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CS492A Senior Project

Requirements Document

Project Name: Down to Play (DTP)

Application Description:

This application is a platform for a community of gamers to quickly host, queue up, and create rooms for play for multiple games at once, and for multiple platforms. The end goal will be to allow registered users to select several games in which they are interested in playing, by either queuing up for or hosting a queue for their desired games. Ultimately, allowing users to share account names for specific platforms to add as friends and voice chat for selected queues once enough players have queued up and “ready.”

Problems Being Solved:

The primary problem being solved is the issue that when gamers want to find a match or room to play, they (generally) have only one application launched and are using the developers’ methods/algorithms for searching for other players through the applications’ servers. This leaves the gamer subject to only searching for games to play, one specific game at a time. DTP will allow users to essentially search for viable matches/rooms, multiple games at a time. For example, if a user is willing (Down to Play) any of the call of duty games of the franchise, he can enter the queuing system for all the games at once. Whichever queue fills up first will send a “ready” or “cancel” message to the user’s application, which they can in turn accept or cancel. If accepted, they will receive a message with the host of the queue’s username for the specific platform of the game chosen with a chat open to begin communication to all other players queued.

A secondary problem this application can solve is the ability for gamers to “work around” unwanted or unfair matching algorithms which have become the bane of many online streamers and players. For example, popular games such as Apex Legends have repeatedly been accused and criticized for their use of skill matching, which when mixed with retention algorithms, causes unfair and unbalanced matchmaking. With DTP, users will find other gamers who will simply be down to play. Users will then have the power to avoid players/hosts based on their own criteria, rather than being forced to play against other gamers defined by developers wishes and restraints. This reflects the strength of the community aspect of DTP.

A third problem this application may solve is allowing resurgences of older games in terms of a player base. Personally, older real-time-strategy games, and others which would now rely on a client hosting a room for other players to join, will have players who are Down to Play find each other. This will also help newer games, as mentioned in the primary problem when sequels of games with multiplayer support come out in relative secession by possibly extending longevity of online play after launch.

Are there other ways to achieve this goal:

Currently, gamers can look on forums, find discord channels, look through message boards, or rely on good old friends to find enough players to play their desired games. However, by using DTP, the time and work associated with gathering players to play will be streamlined and made effortless.

How to achieve this:

Use a server to allow users to connect and requests services.

Node.js, along with express package, to create a web application to work on foundational aspects of DTP user functionality and interface. Potentially Pug package to create html templates for design

Manage a DB for user accounts, potential game libraries, information, queues etc.

My SQL server may be used for testing purposes, depending on development of previous functionality

Create a desktop application

Eventually translate into electron, allowing for desktop application use.

Possible APIs and third -party functionality

Ability for users to login to their specific external accounts(Discord, Steam, GOG, EA, etc.)