Space Invaders – Design Documentation
Example

Overview

Each of the following sections describe a collection of code, organized together to implement a specific part of the game functionality. We will hereafter refer to these as "features".

Image Render

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Alien Control

This feature controls the movement of the alien block, as well as the flying saucer. It will interact with the image renderer to display the current state of the alien block on the screen.

External API

This feature allows other features to call a tick() method, which causes the alien block to update its state. It also provides a method to detect collisions based on input coordinates.

External Requirements

This feature requires the following: something to display things on a screen, a way to update the player's score, a way to request that an alien bullet be fired from a given location and a way to indicate the game is over.

Player

…

Bunkers

…

Bullets

…

Stats

...

Globals

This feature keeps track of information needed by multiple features. This includes whether or not the game is over, the current score and the current number of lives.

External API

This feature allows other features to both get and set the information mentioned above.

External Requirements

None

Gameplay

This feature will setup the game by initializing all of the other features, and will also handle exiting correctly. It is also responsible for calling all of the tick functions available.

External API

None, top-level

External Requirements

It must be able to see all of the available tick functions, as well as the init and exit functions for each feature.

Assignments

Tanner: image render, player, gameplay

Benjamin: alien control, bullets, gameplay