

## CSI 470 - HW 2 - SPRING 2010

In this program you will build the server application on albert to go along with the client in HW1. Your port has been given to you individually. Your client will need to be altered to connect to this new port, but you should still use 127.0.0.1 as the ip address to connect only to localhost.

These are the steps that your server should follow.

1. Set up a socket and listen for incoming connections.
2. Accept incoming connections.
3. Receive a 4 byte login which will be a 3 letter login followed by period.
4. Receive an arbitrary length message from the client in the form of "#dS." where # is the number of dice and S is the dice size.
5. Parse the received message to determine the number and size of dice.
6. If # or S or #\*S is larger than 999, send "999" back as the result in 3 bytes.
7. Else generate the sum of # random numbers between 1 and S.
8. Send the resulting total as 3 bytes. Prefill with 0s for numbers between 0 and 99. For example, send the number 4 as the three byte sequence "004" in your response.

Example interaction.

- 1) socket setup
- 2) connection accepted
- 3) received "RAM."
- 4) Received "5d6."
- 5) 5 is # and 6 is S
- 6)  $5 < 999$  &  $6 < 999$  &  $5*6 < 999$
- 7) randomly generated  $1 + 3 + 4 + 5 + 1 = 14$
- 8) Sending "014" to client