

Group 8 Milestone 1

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Introduction:

For our project we have decided to work to emulate something resembling a crazed fever dream of what an MMO database would look like. The game has accounts that are tied to players. For the game itself the database also represents some game systems with items, equipment, levels, guilds, alliances and regions.

Information Collection & Requirements:

MMO Project

- This project requires information about:
 - Accounts are how the players sign into the game. Accounts have multiple characters while characters are tied to one account
 - Accounts have username, password, email, payment info, and a userID.
 - A player has a unique ID and is tied to one account.
 - Players have equipment, race, levels, a guild, stats, and a name.
 - A server has a unique server name and has many players and many items tied to the server
 - An item is in one server and zero or many items can exist in the market
 - Item have a unique itemid, itemtype, a calculated itemquantity, a calculated marketvalue, stats which would be made up of attack and defense
 - A region could have zero to many character and has only one market
 - A region would have a unique region id and a calculated population
 - A market is in one region and a market can have zero to many items
 - A market have a unique marketid, itemid, price, quantity, and characterid
 - A player can only be in one guild and a guild must have at least four members.
 - A guild have a unique guildname, a unique guildid, guildleader, allianceid, and a derived memberlist
 - A guild has to be part of an alliance and can have only one alliance while an alliance must have at 2 guilds but can have many.

- A alliance would have a unique allianceleader, a unique alliancename, a unique allianceid, and can have multiple unique territoryowned
- Functional & non Functional requirements
 - Need to be able to add and remove players from guilds
 - Need to be able to add and remove guilds from alliances
 - Need a system for buying/selling and bidding items
 - Users should be able to delete items
 - User should be able to add and delete characters they own

Ideas:

- **MMO Project**
 - **Auctions**
 - Could have auction tables where items can be bought and sold. Can have different item types (potions, food,armor etc.)
 - Could possibly add some sort of bidding system
 - **Stats/leveling/player inventory**
 - Lots of things to track. Could track skill points, levels, armor, weapons,buffs and debuffs.
 - **Collectables database**
 - Lots of cool options. Could track pets, mounts, achievements etc.
 - Could have an achievement or collection score that ties into the stats sections or game systems somewhere?
 - **Gameception**
 - Could have some small games like dice rolling that uses the database information such as player gold for wagers between two players.
 - **Game systems**
 - Can have guilds and servers. Players could have different guilds they are a part of that are of different categories (fishing guild, PVP guild etc.). Could be some restrictions on not allowing players to join a guild outside their server?

Architecture of the project:

- A two tier architecture is likely the best approach for the project as it would be the simplest with only a database tier and a client tier compared to a three tier where a some

application tier like a website is involved. This simplicity would allow us to focus on making the database itself more interesting.

- Backend: Have decided to use MySql for the backend of the project
- Front end: Everyone in the group is familiar with c++ so this would likely be the option to go with.

Roles:

- Jayson and Colin plan on working on the items/collectibles & auction systems. Marcus plans on working on the game system for things like guilds, alliances and regions. Tigran and Cheyenne are working on the player inventory, stats and leveling system.

Communication:

- Using discord as the main communication tool between groupmates
 - <https://discord.gg/XGhkhZJ8>

ER Diagram Idea:

<https://cdn.discordapp.com/attachments/802233518213300225/815379459082944522/unknown.png>

