

SYSC 3110

PROJECT - PLANTS VS ZOMBIES

README

1. Authors

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2. Deliverables

- Source Code
 - Board.java (Britney, Nour)
 - GenericZombie.java (Britney, Nour)
 - GridObject.java (Britney, Nour)
 - Level.java (Robyn, Meet)
 - Main.java (Robyn, Meet)
 - NullSpace.java (Britney, Nour)
 - Plant.java (Britney, Nour)
 - SunFlower.java (Britney, Nour)
 - VenusFlyTrap.java (Britney, Nour)
 - Zombie.java (Britney, Nour)
- UML Diagrams
 - Class Diagram (Robyn, Meet)
 - Sequence Diagram (Britney, Nour)
- Documentation

3. Documentation

- Design Decisions
 - Board Class contains a static 2D array of abstract type GridObject which allows for a simple but powerful enough MODEL. This 2D array is essentially the Board of the game on which different objects will be placed, such as a plant or zombie.
 - GridObject is an abstract class which currently is implemented by the Plant -> SunFlower and Plant -> VenusFlyTrap and Zombie -> GenericZombie and NullSpace. NullSpace allows for a default object on the board on creation. Plant and Zombie classes are also abstract to allow easy additions of new plants/zombies.

- It also allows for later implementation of various other objects/entities. For example, in the real game, there are gravestones that appear in locations of the board which the player cannot place plants on. (Easy implementation of a higher difficulty level)
- Complete User Manual

Welcome to Plants versus Zombies where the player uses plants to defeat the zombies from crossing the last row. If the plants successfully defeat the wave of zombies the player wins. Otherwise if the zombies make it across the last row the player loses.

How to play Plants versus Zombies:

1. The player will be given a set amount of 10 coins at the beginning to purchase the available unlocked plants.
2. The player will then use the plants that were purchased and place it onto their side of the grid.
3. There are multiple levels which are known as the waves of zombies. Once the player has placed their plants on grid of their desired location, a wave of zombies will occur.
4. Each plant and zombie has a specified health and power attack.
 - a. Zombies health and power attack increases as the player defeated a level.
 - b. Plants with greater health and attack power are unlocked on a new level and the player must have the appropriate amount of coins to purchase the plant they wish to use.
5. The player has the options to skip a turn with the Skip a Turn feature if they have no desire to place any plants on their turn and continue the game as they wish in the next round.
6. The player wins if all rounds of the zombie waves have been successfully defeated.
7. The player loses if the zombies make it across the last row.
8. Enjoy Playing :) !