HTTP Connection Simulation

A server available in www.students.com/marks/index.html, maintains a database of student marks. On entering the register number of a student in the page, the list of courses taken by the student is sent by the server to the client who has requested for the student marks. The marks secured by the student in each course is available as an individual object in www.students.com/marks/<register-number>/<course-code>. Simulate the HTTP protocol for the transfer of messages between the client and the server for fetching the marks of a student using each of the following types of connections:

1. non-persistent (TCP connection opens and closes for transfer of each object)
2. **persistent** (TCP connection remains open until all objects are transferred)

Compare the time taken by each type of connection for fetching all the marks of a student.

Note:

	HTTP Request	**HTTP Response**
Message Format		
Sample Message	GET /somedir/page.html HTTP/1.1 Host: www.someschool.edu Connection: close User-agent: Mozilla/5.0 Accept-language: fr	HTTP/1.1 200 OK Connection: close Date: Tue, 18 Aug 2015 15:44:04 GMT Server: Apache/2.2.3 (CentOS) Last-Modified: Tue, 18 Aug 2015 15:11:03 GMT Content-Length: 6821 Content-Type: text/html (data data data data data ...)
Other Information	See operations table below	See codes table below

Operation	Description
OPTIONS	Request information about available options
GET	Retrieve document identified in URL
HEAD	Retrieve metainformation about document identified in URL
POST	Give information (e.g., annotation) to server
PUT	Store document under specified URL
DELETE	Delete specified URL
TRACE	Loopback request message
CONNECT	For use by proxies

Code	Type
1xx	Informational
2xx	Success
3xx	Redirection
4xx	Client Error
5xx	Server Error

Code to determine the time taken:

```
// Headers to be included: time.h
clock_t tStart = clock();
/* CODE for which the time taken for execution is to be determined*/
double t=(double)(clock() - tStart) / CLOCKS_PER_SEC;
printf("Time taken (in seconds) : %f", t);
```