Spacey Snakey

by Matthew Grierson, t7094911

User Guide

main menu

|  |  |
| --- | --- |
| Control | Description |
| Up Arrow | Moves menu selecter up |
| Down Arrow | Moves menu selecter down |
| Return Key | Executes selected menu item |

Options Screen

|  |  |
| --- | --- |
| Control | Description |
| Left Arrow | Select 1 Player |
| Right Arrow | Select 2 Player |
| Return Key | Returns to Main Menu |

Game Over Screen

|  |  |
| --- | --- |
| Control | Description |
| Return Key | Returns to Main Menu |

1 Player

|  |  |
| --- | --- |
| Control | Description |
| Up Arrow | Changes green snakes direction to up |
| Down Arrow | Changes green snakes direction to down |
| Left Arrow | Changes green snakes direction to left |
| Right Arrow | Changes green snakes direction to right |

2 Player. Player 1 as above same as above, but with the following additions

|  |  |
| --- | --- |
| Control | Description |
| W Key | Changes white snakes direction to up |
| S Key | Changes white snakes direction to down |
| A Key | Changes white snakes direction to left |
| D Key | Changes white snakes direction to right |

Problems and Solutions

The first major issue I had was when implementing the collectables they would only render in the top left hand corner. The solution was I needed to actually set the collectables position before drawing it. When implementing the planets rotation the planet made a bee-line for the center of the sun and chilled there(well more like roasted). To fix this I just needed to double check the equations code and swap one of the + signs to a – sign. Next I had an issue with writing text to display the snakes scores and the time remaining that only displayed for a frame, when the value of score or timeLeft changed. No clue why but the fix was to set the font in the respective constructors. The last notable problem that occurred was the snake AI not moving towards the collectable when in the same colemn or row as the collectable. The fix was to check if y or x distance was 0 and as such force the AI snake to move in the perpendicular direction towards the collectable.

Reflections and future developments

I have learnt while completeing this ICA about linked lists and how they can be useful to link related items together, solidified my knowledge of using classes and encapsulation, about finite state machines and useing this knowledge to implement different screens, how to moderetly use the sfml library to be able to implement interesting games. If I was to remake the snake game I would improve the AI so that it doesn’t crawl into the sun, planets or snakes when possible and implement inherreted classes with abstraction and polymorphism where appropriate. I would also give the players more setting options, more planets and game modes.

Font used

https://www.fontsquirrel.com/fonts/roboto