Distributed Systems

Assignment 2

Ibrahim Abdo

100618561

For This programming assignment, I created a Client/Server Application using java RMI. This application was coded using java. This application has many uses that will be discussed and demoed in report. The application has 5 JAVA RMI remote interfaces. The first interface is the getFileInterface(). This interface allows the client to request a text or html file from the server side and gets it printed out.

Another interesting feature is the evaluateInterface(). This interface can be used by typing “eval <expression>” and it can perform arithmetic calculations and display the output. I also created the getDateInterface() which returns the date on user command, as well as SortNumbersInterface(). In sortNumbersInterface() the user will input a sequence of numbers and the client will take these numbers, puts them in an array then sends it the server side to be sorted. The last interface which is the getInfoInterface(), where the user will request the system information and it will be printed out for them. Finally, the application can be ended by typing the “finish” command, which will close the Client side of the server and stops the thread assigned to that client. You can also check your server info by typing “info” which will display it.

This application was challenging at first, but after looking back at some lab tasks it was easier to implement. The hardest part was implementing the functions that will be executed by the server side like retrieving the text files and calculating functions. This was overcome by doing more research about the topic and seeing how it can be accomplished.

Description of tests:

Running the application:

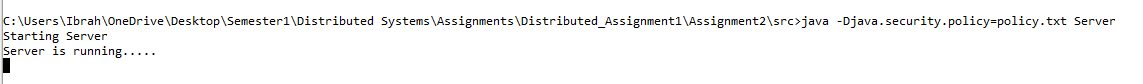
Compile all files using Javac \*.java

Start the rmi registry using “start rmiregistry”

Text

Description automatically generated

Start the server side using “java -Djava.security.policy=policy.txt Server”



Start the client side using “java Client”



Testing features:

Help Feature:

Text

Description automatically generated

Info Interface:



EvaluateInterface:

Text

Description automatically generated with medium confidence

Date interface:



Sort Interface:

Text

Description automatically generated

getfileInterface:

Text, letter

Description automatically generated