   ../p4a/runtests -c
   ```

   The output of the above command tells you how many tests (out of 21) passed and failed. Obviously, you should strive to have as many "passed" as possible. In the snapshot below, all 21

tests passed. It also shows you the grade you will get.