In this practice session, we will use C# and TCP sockets to create a text-based RPG game between multiple clients and a server. The goal is to implement the core client-server structure, including combat and chat functionalities, which are fundamental in a text-based online RPG game.

---------------------------------------------

Learning Objectives

* Understand and implement server-client network connections using the TCP connection
* Implement text-based RPG game features in a multi-client environment
* Implement basic RPG functionalities such as chatting, combat, and player state management within a server-client structure

---------------------------------------------

- Given source code (Server side): [Program.cs](https://kmuackr-my.sharepoint.com/:u:/g/personal/102113_ms_kmu_ac_kr/EVQtH4nlBvJLqzHUa0cCX0cBK5cEA3tQCGUJ5J3zm1KKfw?e=TOdyzE) (ctrl + click)

- Given source code (Client side): [Program.cs](https://kmuackr-my.sharepoint.com/:u:/g/personal/102113_ms_kmu_ac_kr/EX5mMalt93NMrKKw_u53mJIB9BhgWJdV2OeKr_xO5C1-Jg?e=ZGG1OW) (ctrl + click)

-Tasks (Total: 15 points) :

1. **[3 Points]** Modify the code to allow **more than one attack method** (e.g., kick, punch) in the current single-attack command (/combat).
2. **[3 Points]** Currently, attacks are **broadcasted to all players**. Modify this so that attacks are visible only to the **two players involved**.
3. **[3 Points]** The client-side code implements the “/exit” command, but the server does not handle it. Modify the server code so that when the client sends a “/exit” message, the server appropriately handles the user's exit (e.g., removing the user from the client list and broadcasting the exit).
4. **[3 Points]** Modify the server code to handle a **“/list” command** that displays the names and HP of all connected users.
5. **[3 Points]** Add a feature that allows players to **level up** through experience points (victories). For example, leveling up could increase punch damage.
6. **[Honorary]** **Add an item system:** Periodically broadcast the appearance of items (e.g., sword, gun, shield, HP). Players can acquire items by picking them up first (e.g., /getsword).
7. **[Honorary]** Add a **player state-saving system** so that players' states are saved after they exit. Implement using a database or file-based storage.

-------------------------------------------------------------------------------------------------------------------

**Submission Guidelines:**

* If tasks up to #6 are completed during practice time, you may leave after an inspection.
* **Submission Deadline after Practice:** November 13 th
* **Submission Requirements:** A single Word(.docx) or pdf file containing the following:
  + Final source code (in text format, not as images)
  + Screenshots of the server and clients running the application

■