

Assignment #AS01 announced on 16 Nov 2021, due at 23:59 6/7 Dec 2021

Upload **your code (.py, .ipynb, or .java)** to the homework submission system. Note that you **MUST write comments** within the codes to explain your codes. Code without comments get zero points.

Q1. Modify your server code of previous homework and make it a HTTP server that supports the following functions.

- The server runs at **TCP port 8888** on **127.0.0.1** IP address.
- Implement **persistent HTTP** that can transmit **at most two objects** in a single TCP connection.
- Implement a **multi-thread** HTTP server.
- The server can accept a HTTP request with request URL '**good.html**'. The server can reply a HTTP reply message with **200 OK** (and any necessary HTTP headers) and an html message containing a simple html as follows:
`<html><head><link href="style.css" rel="stylesheet" type="text/css"></head><body>good</body></html>`
- The server can accept a HTTP request with request URL '**style.css**'. The server can reply a HTTP reply message with **200 OK** (and any necessary HTTP headers, note that its **Content-Type** header must be **text/css**) and an html message containing a simple css file as follows:
`Body {color: red;}`
- The server can accept a HTTP request with request URL '**redirect.html**'. The server can reply a HTTP reply message with **301 Moved Permanently** and any necessary HTTP headers (including **Location:**). The redirected page is good.html.
- The server can accept a HTTP request with request URL '**notfound.html**'. The server has no such file so it replies a HTTP reply message with **404 Not Found** and any necessary HTTP headers.

Note:

- TA will use a commercial browser (such as safari, edge and chrome) to connect to your server and see if the expected behavior occurs, i.e., showing the correct good.html (with red word), redirecting from redirected.html to good.html, and showing a 404 on browser.
- Your server should be runnable without any user input. TA will use a script to automatically execute your server codes. You should test your server codes in the same way. Otherwise, no points will be given.