



Programming 2

Task 6

Web Server in Python

Due: 14 Feb 2012 for excellent, 21 Feb 2012 otherwise.

Task description

In this task you will be using python to explore network programming. To do this you will develop a very simple web server (using the [HTTP](#) protocol). You might want to use wireshark to check what's going on

Task purpose

Explore network programming. Again reading documentation remains important for this task.

Detailed task

You will write a very simple web server in python, based on the socket module (the only import needed if you don't do threads).

In your code you will have one main body and one method for handling individual connections. At the end of the socket module documentation there are some examples that are very valuable.

The main method would work as follows (in pseudocode):

```
Create a new socket. (socket.socket)
Bind the socket to localhost:1080
Tell the socket to start listening

while not finish:
    connection, addr = socket.accept()
    finish = handleConnection(connection)
```

Then the handleConnection method would work as follows:

```
stream = connection.makefile(mode="rw", buffering=1, encoding="utf-8")
firstLine=stream.readline().split(" ")
Assign method and path to a variable

create an empty list to hold the headers

read a line from the stream
As long as the line isn't empty:
    add line.split(":",1) to the headers
    read the next line

If the method is not GET:
    stream.write("HTTP/1.0 405 Unsupported\n\nUnsupported")
else:
    stream.write("HTTP/1.0 200 Success\n")
    stream.write("Content-type: text/plain\n")
    stream.write("\\n")
    Write the first line to the stream
    Write all headers to the stream

Close the stream
Close the connection
return path=="/stop"
```

Requirements for excellent mark

Explore using [threading](#) to handle multiple requests at once.