



CS 319 - Object-Oriented Software Engineering

Project Final Report

Galaxy Invaders

Group 3J

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TABLE OF CONTENTS

1.	Introduction.....	3
2.	Design Changes.....	3
	2.1. Image Changes.....	3
	2.2. Class Changes.....	3
3.	Lessons Learnt.....	3
4.	User's Guide.....	4
	4.1 System Requirements & Installation.....	4
	4.2 How to Use.....	4

1. Implementation

After getting done with the design report, we started the implementation. In order to implement the code, we used IntelliJ and Github. There was no specific reason for choosing IntelliJ other than being free and Github made the code incredibly easy to work on with multiple people. We didn't divide the work amongst each other so everyone worked on the part that they chose. Umer mostly worked on the player class, the controller classes and the skeleton of the project. Osman implemented view classes for in-game, menu and menu options, also designed all assets in the game. Tanay implemented enemy class, then added it to ModelManager and GameSceneView.

2. Design Changes

2.1. Image Changes

Some images have to be changed because of their image size. After opening the images in the frame, we realized that the images shrink so the game didn't seem aesthetic.

2.2. Class Changes

Additional to class diagram, we need to create three more classes for View: SettingsView, HowToPlayView, CreditsView. These classes are used to switch between menu frames.

3. Lessons learnt

Even though Github made working together easy, we still had some problems with it which was caused when two people tried to push their code without pulling the previous push first which resulted in a conflict so we decided to regularly pull others commits before pushing our codes first. Moreover, different IDEs cause problems for a project because each IDE creates its own project file. Therefore, we decided to use IntelliJ for our project. Dividing the project into pieces equally in the project group is significant as huge projects become easier to implement.

4. User's Guide

The users are guided by menu options. The users simply follow the menu. What is required for the game is defined in 4.1.

4.1. System requirements & installation

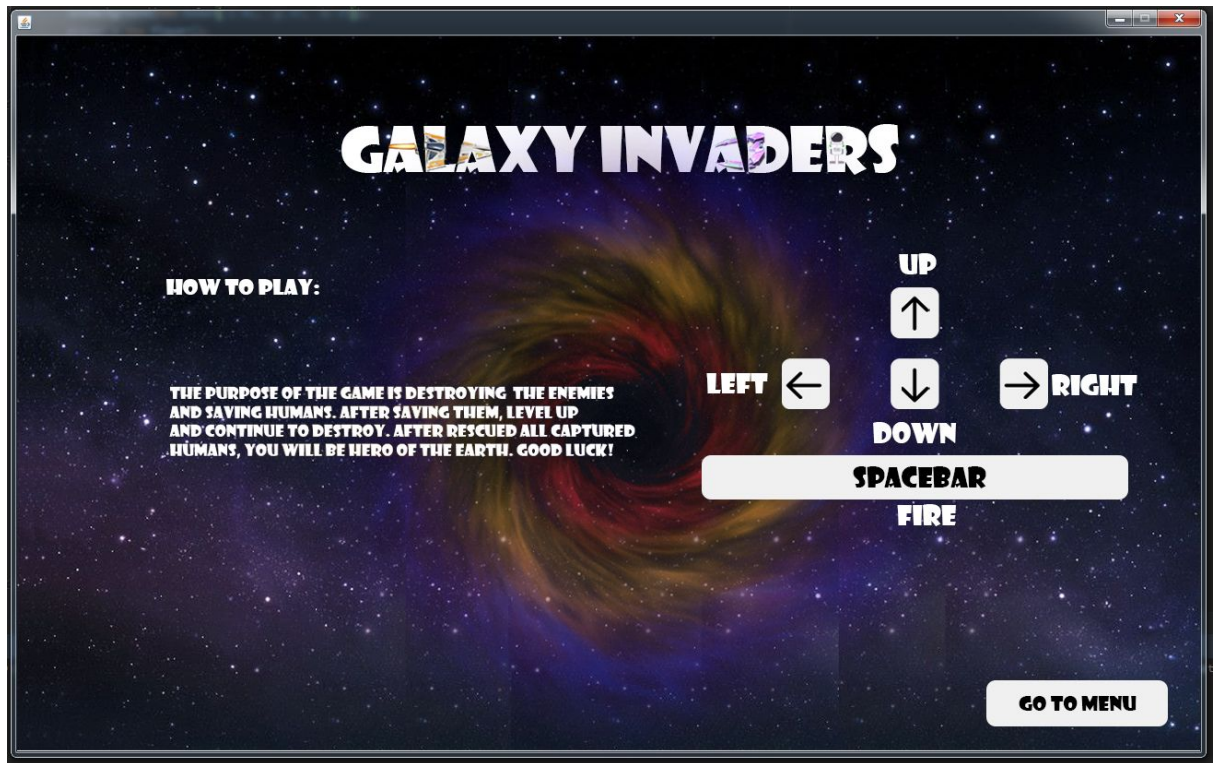
Icons, images and simply all assets occupy space in hard disk but as Galaxy Invaders is not a huge game, 10 MB space in hard disk is enough for the system. Moreover, it can be run on a pc that doesn't have integrated graphic card and at least 128 MB RAM is ideal. Galaxy Invaders doesn't require any installation. It is playable in the computers that have Java Runtime Environment. So users have to download and install the JAVA(Java Runtime Environment) from Oracle's website.

4.2. How to use

The game will be opened by pressing jar file. For now, users have to put the code into the compiler so that they can run it. After the game is opened, the user will encounter with a menu like below.



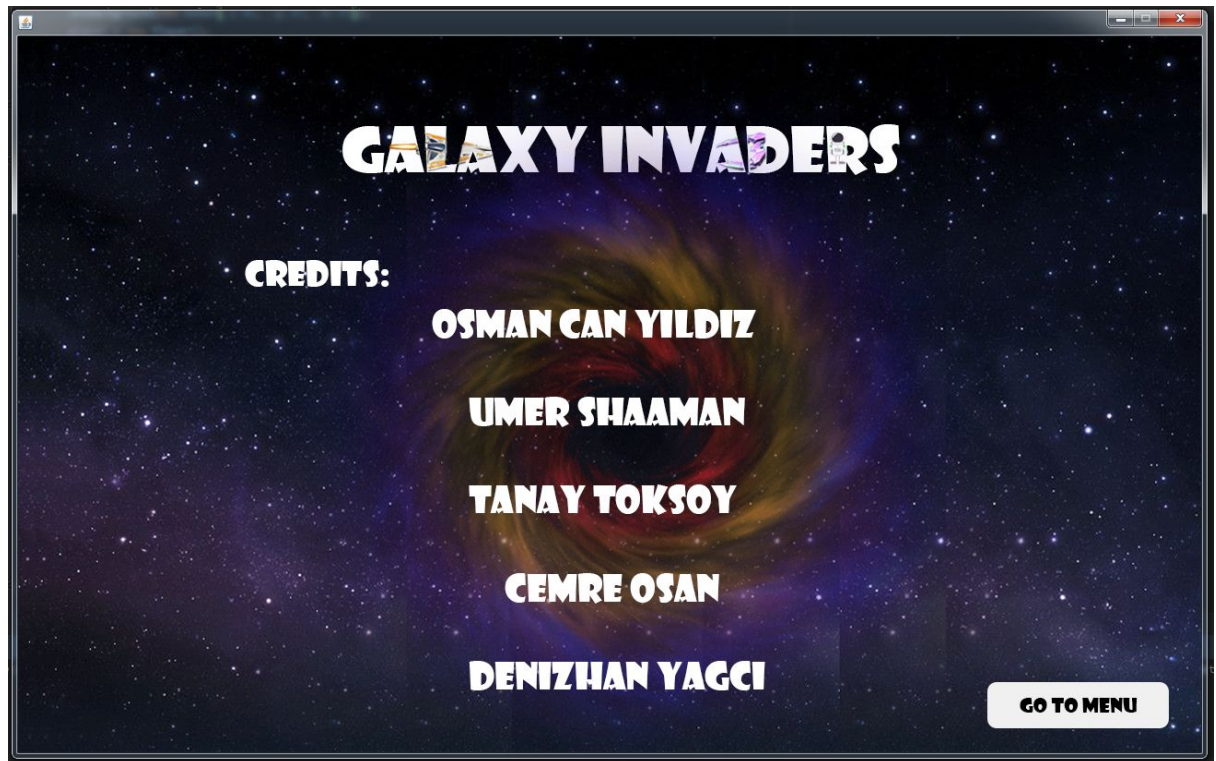
If the user presses “HOW TO PLAY” button, a frame of the information about how the game is played occurs. After reading how the is played, the user can go back menu with “GO TO MENU” button like below.



Then the user goes back to main menu. In the main menu, if users clicks on “SETTINGS” button, settings about the game occurs. After changing the settings, the user can go back menu with “GO TO MENU” button like below.



Then the user goes back to main menu with “GO TO MENU” buttons. In the main menu, if the user clicks on “CREDITS” button, names of the creators of Galaxy invaders occur in the screen like below.



Then the user goes back to main menu with “GO TO MENU” buttons. In the main menu, if the user clicks on “QUIT” button, the game closes. Also, In the main menu, if the user clicks on “PLAY” button, the game starts. User can control the spaceship and fire like below.

