Alien Invasion Pygame Master Document

# Abstract

In Alien Invasion, the player controls a rocket ship that appears at the bottom center of the screen.  
The player can move the ship right and left using the arrow keys and shoot bullets using the spacebar.  
When the game begins, a fleet of aliens fills the sky and moves across and down the screen.  
The player shoots and destroys the aliens.  
If the player shoots all the aliens, a new fleet appears that moves faster than the previous fleet.  
If any alien hits the player’s ship or reaches the bottom of the screen, the player loses a ship.  
If the player loses three ships, the game ends.

# 1.0 Rocket Ship

A rocket ship is an object controllable by the player. It has the ability to move left or right and shoot bullets that deals damage to aliens.

## Structure

A class needs to be created for the object rocket ship, it must be initialized by the conditions as per below:

|  |  |  |
| --- | --- | --- |
| Class Name | RocketShip | |
| Variables | self.lives = 3 | If the rocket ship is hit by alien’s projectile or any alien has reached the bottom of the screen this variable will be subtracted by 1. This variable represents that the ship has total three lives. |
| Methods | ship\_move | To move the ship left or right on the bottom of the sea. |
| ship\_shoot\_bullet | To shoot bullets from the ship. |
| ship\_damage\_taking | If the rocket ship is hit by alien’s projectile or any alien has reached the bottom of the screen, this method shall be invoked and will perform a subtraction on the self.damage variable by 1. |
| ship\_one\_up | If the alien dies and triggers a random life drop, this method shall be invoked and will perform an addition on the self.damage variable by 1. |

# 2.0 Aliens

XXX

# 3.0 Conditions to win

XXX

# 4.0 Conditions to lose

XXX

# 5.0 Game flow

XXX