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CECS-326 - Project 1 Report

Project Design

- QuoteServer.java
 - This class connects and listens to port 6017 which is used to return a String representing the quote of the day to all clients using a Socket connection object. Since the port exclusively returns a quote of type String, the PrintWriter class can be used to write the quote to the input stream of the client without loss of data. By default, the server is set to automatically close after no further client connections have been made after 180 seconds.
- QuoteClient.java
 - This class establishes a connection with a server listening to port 6017 on the localhost host ip address using a Socket connection object. The BufferedReader class takes in an InputStreamReader object which reads output data from the server. The data is read line-by-line, separated by newline characters, and is printed out to the console of the client. The connection to the server is then immediately closed.
- EchoServer.java
 - This class is similar to the 'QuoteServer.java' class, except it connects and listens to the port 6007 which echoes input back to all clients. This class uses an InputStreamReader object in order to guarantee that the program can read data at the byte level in the case that the program would receive binary data. After casting all bytes to their appropriate characters and forming them back into a readable String, the String is "echoed" by replacing all instances of "client" to "server" and vice versa, including their most common variations. Since the input bytes are always converted to String of a standard charset, a standard PrintWriter is used to return the echoed String back to the client. The server ends the client's connection loop once the last byte read equals -1, meaning the client has closed the connection to the server.
- EchoClient.java
 - This class is similar to the 'QuoteClient.java' class, except it connects to servers on port 6007. However, this class has both BufferedReader and PrintWriter instances. The first BufferedReader is used to read input from the client which will be sent as a String to the server via the PrintWriter object. The server sends the echoed line back to the client's second BufferedReader, which is used to output the resulting String to the client's console. The client ends the connection to the server by either entering an empty String or by entering an end-of-input character.

Project Contributions

Task	Carlos Verduzco	Steven Dao
Code design	✓	✓
Code implementation		✓
Code debugging / QA	✓	
ReadMe writeup		✓
Video demo	✓	
Project Report	✓	✓