



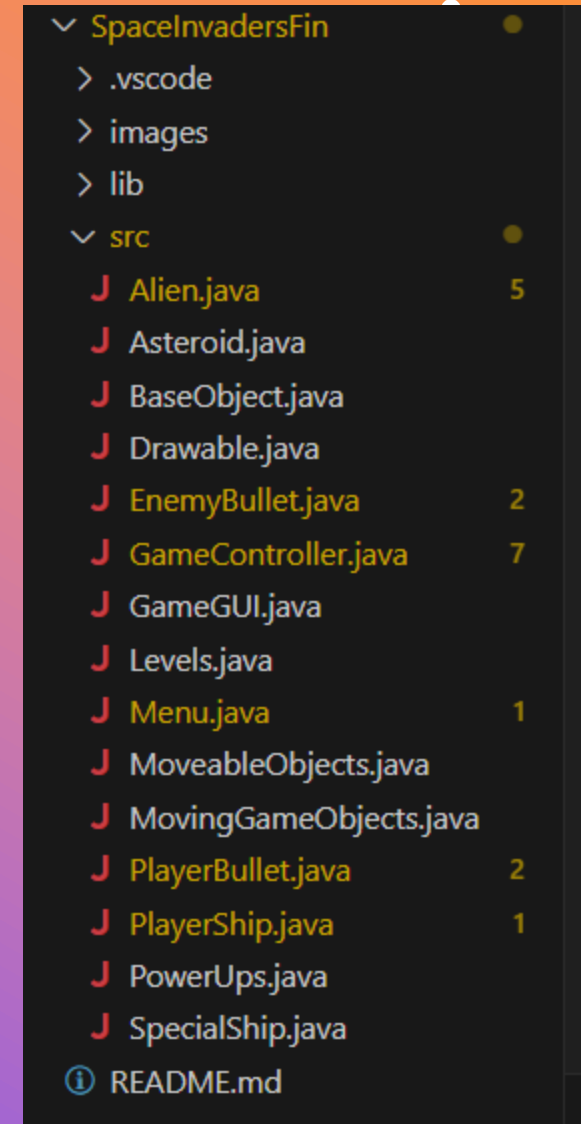
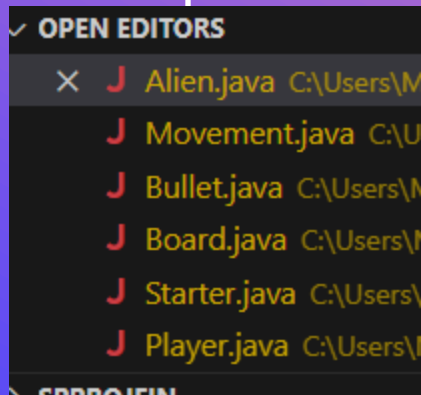
SuengJun & Michael

SPACE INVADERS FINAL PROJECT

UPDATES

As we implemented more features to the game.. We realized it was very important to keep the class of the objects unique, so it is easier to modify the code if needed, and to ensure that each object has its own unique characteristics.

- An example of this was making Bullet into two separate classes...EnemyBullet and PlayerBullet. This made it easier to distinguish between the two and clearer as to what bullet was being referenced, it also allows to assign unique features to one object vs the other



UPDATES



Features we spoke about the last presentation that have since been implemented

- Pause Menu, Start Menu, and Game Over Screens are functional
- Player has 3 lives
- Enemy bullet collision is working
 - Previously it was only the player's bullet collision that worked
- Added Boss / Special Alien
- Added Obstacles (asteroids)
- Added Power-ups
- Added levels

These were the main additions that we wanted to implement. Which we spoke about during our last presentation.

ISSUES / FIXES

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It is very important to keep the game objects organized and distinct so there are no uncertainties of where a function can be found along with the variables assigned to the specific object.

- AlienBullet and Alien used to be on class, but we found out it was easier to separate the two to be able to distinguish between the functionalities of each object. It
 - Same can be said for Player and PlayerBullet

We also ended up using a parent class for most of the objects in our game. This was because every object needed an x position, y position, x velocity, etc.

- Small issue that happened was when JPanel was the class being extended along with the Parent class also needed to be extended
 - Easy workaround

ISSUES / FIXES



The mechanics / game logic (specifically the collision between objects) is another reason as to why we decided to create more classes and make the objects / classes more unique / specific. This also allowed to be able to customize for example, the alien's bullets one way, and the player's bullets another way. It also made it easier to apply the powerups to the Player's bullets only since there is a PlayerBullet class. Since the alien's don't get powerups.

- This was an issue we faced when the Alien bullets are not destroying the players ship.
- Solution was to simply create unique classes and give them each their own hitboxes. The main functionality found within this game is objects colliding.
 - The player's bullets colliding with the enemy
 - The enemy's bullets colliding with the player
 - Player colliding with asteroid
 - Which result in the player losing a life

THANK YOU

