

Business Requirements

- Create a web based game, that has a tutorial and three or more levels
- Uses database to keep track of scores of the player
- Allow for the saving of game by player and allow them to continue on the level they left on
- Allow for the player to repeat the final level after completed the final level
- Use Public Api to transmit information
- Use of Api to connect the game to the frontend website and use of the api as the middle to communicate the game and website
- Allow for a scoreboard of top ten of the format of group: Group name : title and the score to be save in a database that can be sent to an public api url
- The production of two unique implementation idea in the game besides what has been mentioned

User Requirement

Main Menu Operations

The user at the start of the game will be in a main menu where they can either start a new game , continue a saved game or view the scoreboard of the top ten fastest level runners. If they are new they will first be asked to give a name then are able to start the game and start a tutorial where they can get a feel of the game . If they are a continuing player they will go to the save game section, select the save game and start the game where the user left off, with both the correct level and timer intact. If they want to view the scoreboard, they can select the scoreboard which will display the top ten fastest level runners and can exit out to the main menu when fish view the scores.

In Game Controls

The user will be able to move both character sprites within a level in doing so be able to jump onto different platforms around the level to complete puzzles which require the user to use there abilities to activate buttons and levers. As the cat it will be able to survive any fall and go up walls. As the dog you will be able to survive water and pull objects.Both have the ability to make a noise to move sleeping animals. If needed the player can reset the level while getting a time penalty. Once the player has gotten both characters to the end point of a level they will be presented with a game menu which will allow them to save and quit, just quit, or proceed to the next level(if final level next paragraph).

Final level Completion Operation

After the final level of the game is completed the time of the user will be saved to the scoreboard and compared to the other score and if it's higher than one of the score it will replace that score to be that rank and the replace score will do a bump down system and compare with lower score until the tenth score is decided , and if the user want to continue the level they will either start over at the final level or start a new game in the main menu.

Systems Requirements

Software:

Databases management system, Scoreboard, Save and quitting system, Graphical UI, Level generation, Player generation (Abilities, cat/dog), Timer, Level Reset/ penalty system

Hardware:

Website hosting server, Database servers,

People: User/Players

Functional Requirements

- The System shall allow for the user to use key to move there character sprite
- The game shall allow the user to restart a level while also receiving a time penalty
- The game shall record the score and name of the player when the complete the final level
- The system shall always check to see if the cat sprite has touched water and if so reset the level
- But allow the dog to do so
- The system shall always check to see if the dog sprite has jumped/fallen from to high a height and if so reset the level but allow the cta to do so
- The system shall allow the dog to pull a moveable block with them if interacting with it and not allow the cat to do so
- The game shall allow for the user to view the top ten high scores of the game.
- The game shall compare score and rank the players from one to ten
- The game shall allow for the user to save and quit the game
- The game shall allow for the player to return to the level he is one with the time and score intact after saving
- The game shall if the user finish the level by reaching go, move to the next level
- If the player didn't complete the level and try to goto the next level the game shall check and make sure the user goto the correct level
- The game shall allow for both the cat and dog to control and playable
- The game shall if a dog bark make the animal move
- The game shall revel a button if the dog is in the correct place
- The game shall check the high wall and if a cat is nearby allow for climbing
- The game shall make sure the control of the cat goes to the cat and the control of the dog goes to the dog and doesn't mix up
- The game shall allow both the cat and dog to be able to jump