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Computer Networking (BBK_BUCI036H5_1920) Coursework Assignment Description

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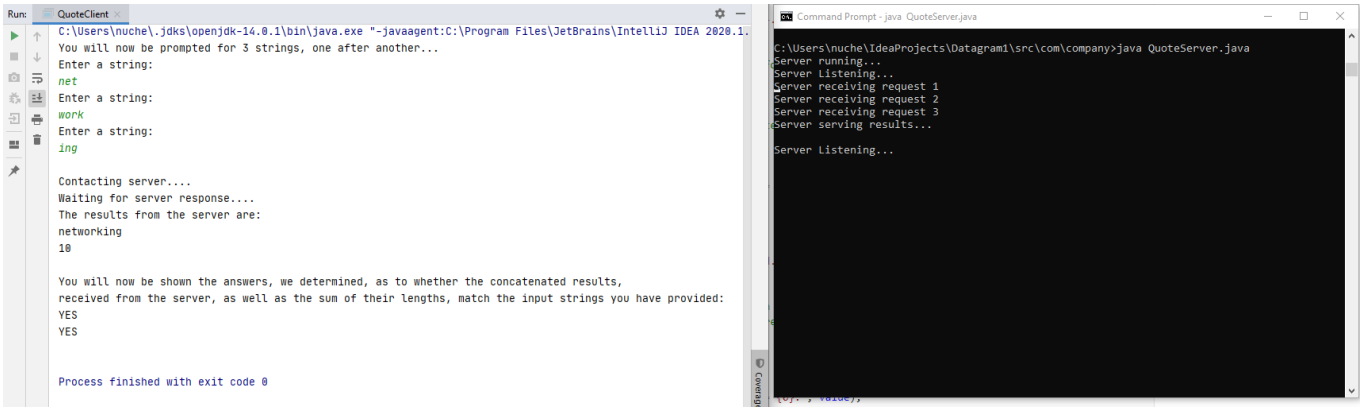
The code in this assignment is based on and modified from this link: https://www.codejava.net/java-se/networking/java-udp-client-server-program-example which in turn is based on this link: https://docs.oracle.com/javase/tutorial/networking/datagrams/clientServer.html.

The server is first run via CMD on windows and its main() instantiates a Server object on port 8014, the default port for UDP protocol. The Server's method Service() is then invoked and this starts a demon while loop that waits for three consecutive 'sends' from the client. While the sends are received, the concatenation is processed alongside it and later, the length is calculated. They are both then sent back respectively, to the client, on the address gotten from the datagram packet, with which the client sent its request. After that, the server goes back to its listening state.

When the client is instantiated, its main method, requests from the user three strings, processes them to get the data needed for verification later, gets the address from the local host and sends a byte array of the 3 strings, one after another, to the server on port 8014. After that, it waits for 1 second, to "give the server time" to process them. Then it does a 'receive' on the socket twice, to get the results processed by the server. It then verifies the results against its own recorded data and, based on that, outputs the answers to the user.

In image #1: The three strings -> net, work and ing are sent. The right-hand side being the server and the left hand side the client.



In image #2: The three strings -> data, structures and algorithms are sent.