SE 393 Software Patterns and Teams

Spring 2019

Project 4

Due Date: 25th April 2019, by class time

Space Invaders is one of the most addicting games that was ever made. The idea is very simplistic. You are a space ship who must destroy the invading enemy space ships as they descend upon your little 8-bit world. Use the [SPACE] bar to fire your gun at them and blow each ship to pieces. Be careful though, because these ships fire back and as you deplete their numbers, the space invaders get faster and faster until the last remaining ship appears to move at near warp speed. To ensure you stay alive as long as possible, hide behind the green walls and develop and a run-and-gun mentality. Try to blast out whole rows of space invaders at once as it makes it easier to shoot into a crowd rather than pinpoint each individual ship [1].

Please play the game at http://www.pacxon4u.com/space-invaders/

Game Description:

Gameplay in Space Invaders is relatively simple. The player controls a small ship that can only move laterally across the bottom of the screen and fires vertically. Five rows of eleven aliens each advance slowly from one side of the screen to the other, dropping down one space and reversing direction when they reach either side. The player's task is to acquire points by eliminating enemies and to destroy all of the aliens before they reach the bottom of the screen and complete their "invasion." As aliens are destroyed, the speed of the remaining enemies increases, as does the tempo of the music. Once all of the enemies are destroyed, the wave resets and the difficulty increases (a cycle that can continue indefinitely).

The Invaders constantly shoot back at the player as they advance from side to side across the screen. To help avoid their attacks, the player can hide behind a number of destructible barriers or "bunkers" near the bottom of the screen (four in the original version). Occasionally a "mystery ship" will appear near the top of the screen and move quickly from one side to the other while making a distinctive klaxon noise. Destroying it rewards the player with a sizeable point bonus [2].

Documentation needed:

Your document should have:

- Use Cases
- Sequence Diagram
- Class Diagram
- Glossary
- Write the test cases for your project.

Reference:

[1]. http://www.pacxon4u.com/space-invaders/

[2]. https://www.giantbomb.com/space-invaders/3030-5099/