THE Potato Game

Software Engineering Document

**Game mechanics**

Game flow

* Displaying the main menu
* Playing the game
* The Game Over screen
* The Winning screen

Win

Quit

Lose

Playing game

Main Menu

**Data types**

Score

* We need to use int as we are showing whole values.

**Classes and scripts**

* A level manager that changes levels.
  + It has a method void OnTriggerEnter2D(Collider2D other) that triggers with a portal and adds a number to the index in the current scene.
* A player controller
  + Attributes:
* [HideInInspector] public bool facingRight = true;
* [HideInInspector] public bool jump = false;
* public float moveForce = 365f;
* public float maxSpeed = 5f;
* public float jumpForce = 1000f;
* public Transform groundCheck;
* private bool grounded = false;
* private Animator anim;
* private Rigidbody2D rb2d;
  + Methods:
    - Awake method
    - Update method
    - FixedUpdate method
    - Flip method
* Enemy controller
  + This has an Awake, FixedUpdate and Flip methods. They make the enemy move around a platform. It needs to check for ground to be able to flip when the ground ends.
* Platform fall scripts
  + Uses a Rigibody2d class that gets disabled when OnCollisionEnter2D(Collision2D other), so it falls with the Fall() method.
* Turnip script that adds score and destroys the object
  + A method OnCollisionEnter2D(Collision2D other) that destroys the object and adds to the score.score attribute.
* A collider that ends the game if you fall
  + A method OnCollisionEnter2D(Collision2D other) where it takes you to the “gameover” scene.
* A script that randomly spawns turnips
  + It uses an array of objects (turnips) and instantiates them randomly on a platform.
* A script for the camera to follow the player
* A script for pausing the game
  + If the player presses p it pauses the game and also unpauses it.
* A script to control the player’s health
  + If there is a collision with an enemy OnCollisionEnter2D(Collision2D other) the player gets substracted life points.
* A spawner script for the enemies
  + Randomly spawns enemies from a spawner.
* A script that shows the final score
  + It only gets the score from the Score class and shows it in a GUI Text component.
* A script that lets you navigate the menu or end scenes
  + It works onClick with the buttons on the menus. If the game is reset, the score then is changed to score.score =0.