

# CN ASSIGNMENT 3 README

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GUPTA(B21CS034)**

## CLIENTFILE.CC

### 1. Client Class Functions:

- `calculate_my_jump`: Calculates the jump options for a client based on its index and logarithm value.
- `sendsubtask`: Sends a subtask message to another client.
- `SendToBestJump`: Determines the best jump option for sending a message based on the destination client.
- `res_ind`: Calculates the resolved index of a destination client.
- `initialize`: Initializes the client, generates task array elements, and sends subtasks to other clients.
- `handleMessage`: Handles incoming messages, processes subtasks, results, and forwards messages.

### 2. Message Handling:

- Messages are instances of the `Mymessage` class.
- Messages can be of types "subtask" or "result".
- If a message is a subtask, the client processes it and returns the result to the sender.
- If a message is a result, the client updates its final result and checks if all subtasks are processed.

### 3. File Handling:

- The code writes various details including subtask data, results, and array elements to a file named "out.txt".

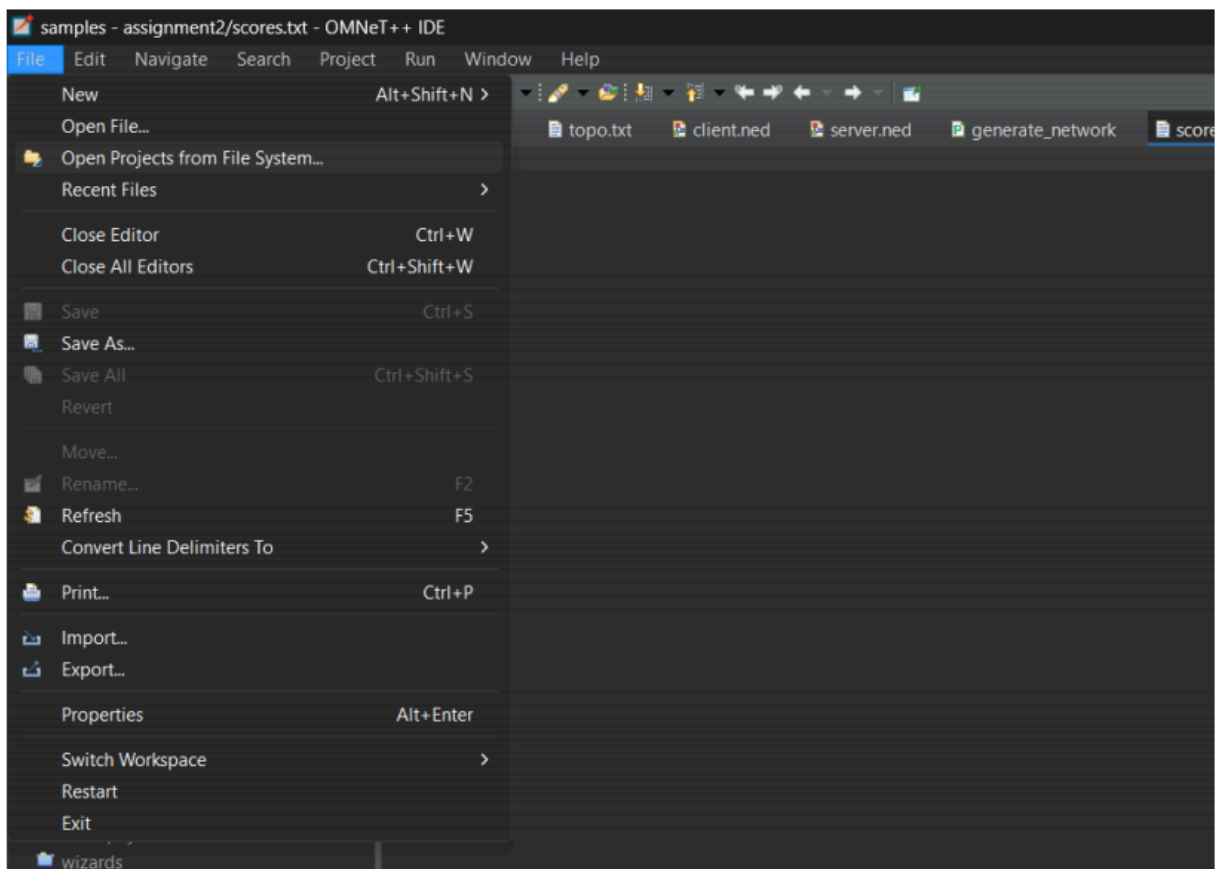
### 4. Jump Options and Routing:

- The client selects the best jump option for forwarding messages based on the destination client's resolved index.

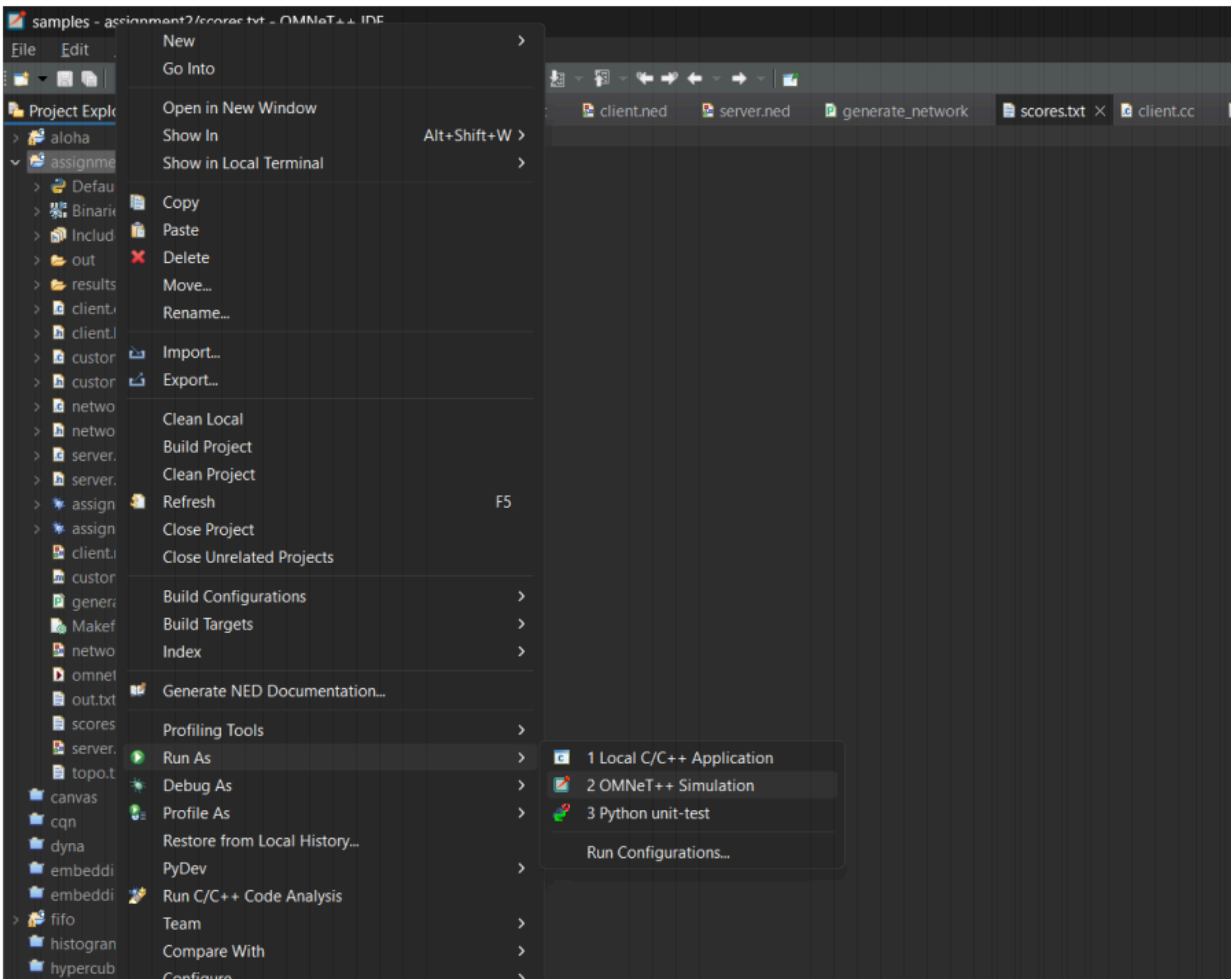
### 5. Handling Duplicate Messages:

- The code maintains a map (ML) to keep track of received messages to avoid processing duplicates.

- Extract the zip and open the folder in oment++ as shown below:



- After opening you have to run the generate\_network.py file to generate the ned files



After that you can see results in out.txt.