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**Project IDE:** Eclipse IDE for Java Developers - 2019-12

**Steps for setting up a project:**

* Create a new java project in Eclipse IDE
* Create a new package under src folder with the name “project2DS”
* Copy the files ClientDS.java and Server.java to the project2DS folder
* Copy the text file given in folder and copy that path in the file path given in code in the Class ConversionRules
* Snippet below for reference:

File formula = **new** File ("C:/Users/User/Desktop/metrics.txt");

- change this path to the path where you copied the input text file

* Run the ServerDS.java as java Application
* Run the ClientDS.java as java application and enter the name to get a connection
* Similarly run this file for next 2 clients in the same way.
* Select an option:
  + Upload Messages
  + Check for messages
* Select Queue and Input number (length in meters) to upload the message to server
* Select only Queue to check for the messages from the queue.
* Press the “SUBMIT” button on the Client GUI to send input length and queue to
* Press the “QUIT button to manually kill the client.
* The text Area in Client GUI displays all the messages from Server.
* The text area in Server GUI displays all the messages from Client.

Class Details at server side:

MessageQueue : Three output message queues at the Server Side.

ConversionRules: Class that checks for the repository(text file) and saves the conversion rules in a list

**Project Reference-**

1. https://stackoverflow.com/questions/15247752/gui-client-server-in-java
2. https://stackoverflow.com/questions/22728794/how-to-put-timer-into-a-gui
3. https://www.geeksforgeeks.org/introducing-threads-socket-programming-java/
4. https://www.geeksforgeeks.org/socket-programming-in-java/
5. https://stackoverflow.com/questions/41506997/java-multithreading-synchronizedthis-on-a-thread-class.
6. https://stackoverflow.com/questions/13671502/java-implement-own-message-queue-threadsafe
7. https://www.geeksforgeeks.org/java-swing-jcombobox-examples/