**Assignment:**

1. **Source files: (check BB)**
   1. **Server file: server.c**
   2. **Client file: client,c**
2. **Screenshot of program running (Check BB)**
3. **Screenshot of Wireshark capture summary page (Check BB)**
4. **Table Summary:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 10KB | 20KB | 30KB | 40KB | 50KB |
| TCP total IP payload bytes | 10000 | 20000 | 30000 | 40000 | 50000 |
| TCP total header bytes | 1004 | 1804 | 2604 | 3404 | 4204 |

\*Note we are using KB to 1000 bytes not 1024 for simplicity

1. **Questions and answers:**

|  |  |
| --- | --- |
| Q. 1 | What operating systems did you use ? |
| Ans. | Client: Linux (Ubuntu)  Server: trig.sci.csueastbay.edu |
|  |  |
| Q. 2 | What were the IP addresses and netmasks for your two machines? |
| Ans. | Client Machine: IP Address:134.154.44.133 Subnet mask:255.255.248.0 |
|  |  |
|  |  |
|  | Server Machine: IP Address:134.154.190.159 Subnet mask:255.255.255.128 |
|  |  |
|  |  |
| Q. 3 | Did the amount of overhead for TCP increase proportionally as the file size increased? In other words, was the overhead twice as much for the 20 KB file as the 10 KB file and so on? Why or why not? Again, provide calculations to support. |
| Ans. | Yes. From following graph is linear. It shows that amount of overhead for TCP increase proportionally as the file size increase.  For  first file (10KB) – overhead is 1004  second file (20KB) – overhead is 1804  third file (30KB) – overhead is 2604  fourth file (40KB) – overhead is 3404  fifth file (50KB) – overhead is 4204  From above it shows that overhead is increased 80% of the initial.  Overhead is not twice as much for the 20 KB file as the 10 KB file because  While sending the 10 KB file all SYN, ACK, etc. are present and for 20 KB file only actual data is increased and rest of all message are same. |