**CMPEN/EE 362 HW 2 Rubric**

**Total number of points:** 15

**Problem 1: (1.5 points)**

1. The document request was http://gaia.cs.umass.edu/cs453/index.html. (0.25 points)
   * -0.0 points if correct URL is provided.
   * -0.25 points if the URL is incorrect.
2. The browser is running HTTP version 1.1. (0.25 points)
   * -0.0 points if correct version is provided.
   * -0.25 points if the version is incorrect or missing.
3. The browser is requesting a persistent connection, as indicated by the Connection: keep-alive. (0.25 points)
   * -0.0 points if the correct type of connection is provided.
   * -0.25 points if the connection type is incorrect or missing.
4. Trick question. There is no way to tell the IP address from looking at the exchange of HTTP messages alone. (0.25 points)
   * -0.0 points if the impossibility of getting an IP address is mentioned.
   * -0.25 points if the impossibility of getting an IP address is not mentioned.
5. Mozilla/5.0. The browser type information is needed by the server to send different versions of the same object to different types of browsers. (0.5 points)
   * -0.0 points if the name of the browser and the reason for the different browser type is mentioned.
   * -0.25 points if only one of the answers is correctly mentioned.
   * -0.5 points if none of the answers are correctly mentioned.

**Problem 2: (1.5 points)**

1. The status code of 200 and the phrase OK indicate that the server was able to locate the document successfully. The reply was provided on Tuesday, 07 Mar 2008 12:39:45 Greenwich Mean Time. (0.5 points)
   * -0.0 points if correct.
   * -0.25 points if incorrectly stated that server was not able to locate the document or no answer was provided.
   * -0.25 points if incorrect time provided or time was omitted.
2. The document index.html was last modified on Saturday 10 Dec 2005 18:27:46 GMT. (0.25 points)
   * -0.0 points if correct modification time provided.
   * -0.25 points if incorrect modification time or no answer was provided.
3. There are 3874 bytes in the document being returned. (0.25 points)
   * -0.0 points if correct number of bytes mentioned.
   * -0.25 points if incorrect number of bytes or no answer was provided.
4. The first five bytes of the returned document are: **<!doc**. The server agreed to a persistent connection, as indicated by the Connection: Keep-Alive field. (0.5 points)
   * -0.0 points if correct.
   * -0.25 points if the first 5 bytes are incorrect.
   * -0.25 points if incorrectly stated server agreed to a non-persistent connection or did not mention connection type.

**Problem 3: (4.25 points)**

1. It takes 140ms to obtain the base HTML. (0.5 points)
   * -0.0 points if correct time and work shown.
   * -0.25 points if partially correct and work shown (mentions two different kinds of **RTTs**), but incorrect result.
   * -0.5 points if totally wrong or no attempt was made.
2. It takes 2.54s to obtain the base HTML. (0.5 points)
   * -0.0 points if correct time and work shown.
   * -0.25 points if partially correct and work shown (correct approach), but incorrect result.
   * -0.40 points if correct answer but no work shown.
   * -0.5 points if totally wrong or no attempt was made.
3. It takes 0.74s. (0.75 points)
   * -0.0 points if correct time and work shown.
   * -0.25 points if partially correct (mentions the correct number of rounds (3)) and work shown.
   * -0.5 points if correct answer but no work shown.
   * -0.75 points if totally wrong or no attempt was made.
4. It takes 1.94s. (0.75 points)
   * -0.0 points if correct time and work shown.
   * -0.25 points if partially correct and work shown (correct approach), but incorrect result.
   * -0.5 points if correct answer but no work shown.
   * -0.75 points if totally wrong or no attempt was made.
5. It takes 1.39s. (0.75 points)
   * -0.0 points if correct time and work shown.
   * -0.25 points if partially correct and work shown, but incorrect result.
   * -0.5 points if correct answer but no work shown.
   * -0.75 points if totally wrong or no attempt was made.
6. The minimum number of parallel connections is 2. (1 points)
   * -0.0 points if correct time and work shown.
   * -0.25 points if partially correct and work shown, but incorrect result.
   * -0.5 points if correct answer but no work shown.
   * -0.75 points if incorrect but an attempt was made.
   * -1.0 points if totally wrong or no attempt was made.

**Problem 4: (3 points)**

1. Total delay for one object ≈ 2.81s (1 point)
   * -0.0 points if correct total delay and work shown.
   * -0.25 points if partially correct and work shown, but incorrect result.
   * -0.5 points if correct answer but no work shown.
   * -0.75 points if incorrect attempt made (missing some delays).
   * -1.0 points if totally wrong or no attempt was made.
2. Total delay for one object (with 0.2 cache hit rate) = 1.771s (1 point)
   * Same as (a).
3. We need at least 95% hit rate to make the delay ≤ 100ms (1 point)
   * -0.0 points if correct delay equation and cache hit rate provided.
   * -0.25 points if delay equation is partially correct.
   * -0.5 points if delay equation is wrong or none provided.
   * -0.25 points if calculated cache hit rate is wrong.
   * -1.0 points if totally wrong or no attempt was made.

**Problem 5: (0.75 points)**

1. 0.25 points
   * -0.0 points if correct commands provided and answers are clearly marked. Note: IP address and name may vary.
   * -0.10 points if partially correct (printout missing, answers not clearly marked).
   * -0.25 points if no attempt was made.
2. 0.25 points - Same as (a).
3. 0.25 points - Same as (a).

**Problem 6: (4 points)**

1. According to the file distribution time:



we can compute the following chart: (2 points)

|  |  |  |  |
| --- | --- | --- | --- |
| u  N | 500Kbps | 2Mbps | 10Mbps |
| 10 | 80,000sec | 80,000sec | 80,000sec |
| 100 | 800,000sec | 800,000sec | 800,000sec |
| 1000 | 8,000,000sec | 8,000,000sec | 8,000,000sec |

* + -0.0 points if all the values in the table/chart are correct.
  + -0.25 points if mostly correct (made a small error).
  + -0.5 points if partially correct (correct file distribution time eq. mentioned but used u in place of us).
  + -1.0 points if incorrect attempt made but work shown (includes N, F, u and dmin).
  + -2.0 points if totally wrong or no attempt made (does not include any of these variables: N, F, u or dmin).

1. According to the file distribution time:



we can compute the following chart: (2 points)

|  |  |  |  |
| --- | --- | --- | --- |
| u  N | 500Kbps | 2Mbps | 10Mbps |
| 10 | 53,333sec | 26,667sec | 8,000sec |
| 100 | 133,333sec | 38,095sec | 8,000sec |
| 1000 | 156,863sec | 39,801sec | 8,000sec |

* + Same as (a).