



## Network Programming HW 1

CLOs [iii]  
points

deadline 6/November/2023 midnight

5

For all students, simple Socket programming homework. Work individually, no groups.

Follow the example of socket programming in chapter 2 (java edition ppt), for implementing a client-server simple program. **Use the code for TCP and UDP.**

Your program must implement a simple request-response example:

- 1) The **client** reads the line (request) from standard input, then sends it to the **server**.
- 2) **Server** reads the line from the socket and prints the incoming message from the client.
- 3) The **server** sends (response) back.

The response is taken from a file stored in the server side. Think of it as DataBase table.

For example: the **client** sends "B001", the server sends "Seat, Ibiza, 2009, Orange". In case there is no match request, send "**Vehicle is not found**".

*Sample database is shown in the table below.*

- 4) The **client** reads and prints the result from the socket.

Print the response as table, such as the response for the inquiry requested message B001:

| Vehicle plate ID | Make | Model | Year | Colour | Owner Name | Owner ID |
|------------------|------|-------|------|--------|------------|----------|
| B001             | Seat | Ibiza | 2009 | Orange | SAed       | 9087654  |

- 5) The **client** can make more requests, before closing the app.
- 6) regarding the inquiry from client server, consider the "Vehicle Plate ID" is not case sensitive, which means, the inquiry of AB00Wru = = aB00wRU , the small letter or capital letters are not considered as different characters. Moreover, B001 = b001 and vice versa.
- 7) you have to run the code for both UDP and TCP Client Server application structure on DIFFERENT standalone Hosts (different machines, different laptops, different PCs)

Submit a compressed folder that contains, the java code for client and server.

**\*\*\*\* You must Submit a Word or PDF document briefly explaining the steps of the code with screenshots of the output in different machines. Show the name of device and IP configuration for the network card. You must run the program on different devices.**

| Vehicle plate ID | Make    | Model | Year | Colour | Owner Name | Owner ID |
|------------------|---------|-------|------|--------|------------|----------|
| B001             | Seat    | Ibiza | 2009 | Orange | SAed       | 9087654  |
| B002             | Hyundai | Kona  | 2019 | White  | Sami       | 8750888  |
| A001             | VW      | Polo  | 2005 | black  | Noora      | 3467892  |
| C002             | Audi    | A6    | 2020 | silver | Hiba       | 0956784  |
| C003             | BMW     | X7    | 2022 | brown  | Noah       | 9076045  |