Faculty of Science, Engineering and Technology

Introduction to Programming

Distinction Task 9.2: Custom Program

Design Report of Rock Rider

Summary of Program

The game was created using gosu library which allow player to travel around a highway using arrow buttons on keyboard and pick up fruits to gets score and avoid objects in order not to lose their score. Foods and objects will be randomly spawn on the map, fruits will be moving down towards the bottom of the map and the objects also do the same, but it will change the direction up or down randomly.

List of records and enumerations

```
SCREEN_WIDTH = 430
SCREEN_HEIGHT = 720
TIME_CHANGE = 3000
```

```
module ZOrder
  BACKGROUND, FOOD, PLAYER, UI = *0..3
end
```

```
class Rider
  attr_accessor :score, :image, :minus, :plus, :vel_x, :vel_y, :angle, :x, :y, :score
```

```
class Food

  attr_accessor :x, :y, :image, :vel_x, :vel_y, :angle, :score, :type
```

```
class Object
  attr_accessor :x, :y, :image, :vel_x, :vel_y, :angle, :score, :type
```

Main function and procedures

Player movement: allow player to move up, down, left, right using arrow key

Player collect food: When approach food the player score increase by one

Player met object: When approach object player's score got minus 1

Food spawn: Food will be spawn randomly

Food moving: Food moving up and down

Object spawn and move: Spawn food and move up and down randomly

Object change direction: During the moving, it will change the direction to up or down

Structure chart