

Recitation 8



Context: Client and Servers

- Simplified definitions:
 - Servers: Provide services to programs or users, also known as clients
 - Clients: Uses or accesses services provided by servers

Addressing

- IP address: Is used to specify a host.
- Hostname: Serve as an alias for an IP address
- Ports: Specify a specific process on running on a host.

** Think about IP addresses as an apartment building, and ports as a specific apartment inside the building.

Introduction to Socket Programming

- ServerSocket (Blocking call)
 - Object used by the server
 - Listens for connection requests from clients
- Socket
 - Object used by client and server to **send** and **receive** data
- Constructed with:
 - `new Socket(hostname, port_num)`
 - `new ServerSocket(port_num)`

Input and Output Streams

- Many available to use, we will be using **DataInputStream** and **DataOutputStream**.
- `DataInputStream(InputStream input)`: Allows us to **read** values from an input stream.
- `DataOutputStream(OutputStream output)`: Allows us to **write** values to an output stream.
 - The input and output streams in our case will be created from the socket after a connection has been established between server and client.

Tips for Network Programming

- Ctrl-c - When typed into a terminal causes the executing program to terminate.
 - Useful when you are using objects that block!
- The timing of this assignment will be the hard part, so be thoughtful when planning out how programs send and receive messages.

Completion Activity

- Finish implementing the main method of Num_Client.java