Team: Alpha-Bravo

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

Use Cases

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| Use-Case Name: | Using the Main Menu |
| Actors: | Player |
| Pre-Conditions | 1. Player must be connected to the internet. 2. Player must be on website. 3. Player must be logged in. 4. Player must be connect to a keyboard. |
| Flow of Control | 1. Player goes to website. 2. A splash screen appears. 3. The menu appears which will show a variety of options.    1. See Use Case: Starting a Game    2. See Use Case: Viewing Leaderboards/Progress    3. See Use Case: Exit |
| Post Conditions | 1. The player is given options for their next plan of action. |
| Error Conditions | 1. The game hangs on the splash screen. 2. The game crashes before showing the splash screen. |
| Non-Functional Requirements | 1. The main menu should load in less than 5 seconds upon opening. |

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| Use-Case Name: | Starting a Game |
| Actors: | Player |
| Pre-Conditions | 1. Player must be in the main menu. |
| Flow of Control | 1. Player enters the option to start a new game.    1. Player selects a game from the dropbox menu.    2. A loading screen appears.    3. See Use Case: Play a Game 2. Player enters the option to load a new game.    1. Player selects a game from the list of saved games.    2. A loading screen appears. |
| Post Conditions | 1. Player is now in a game. |
| Error Conditions | 1. The game hangs at the loading screen. 2. The game cannot proceed after selecting from the dropbox menu. 3. Game type selected is not available. |
| Non-Functional Requirements | 1. The game level must load in less than 1 second. |

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| Use-Case Name: | Viewing Leaderboards/Progress |
| Actors: | Player |
| Pre-Conditions | 1. Player must in the main menu. |
| Flow of Control | 1. Player enters the option to view leaderboards and progress.    1. A screen appears which displays each level with the player’s completed time and the ranking they received. |
| Post Conditions | 1. Player is in the leaderboards/progress screen. |
| Error Conditions | 1. Database connection fails. |
| Non-Functional Requirements | 1. The progress screen should load in 0.5 seconds or less. |

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| Use-Case Name: | Exiting the Game |
| Actors: | Player |
| Pre-Conditions | 1. Player must be in the main menu. |
| Flow of Control | 1. Player enters the option to exit the game.    1. An exit screen appears. |
| Post Conditions | 1. Player is now no longer in the main menu. |
| Error Conditions | 1. Data doesn’t save upon exit. |
| Non-Functional Requirements | 1. The player’s data needs to be saved into the database upon exit. |

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| Use-Case Name: | In-Game Settings |
| Actors: | Player |
| Pre-Conditions | 1. Player must be in-game. |
| Flow of Control | 1. Player presses button on the top right of the screen. 2. A menu shows up showing a variety of options.    1. See Use Case: Exit a Game (In-Game)    2. See Use Case: Save a Game (In-Game) |
| Post Conditions | 1. Player is in the in-game settings screen. |
| Error Conditions | 1. Game hangs after clicking the settings button. |
| Non-Functional Requirements | 1. Menu should pop up instantaneously. |

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| Use-Case Name: | Save a Game (In-Game) |
| Actors: | Player |
| Pre-Conditions | 1. Player must be in the settings menu. |
| Flow of Control | 1. Player selects option to save game. 2. The game is saved to the database. |
| Post Conditions | 1. The player’s game is saved to the database. |
| Error Conditions | 1. The player’s game isn’t saved to the database. |
| Non-Functional Requirements | 1. The game must saved in less than 1 second. |

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| Use-Case Name: | Exit the Game (In-Game) |
| Actors: | Player |
| Pre-Conditions | 1. Player must be in settings menu. |
| Flow of Control | 1. Player selects the option to exit the game. 2. The players data is saved into the database. 3. A prompt is shown telling the Player their data and game is being saved. 4. The game exits the level. 5. See Use-Case: Using the Main Menu |
| Post Conditions | 1. Player exits to the Main Menu. |
| Error Conditions | 1. Player’s data isn’t saved upon exit. 2. Database connection fails. 3. The prompt is not shown when the data is saved. 4. The game hangs after the player selects the exit option. |
| Non-Functional Requirements | 1. Game should exit to the main menu in less than 2 seconds. |

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| Use-case Name: | Play a Game |
| Actors: | Player |
| Pre-Conditions: | 1. User must be on the website. 2. User must be logged on. 3. User must be using a keyboard. 4. User must be at the game menu. |
| Flow of Control: | 1. The player selects a game type from a drop box    1. [ game type] 2. The game type is loaded and displays the following data:    1. [health]    2. [level]    3. [inventory]    4. [score] 3. The player proceeds through the level by moving towards the goal. |
| Post-Conditions: | 1. A game and its data is loaded. 2. Game data can be saved. |
| Error-Conditions: | 1. Game type selected not available. 2. Game hangs when loading and never loads. 3. Web browser can not load the game. 4. Frames per second drops below 30 FPS. |
| Non-Functional Requirements: | 1. Game loads within 5 seconds. 2. Cross browser compatible. 3. WebGL support included. 4. The game must run at between 30- 60 frames per second. |

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| Use-case Name: | Encounter and Avoid an Enemy |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. A an enemy must have spawned. |
| Flow of Control: | 1. The player encounters an enemy. 2. The player avoids enemy attacks and maneuvers past it. 3. The player continues with the level. |
| Post-Conditions: | 1. The current game is still ongoing. 2. The player statistics do not change. |
| Error-Conditions: | 1. Controls are not responsive. 2. Controls lag. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds 2. The ground enemy must actively attack the player. |

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| Use-case Name: | Encounter and Engage an Enemy |
| Actors: | Player |
| Pre-Conditions: | 1. The user must have loaded a game. 2. An enemy must have spawned. 3. The player does not have a weapon selected. |
| Flow of Control: | 1. The player encounters a ground enemy. 2. The enemy attacks the player. 3. The player is struck and loses health. 4. The player’s following statistics change:    1. [health] 5. The player opens the inventory menu    1. [weapon item]    2. [weapon item]    3. [weapon item] 6. The player selects one of the weapon items. 7. The player equips the item and fires at the enemy. 8. The player’s following statistics change:    1. [score] 9. The enemy is struck an amount of times and dies. 10. The player continues with the level. |
| Post-Conditions: | 1. The current game is still ongoing. 2. The player’s health level changes. 3. The player’s score changes. |
| Error-Conditions: | 1. Controls are not responsive. 2. Controls lag. 3. Weapon does not load onto the character. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. 2. The ground enemy must actively attack the player. |

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| Use-case Name: | Encounter a Gap and Misses |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. The obstacle must have appeared. |
| Flow of Control: | 1. The player encounters a gap. 2. The player tries to jump the gap. 3. The player misses the jump. 4. The player loses an amount of health. 5. Adjusts the following data:    1. [health] |
| Post-Conditions: | 1. The current game is on going. 2. The player’s health level changes. |
| Error-Conditions: | 1. Controls are not responsive/lag. 2. The gap does not appear. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. |

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| Use-case Name: | Encounter a Gap and Makes It |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. The obstacle must have appeared. |
| Flow of Control: | 1. The player encounters an obstacle. 2. The player tries to jump the obstacle. 3. The player makes the jump. 4. The player continues on with the level. |
| Post-Conditions: | 1. The current game is still ongoing. 2. The player statistics do not change. |
| Error-Conditions: | 1. Controls are not responsive/lag. 2. The gap does not appear. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. |

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| Use-case Name: | Encounter a Platform |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. The obstacle must have appeared. |
| Flow of Control: | 1. The player encounters a platform that is elevated. 2. The player uses other objects to maneuver onto the platform. 3. The player continues with the level. |
| Post-Conditions: | 1. The current game is still ongoing. 2. The player statistics do not change. |
| Error-Conditions: | 1. Controls are not responsive/lag. 2. Nearby object does not load. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. |

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| Use-case Name: | Encounter and Avoid a Pick-up Item |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. An item must be spawned. |
| Flow of Control: | 1. The player encounters a pick up item. 2. The player avoids the item and moves passed it. 3. The player continues with the level. |
| Post-Conditions: | 1. The current game continues. 2. The player statistics do not change. |
| Error-Conditions: | 1. Controls are not responsive. 2. Controls lag. 3. Item does not load. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds 2. Item must remain on-screen until next screen frame. 3. Item must have an equal chance of spawning. |

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| Use-case Name: | Encounter and picks up pick-up item |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. An item must be spawned. |
| Flow of Control: | 1. The player encounters a pick-up item. 2. The player click a button and picks up item. 3. The player gains item picked up. 4. Adjust statistics to player inventory or score 5. [ Item] 6. [Score] 7. The player continues with the level. |
| Post-Conditions: | 1. The current game continues. 2. The player statistics changes. 3. The player’s inventory changes. |
| Error-Conditions: | 1. Controls are not responsive. 2. Controls lag. 3. Item does not load.   4. Item does not register being picked up. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. 2. Item must remain on-screen until next screen frame. 3. Item must have an equal chance of spawning. 4. Stats from item gain must update within .1 seconds |

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| Use-case Name: | Encounter and avoid an auto-pick up item |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. An item must be spawned. |
| Flow of Control: | 1. The player encounters an auto-pick up item. 2. The player avoids the item and moves passed it. 3. The player continues with the level. |
| Post-Conditions: | 1. The current game continues. 2. The player statistics do not change. |
| Error-Conditions: | 1. Controls are not responsive. 2. Controls lag. 3. Item does not load. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. 2. Item must remain on-screen until next screen frame. 3. Item must have an equal chance of spawning. |

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| Use-case Name: | Encounter and gets an auto-pick up item |
| Actors: | Player |
| Pre-Conditions: | 1. User must have loaded a game. 2. An item must be spawned. |
| Flow of Control: | 1. The player encounters an auto pick-up item. 2. The player makes contact with item. 3. The player gains items. 4. Adjust player statistics according to item. 5. [Score] 6. [Health] 7. [Hit points] 8. The player continues with the level. |
| Post-Conditions: | 1. The current game continues. 2. The player statistics change. 3. The player’s inventory changes. |
| Error-Conditions: | 1. Controls are not responsive. 2. Controls lag. 3. Item does not load. 4. Item does not register as obtained. |
| Non-Functional Requirements: | 1. Controls must be responsive within .1 seconds. 2. Item must remain on-screen until next screen frame. 3. Item must have an equal chance of spawning. 4. Stats from item gain must update within .1 seconds |