Day 1:

Classes:

Tank:

Parameters: Initial X,Y; Fire Rate, Firing Damage, Movement Speed, Name, Team

Properties: Initial X,Y; Current X,Y; Energy (Health); Fire Rate; Firing Damage; Movement Speed; Name; Team; Turret Angle

Tanks will be given a block coordinate position for initial placement and bounding box creation. 3 sets of X,Y coordinates are stored for the corners of the bounding box as well as the center of the tank for aiming turrets.

Movement: Both tanks are AI controlled and have a move speed based off of their class. Heavy tanks move and fire slower but hit harder, medium tanks have medium stats, and light tanks move and fire faster but have lower damage.

Design: Tanks and obstacles will be 25 x 25 pixel squares with the tanks containing turrets that point in the direction it will fire. Turret is capable of 360 degree rotation.

Obstacles: Reused members of the tank class to cut down on code and retaining the collision detection of the moving tanks. These wall tanks will have no movement, firing capabilities, or AI of any kind. Can be made destructible by changing the Tanks’s firing parameters.

Board:

500 x 500 pixel grid, blocks are 25 x 25 pixels, Blocks only factor in initial placement of tanks and obstacles then real time movement/firing takes over. Grid lines have been made for visual aid in the early implementation steps.

Algorithms: Tank movement is determined by euclidean distance and both will take the shortest path to each other. Obstacles will provide a challenge for each tank to navigate and fire around. Firing algorithm will require line of sight and not currently obstructed by a tank with the “Obstacle” team name.

Day 2:

Designed the tank for the tank class to draw and represent the tank on screen.

Worked more on the bounding boxes with code created by zihao

Anton worked on the euclidean distance for the tanks to find each other.

Matthew was set to work looking at the code we already have and setting up the data the simulation would use for the tanks using the class made on day 1.