**Alex Man**

**Project Proposal**

Note

Playing a laser noise causes all animations to freeze for a second. And this happens every time a ship laser is fired. So if you hold down the spacebar the game will look like a powerpoint slide. Another issue is that the filepath for my sound is weird. In the code it is “./src/sounds/pew.wav” which isn’t an absolute filepath but for some reason when the application is exported as a runnable jar, it doesn’t recognize the filepath and thus freezes. I talked to the professor on 12/5 and she said it was fine and so far I have not found any sort off fix for it.

Premise

Similar to a space invaders where you destroy any rocks in your way and any enemies in your way. Premise is that you are trying to safely navigate a field of asteroids and eliminate enemies. It is a single player game. The space ship will move using the up, left, right, and down keys and will fire using the spacebar key. The player will only be able to move up, left, right, or down. The laser will always be aimed at the top of the screen. The five entities will be the space ship, the laser beam, the asteroid, and small and large enemies. The game is won when all the enemies are destroyed. The game is lost when you lose more than 100 health.

The space ship will be extending off an ImageView and will have some sort of movement binding to it to allow the user to control the ship. The spaceship will have a laser beam component that will fire whenever the user presses the space bar. The space ship can move up, right, left, or down. The ship may be able to wrap around the screen when it hits the border of the screen. Any asteroid or enemy that touches the ship will damage the ship. The ship itself will have a health bar or some sort of health component.

The ship will have its own AnimationTimer class (ShipKeyHandler) which handles the user’s key input. The ShipKeyHandler class will create a ShipLaser whenever the spacebar key is pressed and the ShipLaser will have its own AnimationTimer class as well.

The asteroid will extend off an ImageView and will appear randomly on screen and move in any random direction at a set speed. The asteroid will be destroyed when it is hit by a laser beam or by a ship. If a ship hits an asteroid the asteroid will be destroyed and the ship will lose 5 health (currently deciding if asteroid and ship should blow up or if ship should just lose some health).

There will be a parent laser beam class to allow distinction between UFO lasers and ship lasers. UFO lasers will only affect the ship. The ship’s lasers will only affect both asteroids and UFO’s. The UFO lasers will head towards the bottom of the screen whereas the ship lasers will always head towards the top of the scene. The laser beam will be a component used by the space ship and enemies. It will extend off an ImageView and if fired by the user, it will head to the top of the screen.

Both the BigUFO and SmallUFO will extend off the base Character class. Each will utilize a generalized AnimationTimer class (UFOAnimation) that will fire lasers.