## Milestone

I'm working on creating a simple space shooter in Java. The player will be able to control a spaceship to shoot at incoming enemies, and collect power ups to shoot at enemies in a variety of ways. I plan to have a boss enemy after the player encounters a certain number of waves of enemies, after the boss is defeated with a certain number of shots by the player, the game will be completed.

I wanted to work on a space shooter because I am interested in game design/ game programming. To start I am following a tutorial to help me learn and understand the basics of a main game loop, setting up a JFrame, displaying images/ graphics, object movement and collisions. This will be helpful to me for working on future projects and my understanding of Java. On top of the tutorial I plan on adding and adjusting parts of the game as I want it to be designed. For example I may add different types of enemies to display how objects can move differently, I want to create my own types of power ups(different ones from the tutorial) and I want to include a stronger boss enemy at the end. I will also be creating my own sprites for the game in PhotoShop.

Since I am developing a videogame my main goal is to make sure that it is functional, it may not be addressing a particular issue, but it is a form of entertainment. I'm both a Game Design and Computer Science Major so I'm really creating a game so I can improve my skills in Java and videogame design.

## UML of main Game Class

# -serialVersionUID:long +width: int +height: int +scale: int +title: String -image: BufferedImage -sprite: BufferedImage -running: boolean -thread: Thread +init(): void -start(): void -stop(): void

I'm basing the main design off of classic space shooter video games like Galaga,
Asteroids and Space Invaders. These were classic arcade games with similar themes of a player
controlling a spaceships and fighting against enemies or asteroids. Like those earlier games I will
make this game with simple controls.

+run(): void
-tick(): void
-render(): void

# User Manual

Once the program is running the user just has to hit enter to begin.

To move the spaceship use the arrow keys to move in their respective directions.

To fire at enemies hit the spacebar.

Overall, since this is really my first large project I'm working on in Java alone, it will definitely still be difficult to me to work on. I plan on spending a fair amount of time this Thanksgiving break working on this project, not only trying to learn the new code and techniques from the tutorial and online, but also refining the game and making it my own. I really want to create something both fun and challenging.

# References

This is the tutorial I have been following so far <a href="https://www.youtube.com/playlist?list=PLWms45O3n--6KCNAEETGiVTEFvngA7qCi">https://www.youtube.com/playlist?list=PLWms45O3n--6KCNAEETGiVTEFvngA7qCi</a>