CMSC 447
Group Calico
4/24/2024

Technical Documentation

Introduction:

This documents the technical specifications of our game's development and design process. It includes the specific software and programming languages we chose to make the project, as well as the API calls used and database management. We chose to make our game a top down two-dimensional game combining elements of simple games such as snake and Pacman. Our game has a large, randomly generated square map with 4 quadrants. After the game map is randomly generated, the player, enemies, and coins are randomly placed in the free spaces, while the player moves around to collect coins which extends the length of the player's character. If the player can collect enough points to pass a minimum threshold, the next quadrant is unlocked for the player. For each subsequent quadrant, the frequency of enemies increases, thereby increasing the difficulty of the level.

Game Requirements:

We specified the user requirements that at minimum the user should be able to run the game, complete it, and save their score, updating the high score table as necessary. The system should record the user scores in the database, and place the same movement restrictions and boundaries on the enemies as the user controlled character. If the user passes a

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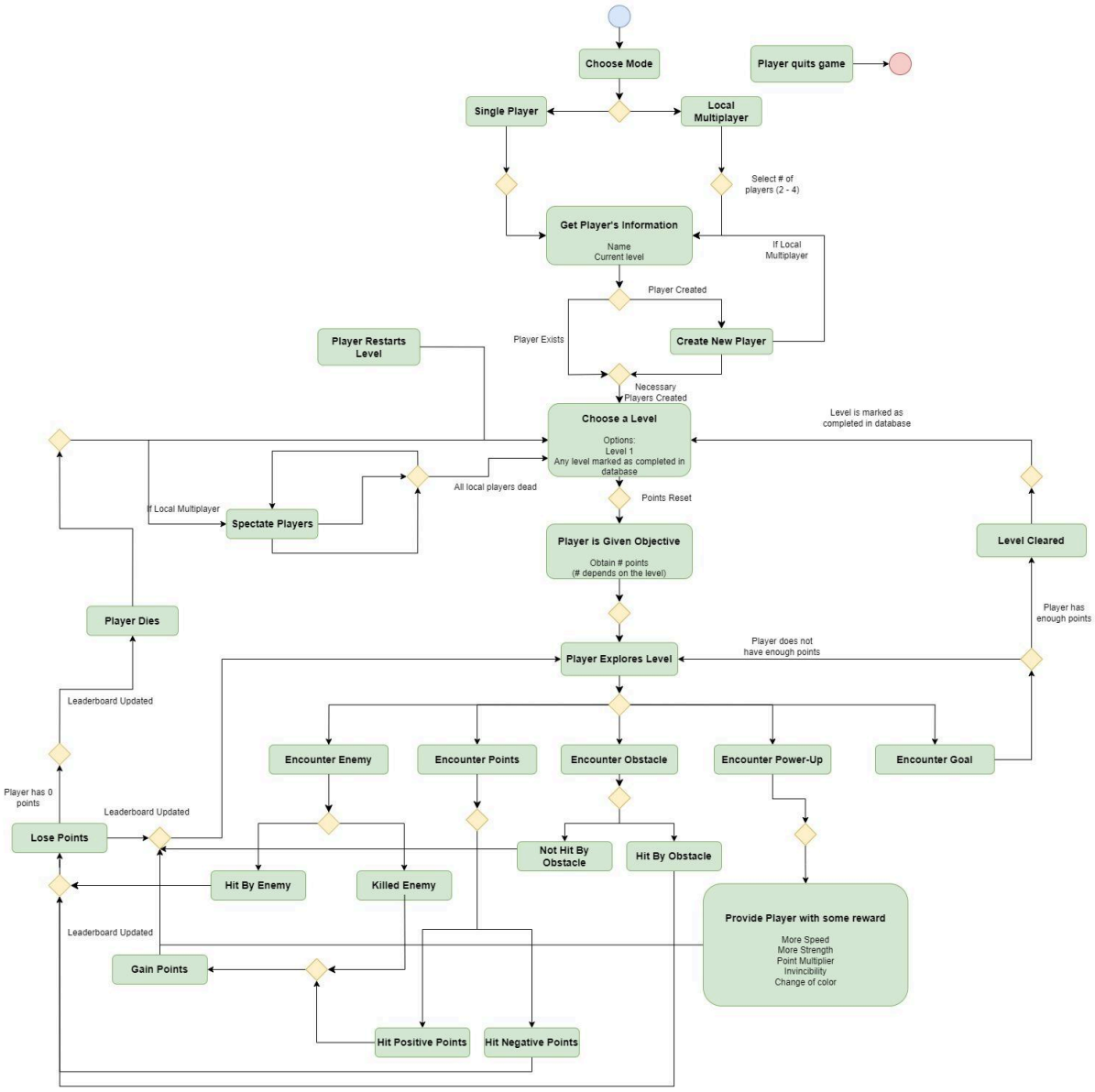
certain threshold of points, the next quadrant is unlocked for the player to progress to.



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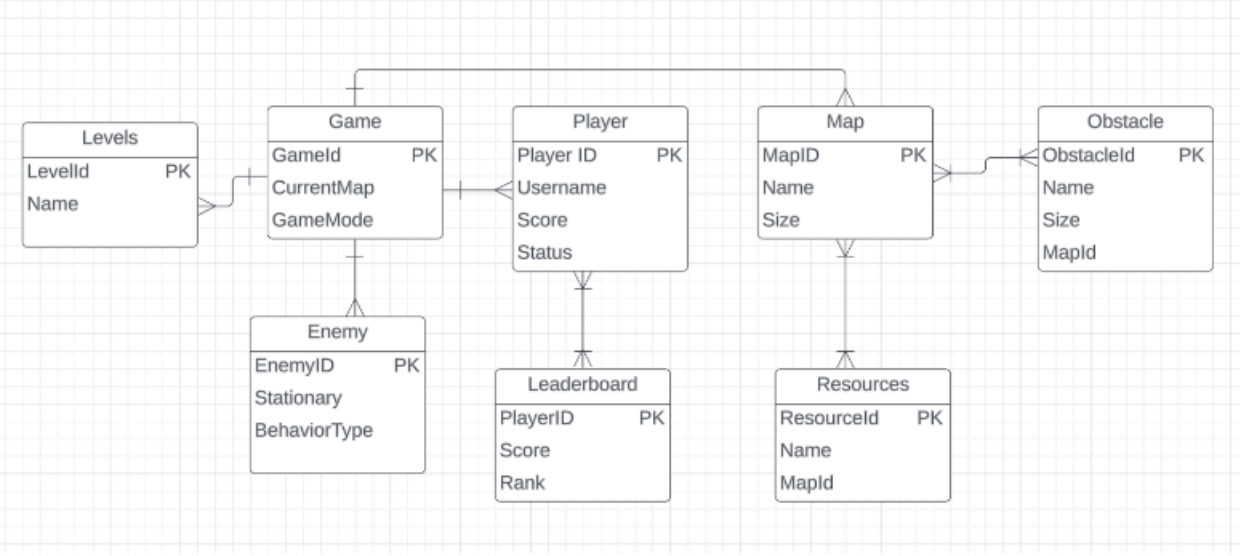
Software and Databases:

We chose to write the entirety of our project in Javascript and HTML because we felt comfortable using the Phaser framework to make our game, which is in HTML entirely. We are using Python for our application backend with We chose to use SQLite3 for our database system. For our “User” table, we have a primary key of “ID”, and additional keys of “Username”, “pw_hash”, “points”, “level”, and “high_score”. The functions we have as API calls include “signup”, “ “update_player_stats”, “generate_static” which generates the map, and “get_leaderboard”.



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