CSE 201 Project High Level Design Document

Team Member Names
Group 16 - Nicole Roark, Dante Wu, Lei Liu, and Robbie Ritchie

Team Project Title
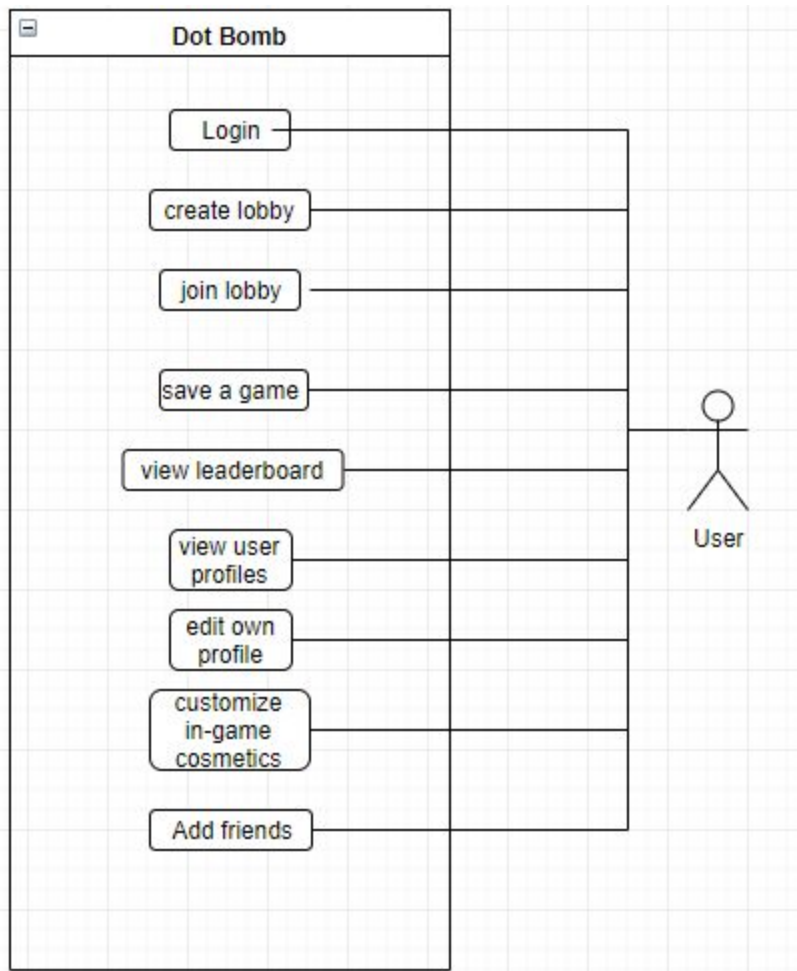Dot Bomb

Project Description
We are creating a multiplayer online game that we will be hosting on a server. The object of the game will be to fill the entire board with your player color. Users will take turns selecting a circle to place one of their dots. If the circle has n number of neighbors, once that dot has n+1 dots in it, the dots will overflow into the neighboring circles. This is how a user can 'take over' other players' circles. Once one player fills the entire board with their color, the game is over. We will allow users to login and have an account which will let them save unfinished games and have a win/lose streak. While in a game, users can change their color and shape of dots. They can also choose from multiple board layouts before a game starts.

Overall Design Description
<Describe the overall design – mention if this is Object Oriented Design or Functional/Procedural design, what components it has (UI, Backend, Front end, Database in backend etc) – use UML diagrams if you want or simple block diagrams>
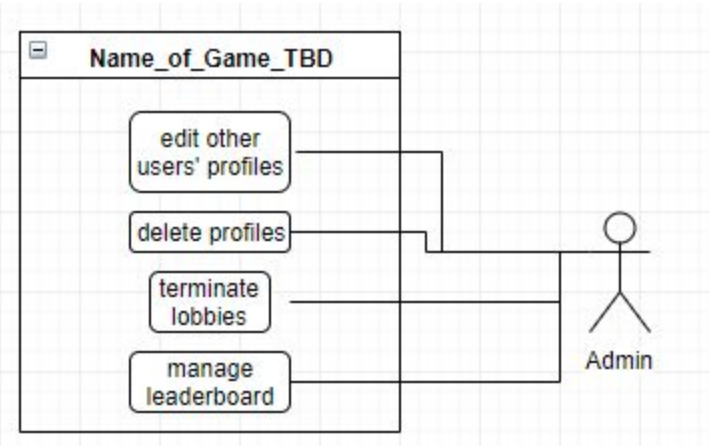
General Use Case

This diagram displays the actions we want our user to be able to take upon connecting to our game


Dot Bomb

- Login
- create lobby
- join lobby
- save a game
- view leaderboard
- view user profiles
- edit own profile
- customize in-game cosmetics
- Add friends

User

Admin Use Cases

This describes the actions an admin can take, over and above the actions of a normal user

Name_of_Game_TBD

- edit other users' profiles
- delete profiles
- terminate lobbies
- manage leaderboard

Admin

Connection Sequence

Once the user connect to the server, the client will send a request to the server for the files needed to generate a login interface, like the animation, the server will send the files to that client. Then the user will proceed to login with the account existed already or sign up for a new account. Once it is verified, the server will let the client connect to the game part of the whole software.
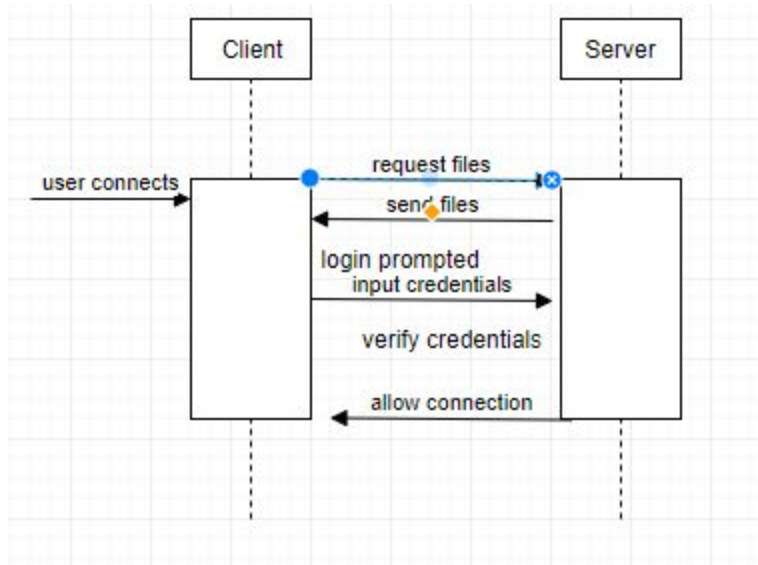
Move Sequence

This diagram shows the basic interaction between the client and server in terms of game logic. This will become more complicated as we introduce lobbies and have to implement the game logic.
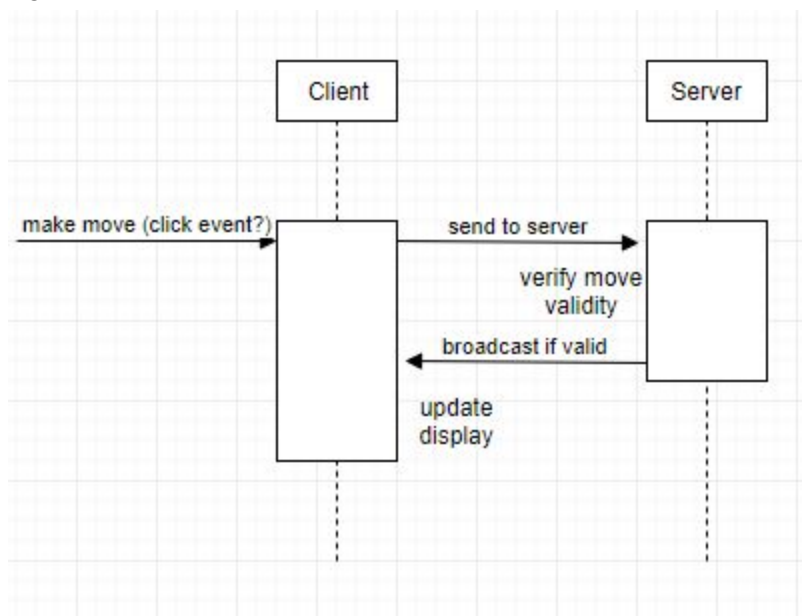
Basic Classes

These are the core classes we will be using for our game, other classes will extend or encapsulate these

Graph
+ nodes[mandatory]
+ players[optional]
+ moveHistory[1]

Node
+ neighbors[1]
+ dotValue[1]
+ color[1]
position[1]