



Year/ Sem/Batch: III/V/P

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HTTP Connection Simulation

A server available in [www.students.com/marks/index.html](http://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>](http://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																														
<b>Message Format</b>																																
<b>Sample Message</b>	<pre>GET /somedir/page.html HTTP/1.1 Host: www.someschool.edu Connection: close User-agent: Mozilla/5.0 Accept-language: fr</pre>	<pre>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 ...)</pre>																														
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**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);
```