Team: Alpha-Bravo

Members: Anthony Martinez (Team Leader), Dustin Chhum, Howard Cho, Luis Rodriguez

List of Objects

# Entity Objects

1. **Game** - A game represents the game-state that contains the Player’s data and the current level they are on.
2. **Main Character**- The main character is the protagonist of the game and will be controlled by the player. The main character has the attributes: inventory, score, health, and controls interface.
3. **Inventory** - A container that may have 0 to 5 weapons. The main character and enemies both have inventories. Only the main character’s inventory is mutable.
4. **Enemy** - An enemy represents the AI character that will try to stop the main character from completing the level. Enemies have their own weapons, health bar, and move on their own.
5. **Weapon** - A weapon is an item that shoots projectiles that does damage to characters and enemies alike. The damage decreases characters’ and enemies’ health totals.
6. **Health** - A health meter that represents the life of the main character or an enemy.
7. **Obstacle** - An obstacle represents barriers to the main character. Their uses vary in effect. These can simply restrict the movement of the player or they can also deal damage to the player.
8. **Platform** - A platform is a bounded object that allows the main character and enemies to walk on to navigate throughout the level.
9. **Level** - A level represents the whole map from start to finish. The map contains the Player, Enemies, Weapons, Items, Obstacles, Gaps, and Platforms. Once the Player reaches the end of the level, they will receive a ranking and the time they took to complete the level.
10. **Game Database**: A database that contains game data generated by each user. It also saves games that can be continued. The database is also queried when generating leaderboards.

# Boundary Objects

1. **MainMenuBoundary** - This window allows the player to select options: load a game, load leaderboards window, and exit the game.
2. **WeaponBoundary** - This user interface allows the player add, drop, and cycle through weapons held in the inventory.
3. **PlayerAttackBoundary** - This gives the user the ability to perform an attacks with or without weapons.
4. **CharacterControlBoundary** - This boundary give the player the option to: move, jump, or duck from obstacles or enemy attacks. They will be able to move or jump in any direction.
5. **InGameMenuBoundary** - This allows the player to pause mid-game and will allow the user to select the options of: continue the current playthrough, save the game, or exit the game.
6. **HealthDisplayBoundary** - This boundary has the health display to be viewed and be modified whether user gets damaged or uses health potions.
7. **GameHUDboundary** - The game HUD displays the player’s current score, health bar, inventory display, and in-game menu.
8. **LeaderBoardBoundary** - The leaderboard window displays the top 5 scores from the game database.

# Control Objects

1. **GameLaunchControl** - This controls the loading of the game onto the web application.
2. **StartNewGameControl** - This controls starting a new game when you click on the button for start a new game.
3. **SaveGameControl** - This controls the ability to save your game via the in-game menu and it will save the player’s data and the level they are on.
4. **LoadGameControl** - This controls loading a game when you click on the button for load a game from a list of saved games..
5. **UserDatabaseControl** - This controls getting the user’s data from our database.
6. **ExitGameControl** - This controls the exiting of the game from either the main menu or in-game menu.
7. **LoadMainCharacterControl** - This controls loading the player’s main character.
8. **SpawnControl**  - This controls the spawning of enemies and items onto the levels we have created.
9. **InventoryControl**: This controls the inventory, which will allow the player to either add weapons or remove weapons from their inventory.
10. **HealthControl** - This will allow the health bar to be adjusted. .