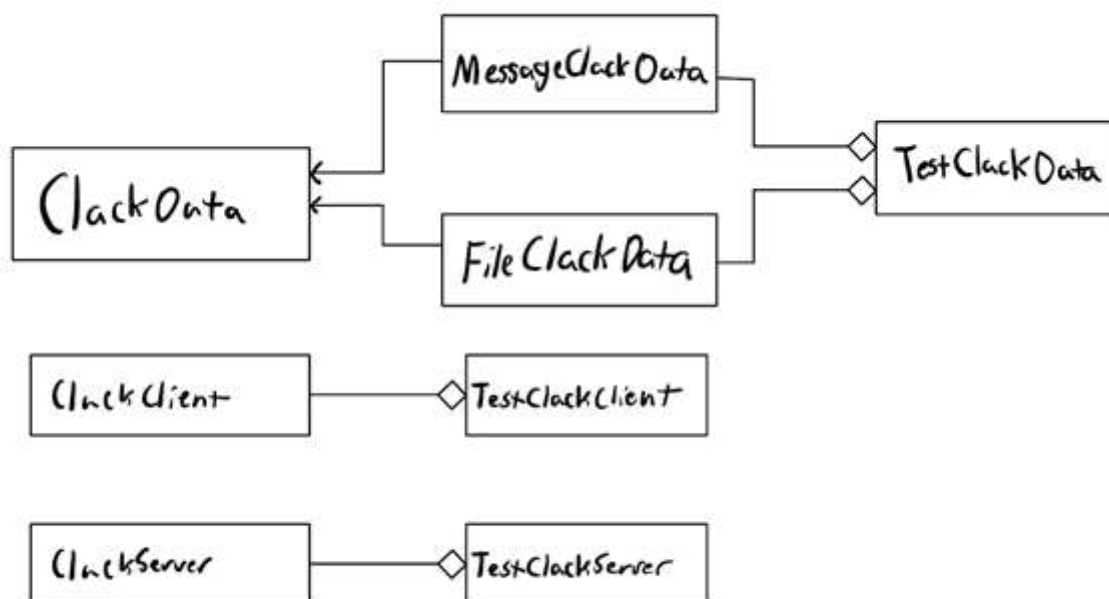


Part 1)

Below is the class diagram for the project as it currently stands. There is currently no relation between the Data, Client, and Server parts of the program so no connection is represented here.



Part 2)

In **testClackData**, we used the same test string for all of the instantiations. Changing that test string to a null value caused a null pointer exception in the hash code function because we were effectively asking for the hash of an invalid memory address. This could be addressed by first checking if the username is a null value, and then performing an alternative calculation that does not involve attempting to get the hash code of the user's name. The story is much the same in both **TestClackClient** and **testClackServer**, as they use similar methods of generating a hash function and thus run into the same issue of trying to generate a hash from an invalid memory address. Thus, they can be resolved in much the same way.

In `testClackClient` and `testClackServer`, there is nothing of note being done with the port at this point, and so the value of the integer does not matter. Putting a negative number there has no significant effect.