

# RocketShip Design Document

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Meta hours - Range of 4-5 days approx 80+ hrs moldy debugging

ReadMe...

This program was initially designed to make a rocket ship traveler game which a rocket travels along a path with making any collision. Although I expanded but did not complete this. I altered this to a rocket ship traveler game which the user can travel around and shoot rockets at asteroids in space.

In this program I utilized swing utilities and library's to make major components. I start with the utilization of the main class RocketGame which is just main class which defaults the operation of the frame. Such as setting the original size and width of the frame and adding essential Listeners such as the Key Listener. Next is the panelGame java where most of the magic happens with the most lines presented. I utilized the JPanel and utilize ArrayList to store the bullets (rockets) and the asteroids(opponents). In addition the use of the comment JLabel is utilized to update and track the score of the rocketship destroyed asteroids and to display Game over when collision occurs with rocketship. Key listeners are utilized as well to create actions for the player(rocketship). Such as up arrow key. To check asteroid collisions multiple methods are used. One of them being the check bullet collision with an asteroid. And when that collision occurs the asteroid is melted from the panel. I utilize nested iterators to iterate through both the bullets and the opponents. For instance if a bullet intersects with an opponent, it indicates a collision, and the necessary actions are taken, such as removing the bullet and updating the opponent's hit count. I also tested so you can see the print statements in the console whenever collisions occurs. In my Player class this is where the utilization of the direction and position of the rocketship is initialized and altered. I utilized Graphics2D and AffineTransform to perform the translation and transformations of the rocketship. And rotations to be from 0-360 degrees range. In my Opponents class the asteroids are utilized here. The initial size speed and angle is utilized here. Also Random is utilized to project the asteroids to float around the "space". I hope to complete this Project and make it more better for

user interface and provide a better and smoother display. For instance the rocketship is just being redrawn. I hope to learn more within graphics to make the image move smoothly with a high frame per second.

Utilization :

\* Youtube

BroCode - <https://www.youtube.com/watch?v=qIr2XYZrznI&t=20s>

BroCode - [https://www.youtube.com/watch?v=9XJicRt\\_Fal&pp=ygUSYnJvIGNvZGUgZ3JhcGhpY3Mg](https://www.youtube.com/watch?v=9XJicRt_Fal&pp=ygUSYnJvIGNvZGUgZ3JhcGhpY3Mg)

BroCode - [https://youtu.be/BJ7fr9XwS2o?si=AyapVdR\\_TAxjJvUd](https://youtu.be/BJ7fr9XwS2o?si=AyapVdR_TAxjJvUd)

\*ChatGtp

Ext:

