Multiplayer Action Action RPG Template - MMO Mode (Ver 1.00)
Documentation

Try the Demo

MMO mode demo is located at **/UnityMultiplayerARPG/MMO/Demo/Scenes/**, add MMO demo scenes to Build Settings dialog
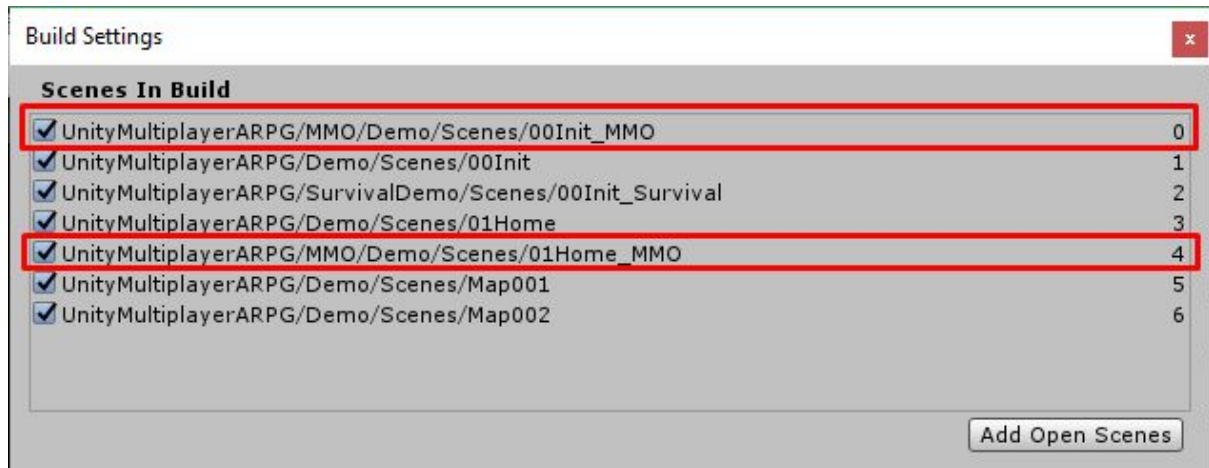

Then build it

Then we're going to setup to run the game as game server

For **Windows,** go to folder that you build the game create shortcut of execution file (.exe), then right click the shortcut select **Properties** then add following arguments at **Target** field
- -startMapSpawnServer
- -spawnExePath "*Path of your execution file such as C:\Game\Game.exe*"
- -startCentralServer
- -startChatServer

Then run the game from the short cut
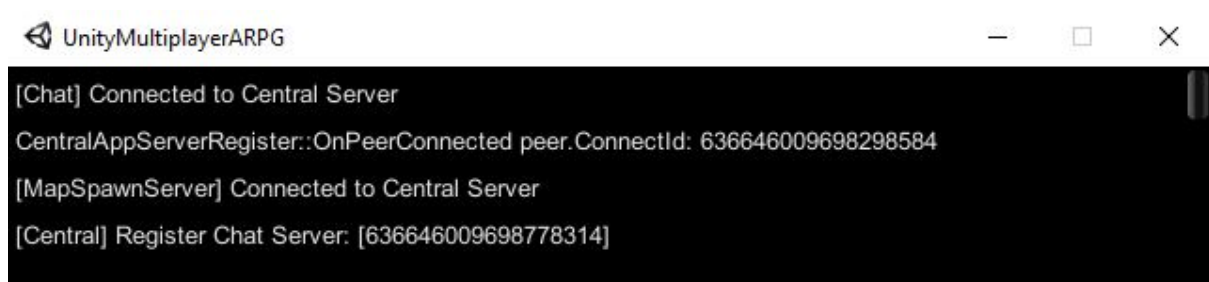
If it's running like image above it mean that it's running correctly then run

For **Linux / Mac,** use **Terminal** go to path where you build the game such as /Game/ then enter command like this
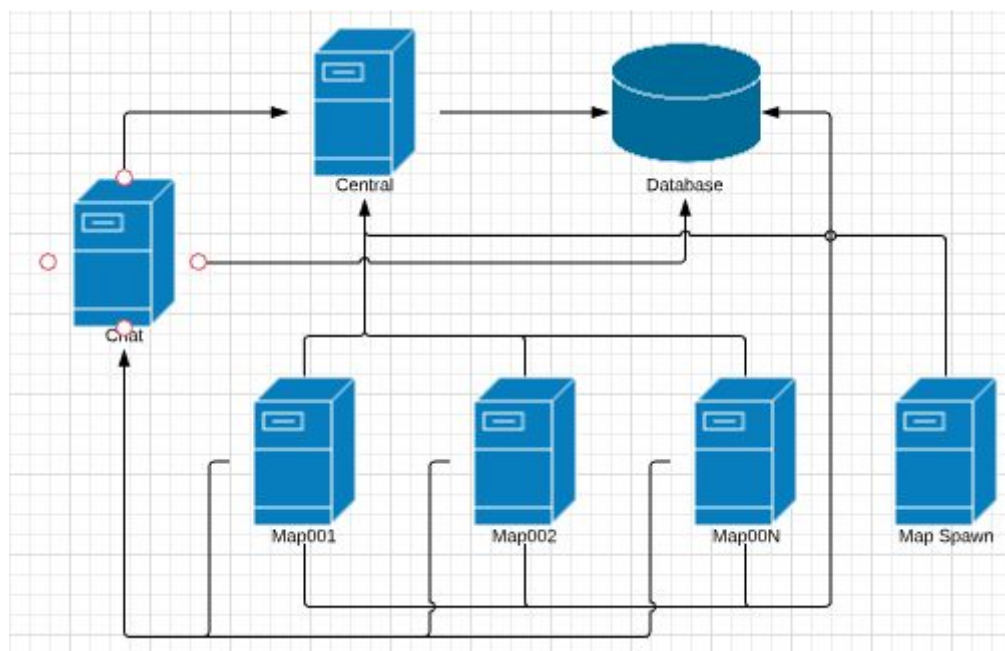$ ./Game.app -startMapSpawnServer -spawnExePath "*Path of your execution file such as /Game/Game.app*" -startCentralServer -startChatServer

Then start the game to test it
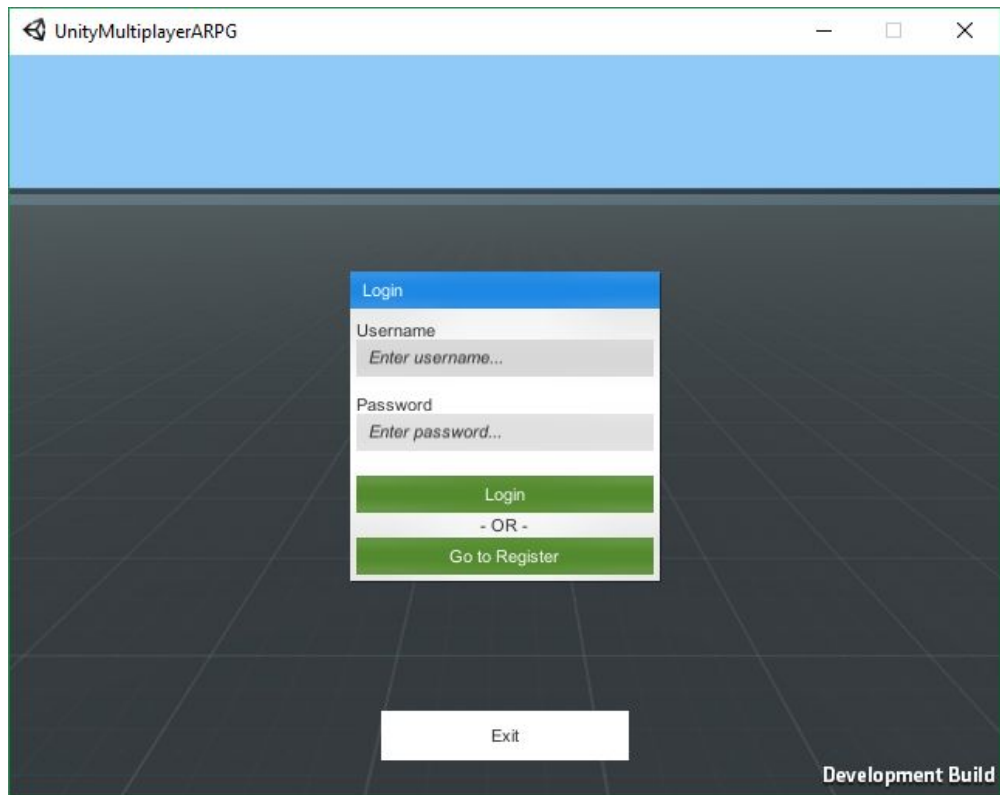
Server Architecture

For this project, there are 3 kind of servers are:
- **Central server,** this server will handle user login/register/character create/character delete more than that it is collects list of other servers
- **Chat server,** this server will handle user chat, this server will connect to Central server to send its address

- **Map spawn server,** this server will connect to central server and then central server will send request to this server to start an map servers
- **Map server,** this server will handle gameplay, each Map scene will handle by 1 server, so if you have 3 maps, it will run 3 servers to handle each map, this server will connect to Central server to send its address and users list, also connect to Chat server to send/receive chat messages

Server Configs

As mentioned architecture, there are different kind of servers and it's have different configs for each server you can set configs in **MMOServerInstance** game object (In **00Init_MMO**)
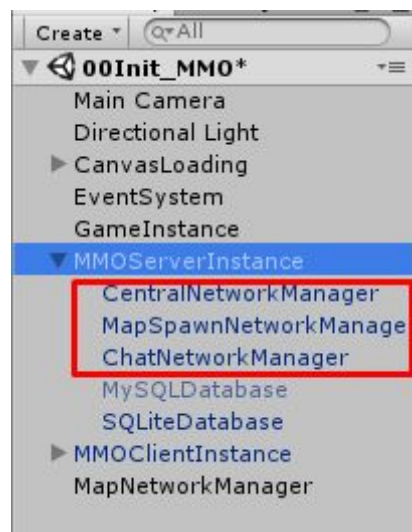
Central Network Manager important configs

- **Connect Key,** Key for communicate between server and clients
- **Network Port,** Central server's port. Clients, chat server, map spawn server and map server will connect to central server by this port
- **Max Connections,** maximum connections for clients including with other servers
- **Min Username Length,** Minimum username length
- **Max Username Length,** Maximum username length
- **Min Password Length,** Minimum password length
- **Min Character Name Length,** Minimum character name length
- **Max Character Name Length,** Maximum character name length

Map Spawn Network Manager important configs

- **Connect Key,** Key for communicate between server and clients
- **Network Port,** Map spawn server's port
- **Max Connections,** maximum connections for clients including with other servers
- **Central Connect Key,** key for communicate with central server this key must be same as central'server connect key
- **Central Network Address,** address where central server is running
- **Central Network Port,** port where central server is running
- **Machine Address,** address to this server
- **Exe Path,** path to execution file must set it correctly to start map servers
- **Not Spawn In Batch Mode,** if this is **TRUE** it will run map server in non batch mode (have graphics and interactable)
- **Start Port,** Port which will be used to run map server then it will increasing when running next map server
- **Is Override Exe Path,** if this is **TRUE** it will use value from **Override Exe Path** to execute map server instead of **Exe Path** when running in editor
- **Editor Not Spawn In Batch Mode,** if this is TRUE it will run map server in non batch mode (have graphics and interactable) when running in editor

Chat Network Manager important configs
- **Connect Key,** Key for communicate between server and clients
- **Network Port,** Chat server's port
- **Max Connections,** maximum connections for clients including with other servers
- **Central Connect Key,** key for communicate with central server this key must be same as central'server connect key
- **Central Network Address,** address where central server is running
- **Central Network Port,** port where central server is running
- **Machine Address,** address to this server

Map Network Manager important configs
- **Connect Key,** Key for communicate between server and clients
- **Max Connections,** maximum connections for clients including with other servers
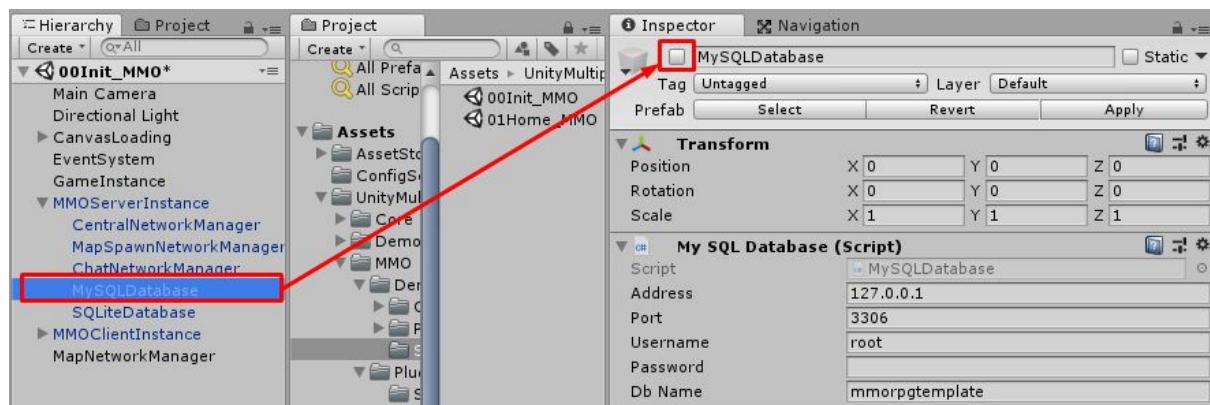
How to change database system
For this project now there 2 available types of database system there are SQLite and MySql database system

You can change database system at **MMOServerInstance** by drag
database system you wish to use into **Database** field
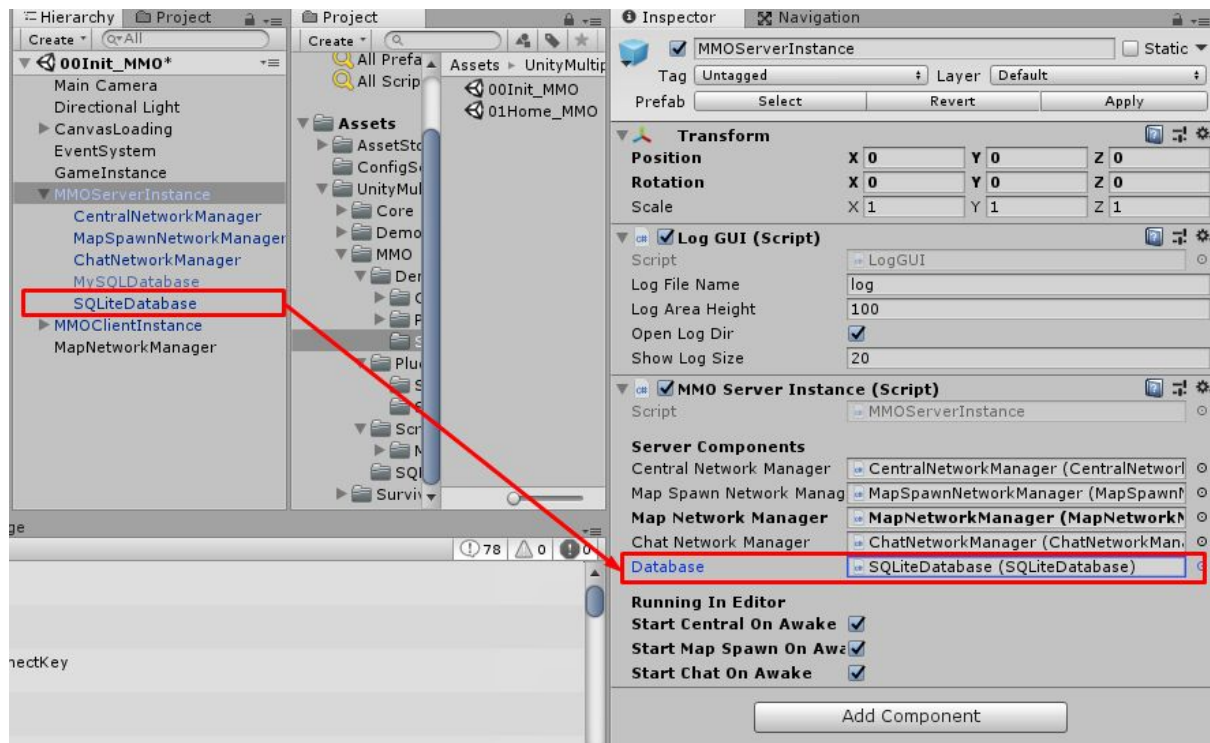
Then you should deactivate the database system that you not want
to use

Server Command Line Arguments

You can change server configs when starting servers by command
line arguments, there are following arguments:

- **-centralAddress**, this will change chat, map spawner and map
  server's **Central Network Address** config
- **-centralPort**, this will change central server's **Network Port**
  config and change chat, map spawner and map server's **Central
  Network Port** config

- **-centralMaxConnections,** this will change central server's **Max Connections** config
- **-machineAddress,** this will change chat, map spawner and map server's **Machine Address** config
- **-mapSpawnPort,** this will change map spawn server's **Network Port** config
- **-mapSpawnMaxConnections,** this will change map spawn server's **Max Connections** config
- **-spawnExePath,** this will change map spawn server's **Exe Path** config
- **-notSpawnInBatchMode,** this will change map spawn server's **Not Spawn In Batch Mode** config to **TRUE**
- **-mapPort,** this will change map server's **Network Port** config
- **-mapMaxConnections,** this will change map server's **Max Connections** config
- **-sceneName,** this will change map server's online scene config
- **-chatPort,** this will change chat server's **Network Port** config
- **-chatMaxConnections,** this will change chat server's **Max Connections** config
- **-startCentralServer,** add this command to run central server
- **-startMapSpawnServer,** add this command to run map spawn server
- **-startMapServer,** add this command to run map server
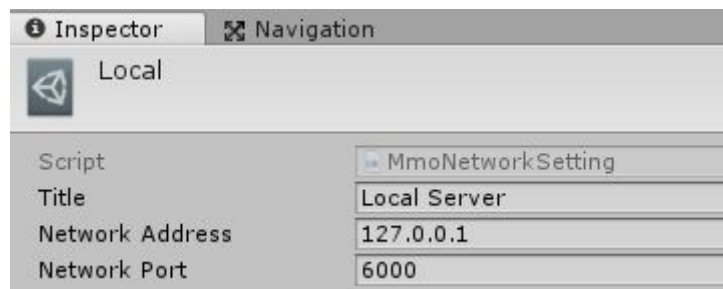- **-startChatServer,** add this command to run chat server

Server list for client

If you planned to run multiple servers you can add network settings to connect to each server at client side by right click at Project tab select Create -> Create NetworkSetting -> MmoNetworkSetting
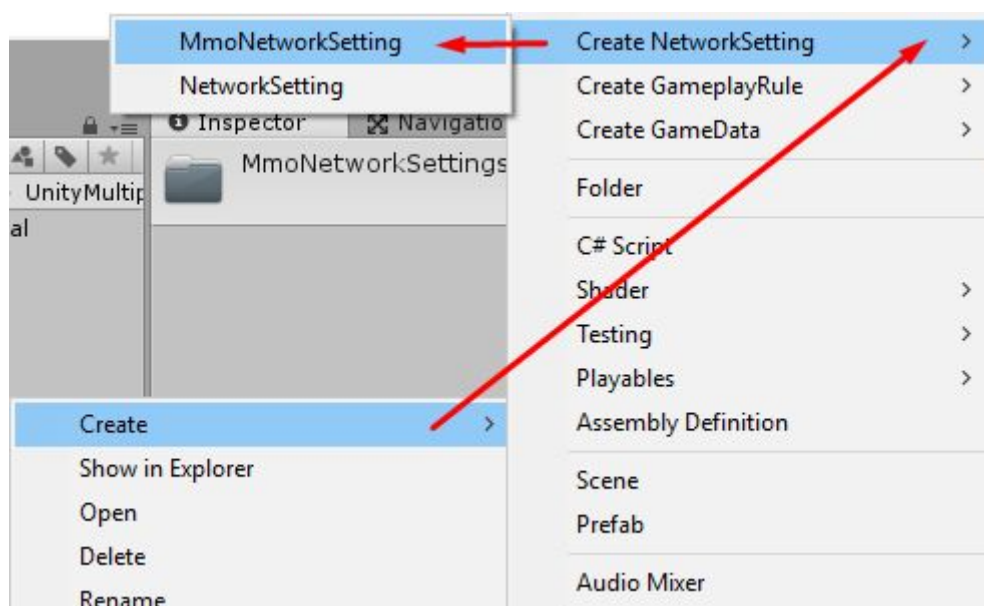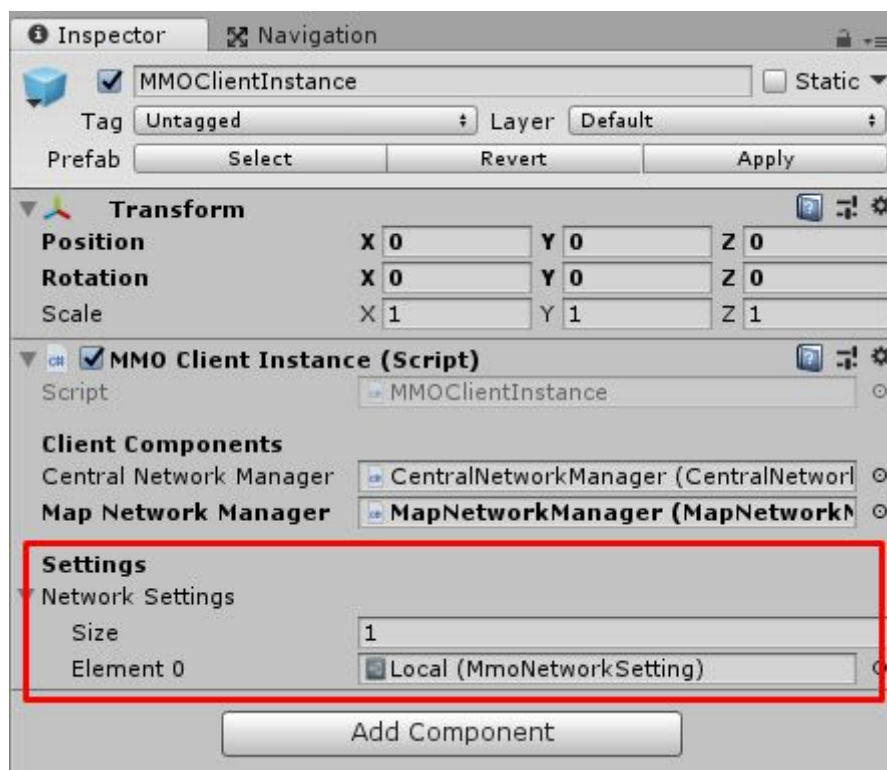
Then set server name (title), central server's address and port

Then add it into **MMOClientInstance** game object (In 00Init_MMO scene)

Client Production Build

Before you build the game for players you should remove **MMOServerInstance** game object to avoid players use the game to create private server