**Project Report**

Key Configuration:

Up = Up Key

Down = Down Key

Left = Left Key

Right = Right Key

Shoot = Space

The aim of the game is very simple: Shoot the enemies. There are 4 different levels with 4 different enemies. Careful these enemies have different attack and move patterns.

I’ve decided to make a game similar to Space-Invaders. There is no rotation for player ship because I think it decreases gameplay a lot, especially for a game like this. Also I limited the bullet count of player ship to prevent spamming bullets. Some enemies can move in the space, however their movement is limited. To increase the difficulty the final boss has a simple AI, which can aim and shoot.

I used one game engine (GameEngine) to control most of the game. I singleton pattern in many classes, GameEngine is one of them. I used a simple collision detector, which I implemented in our LAB sessions. I used XMLParser to parse level information from an xml file. I make use of polymorphism & inheritance for game objects a lot.

More levels can be added to game with only writing levels into the xml file. I also added a easyLevels.xml in order to play an easier game, changing the name to “levels.xml” is enough to play easy levels.

I wasn’t expecting drawing a new ship could be this hard. I’ve spent so many times to decide how to draw enemies and player ship. I could have used images but I didn’t want to mess with copyright issues and rendering. I’m really proud of loading levels from XML process. It really makes adding new levels to the game easier. I couldn’t find any bugs, however at the last run I got a low FPS. I’m not sure if it was because of my computer or game implementation.

I was hoping I could have spent more time for my project. I was thinking about improvable shield & bullet power system, and also money system. However I found it quite hard to connecting frames to the game, that’s why I couldn’t implement these systems.

I used an Eclipse tool to create GUI frames (Swing Designer), except those frames and some LAB codes, all other codes belong to me.