

Space Invaders

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Chapter 1

Space Invaders Overview

1.1 History of Space Invaders

Space invaders was a really popular game in the early 16th century. Children played it out in the fields with the trebuchet when their parents were out of town.

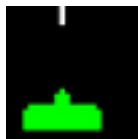
Designed by Tomohiro Nishikado, Space Invaders is one of the greatest arcade games of all time. It hold the Guinness World Record for greatest arcade game.

1.2 Game Play

1.2.1 Objective

The world is being invaded by marching aliens. All of humanity has gathered behind 4 bunkers for protection. You control the only weapons available, a supply of 3 tanks and a handful of missiles. Kill all the aliens! Watchout! The alien mothership flies over head! Destroy it at all costs! The fate of the world rests in your hands...

1.2.2 The Tank



You are the tank. Push the left button to move left, and the right button to move right.

Watchout! Enemy fire rains from above! Dodge the alien fire by moving the tank left or right.

Fire your missile to destroy the alien invaders! Push the middle button to fire your missile, aiming for the aliens. When the missile hits an alien, it dies. Be careful! They move left and right, and get closer as time goes on.

1.2.3 Enemies

Spaceship

The alien mothership circles the Earth, looking for its prey. Destroy it at all costs! It flies occasionally from left to right. As it flies overhead, launch your tank missile by pushing the middle button. Be careful, it tries to evade you missile, so shoot accurately and quick!



Aliens

55 aliens are marching toward your position! You are charged with destroying all of them before they reach you! Fire your missiles to kill them! There are 55 aliens on the screen.



1.2.4 Points

1.3 Game Details and Specifications

1.3.1 Aliens

Alien Placement and Appearance

There are 55 enemies that start on the screen. They are on a 11 by 5 grid. Each grid is 15 pixels by 15 pixels. There are three types of aliens. The first

two rows are the widest aliens, the next two rows are a little narrower and the top row has the narrowest alien.

Alien Movement

The aliens move laterally in increments of 2 pixels. When the rightmost aliens reach the right edge of the screen, the grid of aliens will move down 7 pixels and start moving left. When the leftmost aliens reach the left edge of the screen, they will move down 7 pixels and start moving right. The rightmost alien and leftmost alien is the closest alien to the respective sides that has not been killed.

1.3.2 The Tank

The tank moves laterally across the bottom of the screen. The user should be able to hold down the left or right buttons to

1.3.3 Bullets

Tank Bullets

Tank bullets, unlike Alien Bullets, only have one appearance. When a bullet is fired, it should appear on the screen just above the center of the tank. When a bullet is on the screen, the tank cannot fire again until the bullet has left the screen.

Alien Bullets

There are two types of alien bullets:

1. Zig zag bullets rotate cyclicly through the following appearances:

(a)

(b)

(c) i

(d) 2

2. Cross bullets oscillate through the following appearance:

(a) T

(b) +

(c) L

There can only be 4 bullets on the screen at any given point in time.
Once a bullet leaves the screen, a new bullet can be fired.

Chapter 2

Bug Reports and File Organization

2.1 Bug Reports

2.1.1 Drawing Bullets