Module Interaction Description File

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StartMenu module

* Once the game is running, the StartMenu module will be the first visible module
* The start menu has a “Start Game” button and a “Quit Game” button
* Clicking the “Quit Game” button will exit the application
* Clicking the “Start Game” button will take the user to the LevelSelectMenu Module
* Functions:
  + \_on\_StartGameButton\_pressed()
  + \_on\_QuitGameButton\_pressed()

LevelSelectMenu module

* The level selection menu has a button for each corresponding level and a back button
* Clicking the “Back” button will bring the user back to the StartMenu module
* Clicking a level’s button will bring the user to that level’s module
* Functions:
  + \_on\_Level1Button\_pressed()
  + \_on\_Level2Button\_pressed()
  + \_on\_Level3Button\_pressed()
  + \_on\_BackButton\_pressed()

Level1 module

* Instances the Player class
* Instances the Alien class
* Instances the NextLevelPortal class
* Instances the PauseMenu class
* Instances GroundTileSet
* Instances Gut class for in game automated testing

Level2 module

* Instances the Player class
* Instances the Alien class
* Instances the NextLevelPortal class
* Instances the PauseMenu class
* Instances GroundTileSet

Level3 module

* Instances the Player class
* Instances the Alien class
* Instances the NextLevelPortal class
* Instances the PauseMenu class
* Instances GroundTileSet

PauseMenu module

* Pressing the ‘esc’ key in a level scene will make the PauseMenu module visible
* The pause menu has a “Resume” button and a “Quit” button
* Clicking the “Quit” button will take the user to the StartMenu module
* Clicking the “resume” button or pressing ‘esc’ again will unpause the game and the PauseMenu module will no longer be visible
* Functions:
  + \_input(event)
  + \_on\_resumeButton\_pressed()
  + \_on\_quitButton\_pressed()
  + \_unpause\_processing()

Player Module

* Pressing the left/right arrow keys will move the character left/right respectively
* Pressing up arrow makes the player jump
* Animated sprite node creates the player animation
* CollisionShape2D node creates collision detection
* ParallaxBackGround node creates the background relative to the player
* Camera2D node creates the camera view following the player
* Functions:
  + \_physics\_process(delta)
  + gravity()
  + move\_character()
  + on\_floor\_ready\_to\_jump()
  + is\_falling\_off\_map()
  + move\_player\_right()
  + move\_player\_left()
  + stop\_player\_movement()
  + is\_falling\_off\_map()
  + respond()

Alien Module

* Animated sprite node creates alien animation
* CollisionShape2D node creates collision detection
* RayCast2D node creates ledge detection
* Instances AlienHitBox class
* Functions:
  + \_physics\_process(delta)
  + detect\_wall()
  + detect\_ledge()
  + flip\_alien\_sprite()
  + sprite\_faces\_direction()
  + gravity()
  + move\_alien()

AlienHitBoxModule

* CollisionShape2D node creates collision detection
* Functions:
  + \_physics\_process(delta)

GroundTileSet module

* CollisionShape2D node creates collision detection
* Sprite node sets an image for a tile

NextLevelPortal module

* Sprite node provides portal animation
* CollisionShape2D node creates collision detection
* Functions:
  + \_physics\_process(delta)