**15-112 Term Project Deliverable #1**

**Project Proposal**  
My term project would be a game similar to tank-battle game, but with several new features. The most common type of tank-battle game is like this: players control their tanks with look-down view, seeing tanks of both sides, move and aim with arrow keys, and shoot enemies. Players control their tanks like controlling robots, instead of immersing themselves in the battle. So the most exciting feature I am going to add is to let players aim in a first-person perspective view through the tank’s scope, and shoot. Additionally, if shells hit armor of tanks at a certain angle, the shells will bounce away instead of penetrating armor. Also, I will make the movement of tanks more real: the starting speed of tanks is slow; tanks take a little time to stop, because of inertia; turrets of tanks will not point at where the mouse is immediately, but turns slowly; tanks need time to reload instead of shoot one shell after another immediately; players are able to choose three types of tanks with different fire power, armor, and speed: light tank, medium tank and heavy tank; hitting tanks in different parts causes different effects, for example, if players hit the track of a tank, the tank will immediately stop and will take some time to repair; in the quest of player’s tank, enemy tanks with AI will attack player in different ways. In order to make the game more exciting, I will set several maps in WWII context.

I plan to use pygame as external module.

**Competitive Analysis**

**Similar products and features I want to include:**

1. “World of Tanks”, an online game. I want to simulate the scope perspective of this game. Also, in this game, when a shell hits the armor in a certain angle, the shell will bounce away instead of penetrating. It is another feature I want to include in my game;

2. “Parka”, a previous 15-112 project. The scope view of this game simulates a first-person perspective view and shows player’s distance to various objects. It is very similar to the scope perspective I want to write;

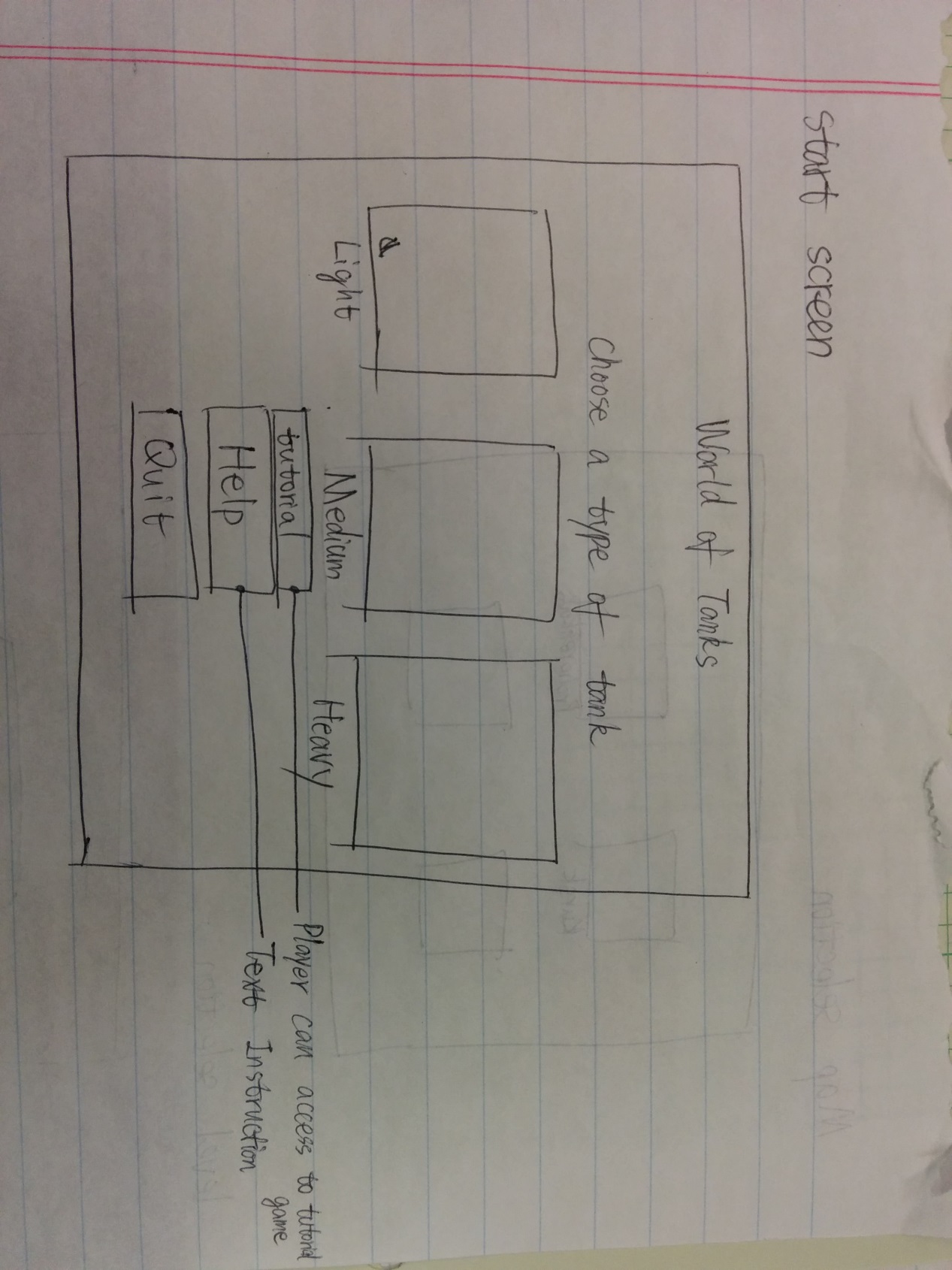
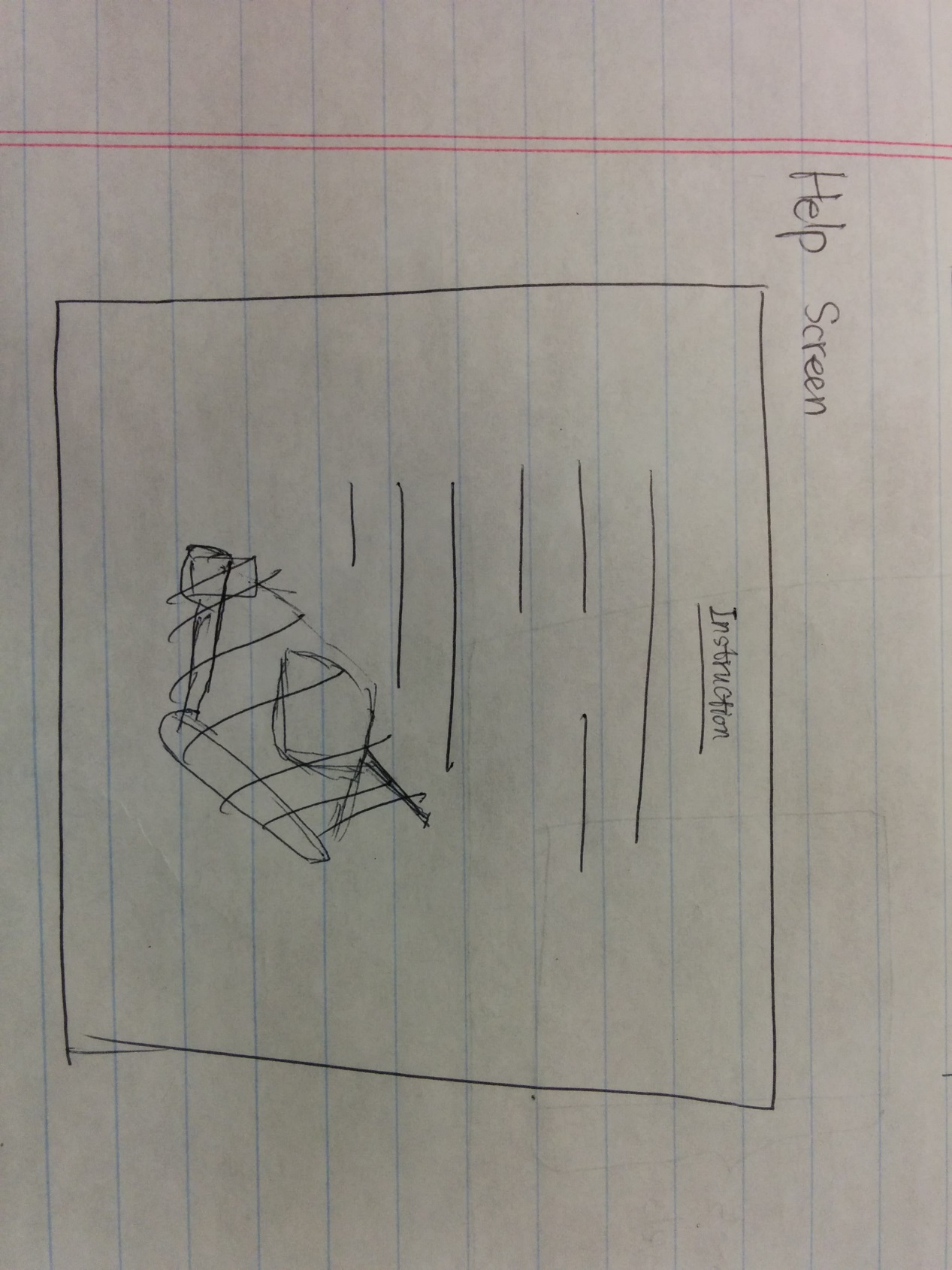
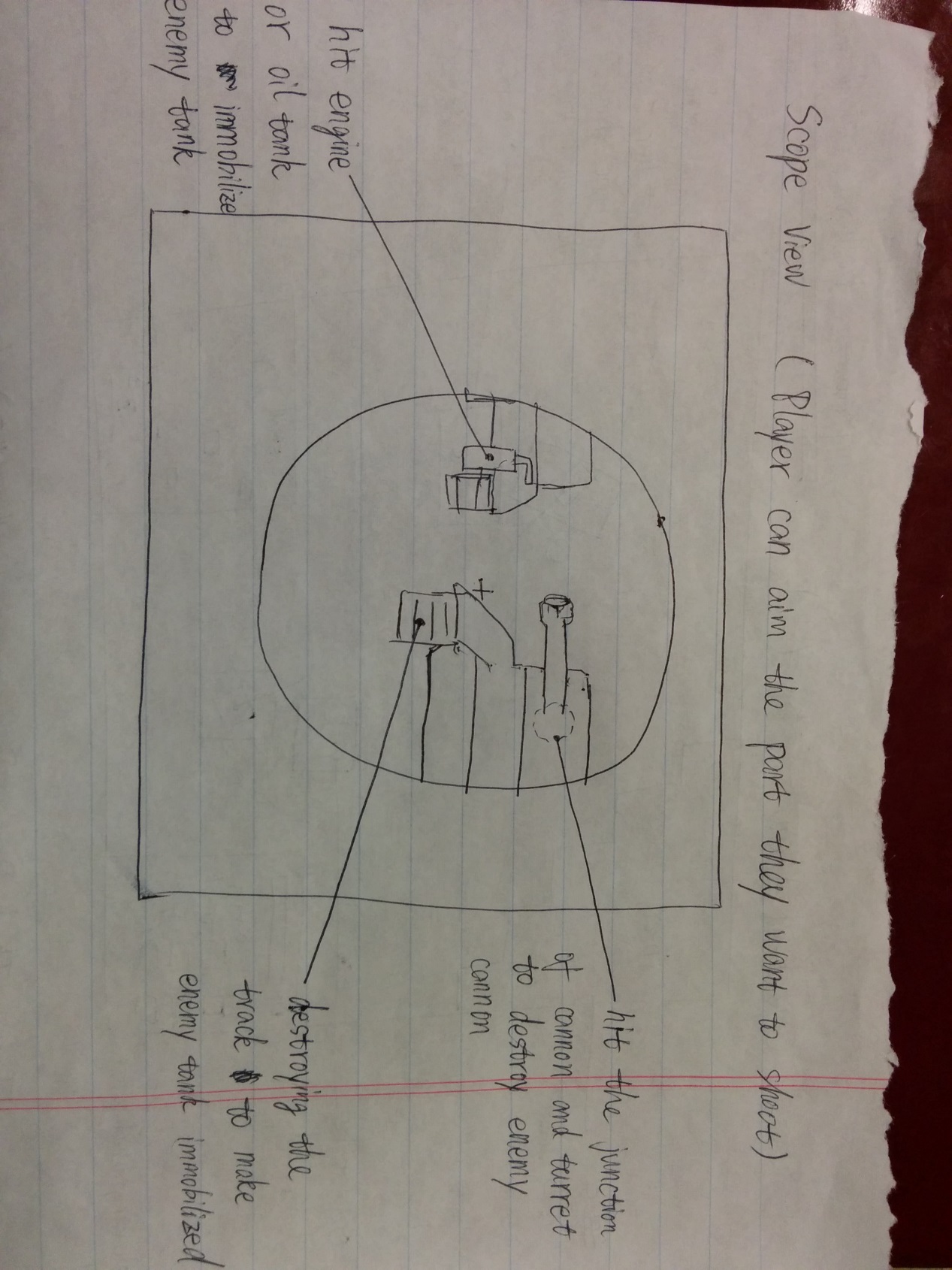
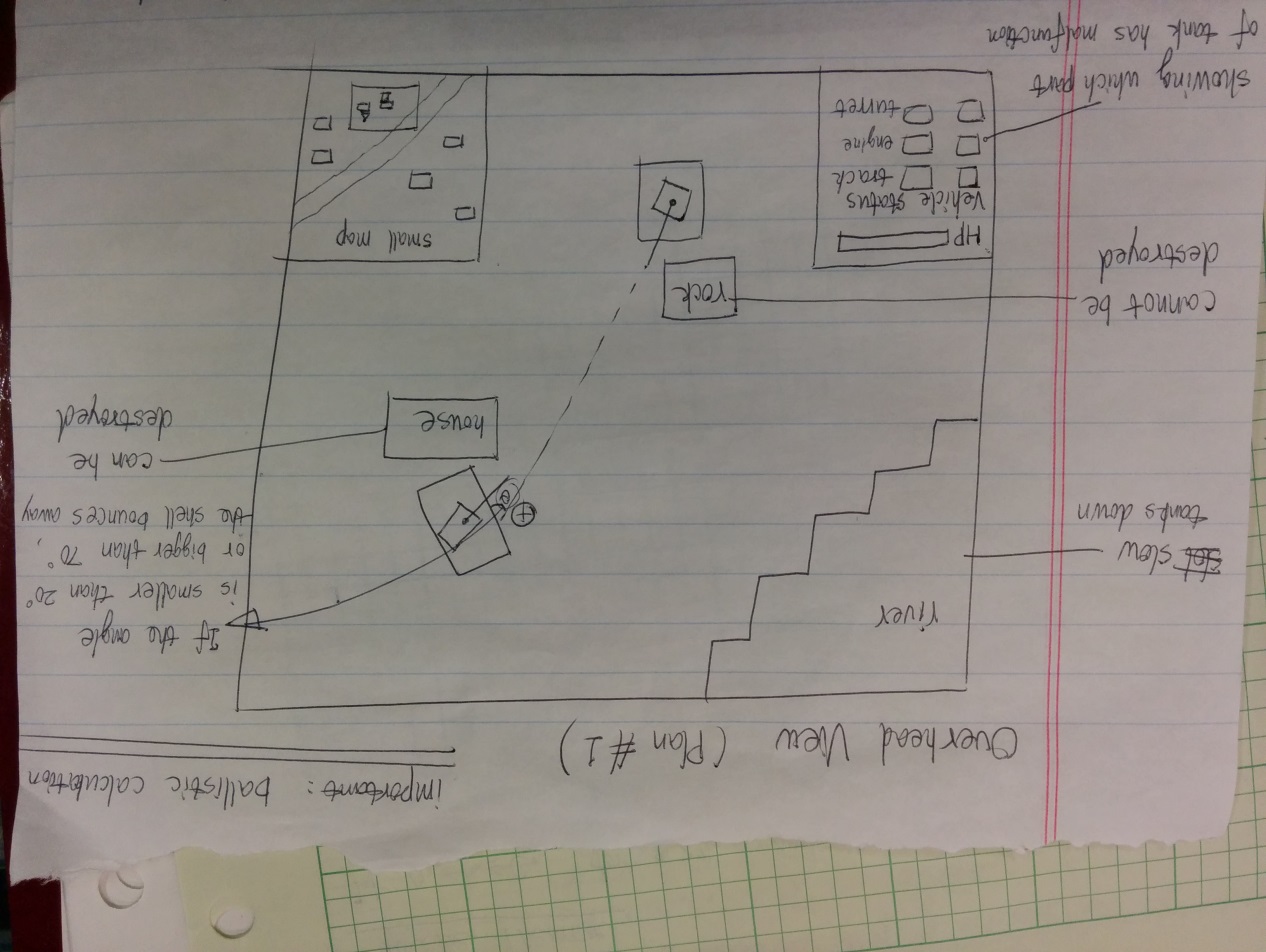
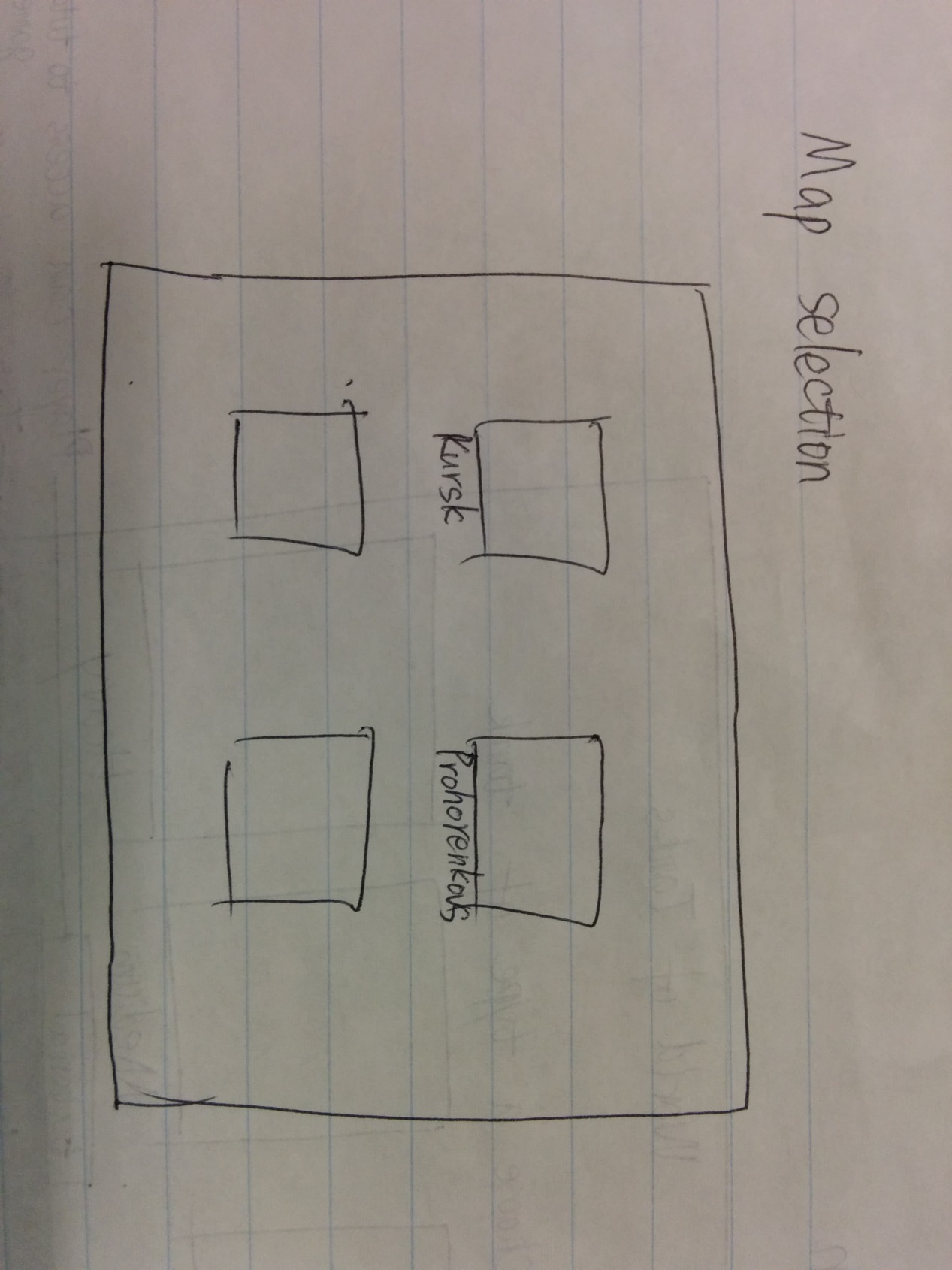
3. “Tank Battle”, a previous 15-112 project. Player playing this game can scroll around the map, I want to include this feature, because player is not allowed to view the whole map.

Anti-features I don’t want to include:

1. In “World of Tanks”, player control the tank in a third-person perspective, but I don’t want to include this feature into my program, because there is not enough time for this, and pygame can barely support this;

2. In previous projects “Tanks!” and “Tank Battle”, player cannot make turret of tanks turn, I am going to improve this feature by enabling rotating turret with mouse.

**Storyboard**

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