Crab Game

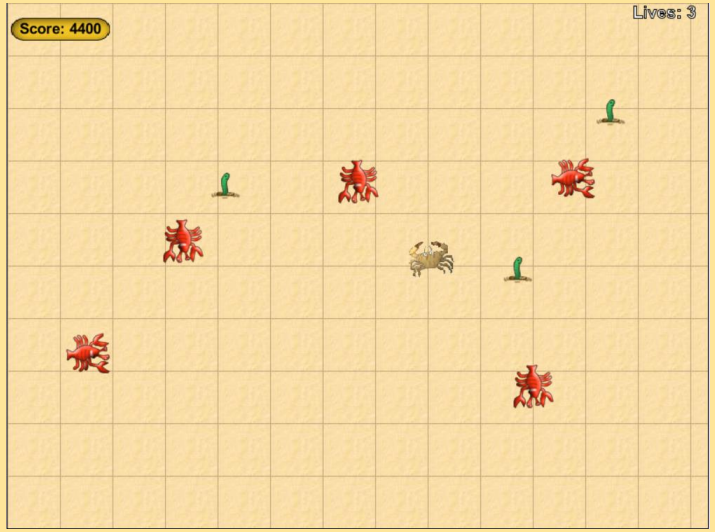
By Ethan Smith

Introduction

- In crab game, the crab has to eat all the worms while avoiding the lobsters.
- The player will gain 100 points for every worm they eat, needing to reach 5000 to win.
- The player will also have 3 lives, losing 1 each time they collide with a lobster, losing all 3 loses the game.
- The more points the player has, the more worms and lobsters spawn

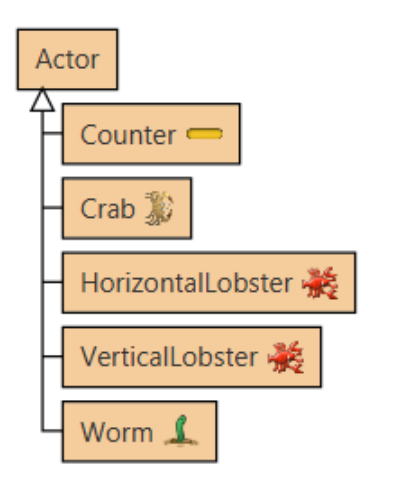
The world at the beginning of the game

The world near the end of the game



Design Considerations

- I created 5 classes for this game: Counter, Crab, Worm, HorizontalLobster and VerticalLobster
- The player controls the crab, the worms randomly spawn in the world and are eaten by the crab and the Counter tells the player the score
- The two Lobster classes are used in different orientations, as they are checking for different coordinate types (on is checking X coordinates the other is checking Y coordinates) to make sure they keep wrapping around the world



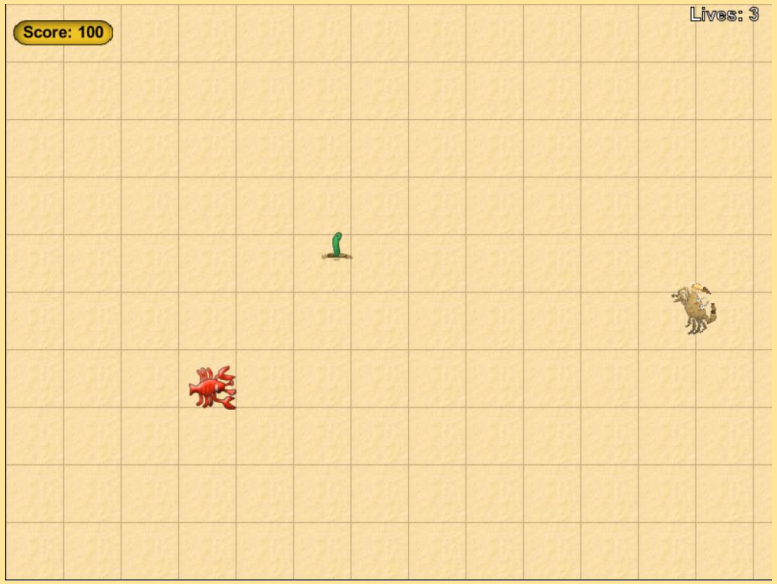
Development

- Development started out very difficult to my lack of knowledge with greenfoot
- After a while of adding more basic features such as the crabs movement is started to find it easier as I found it easier to understand how greenfoot works
- By completion, I now have a much better understanding of how greenfoot works, and how to call methods from the world

Testing

The world at the beginning of the game

The world after eating a worm showing the point increase and removal of explanation text



The world before being hit by a lobster

The world being hit by a lobster, showing the loss of a life and the crab being moves to a safe spot

Evaluation

- The main thing I learned is the use of object oriented programming, helping to break up different sections of code so its easier to identify what code does what
- I would like to add more mechanics to the game, however I didn’t get time to try adding many and also did not have time to get a couple I tried working, so they had to be removed