CS 319

Object-Oriented Software Engineering

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Final Report

Road Blocker: Alpha

Section 1 / Group J

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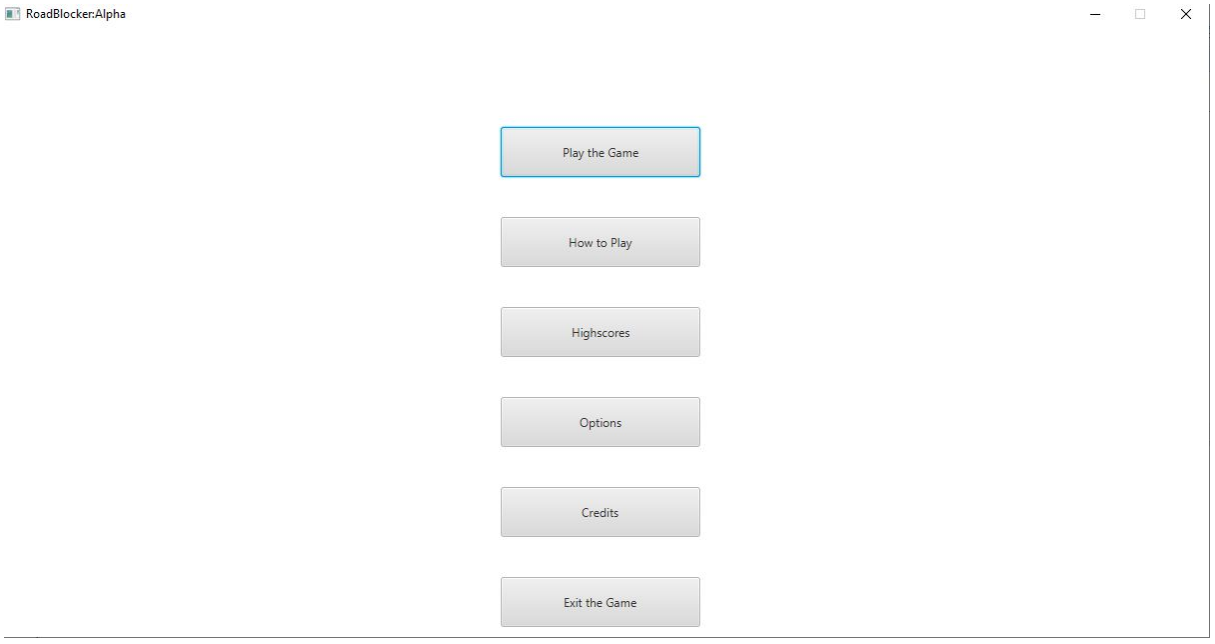
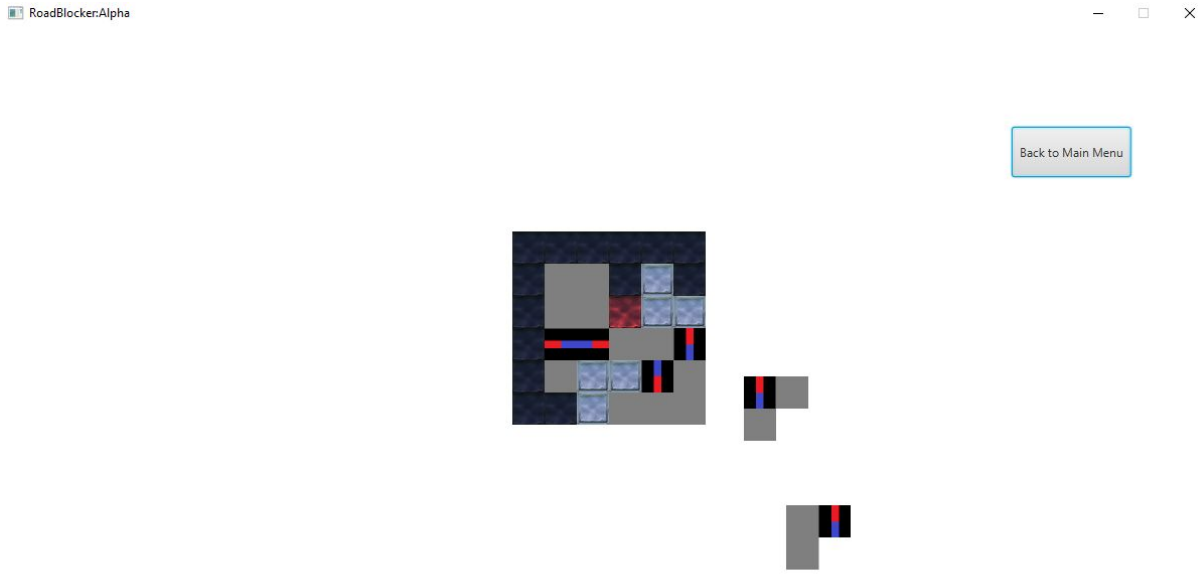
1. Introduction

We have implemented most of the object classes such as Blocks, Table, PoliceCars, Buildings, RedCar etc. Also we have implemented Game Engine class (excluding timer functions). GUI for our GamePlay menu. User can rotate,place and remove blocks. Settings, HighScores, Credits, How to Play etc. are not implemented yet. We have only implemented a sample level, that's why Level class, File Manager class aren't implemented yet. We also have not implemented sound and music classes yet. ScoreKeeper class is still not implemented.

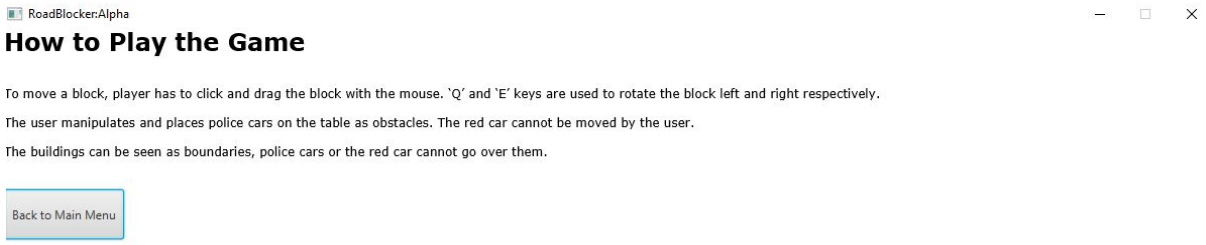
Main Menu:

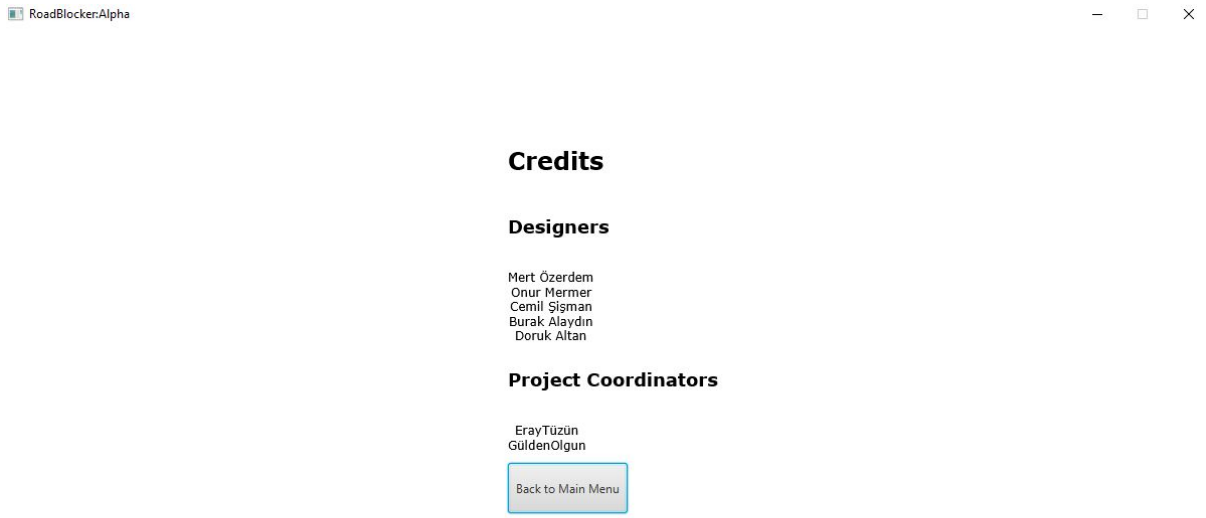


The picture below shows the table with some police cars already placed and some to be used yet



The following pictures shows the remaining options of the main menu such as How to Play and Credits





2. Design Changes

We were thinking about adding a Show the Template button to our GamePlay screen (to show user the places of buildings and red car first so they can place them) then we decided to have them placed already at the beginning of each level. We also changed the

FileManager class so that the GameEngine class can extract the information of each level from a txt file.

3. Lessons Learnt

Weeks coming up to the deadline were extremely full for all members of the group so meeting in person regularly was a problem. Although, this situation led us to a point where we could not manage our time well and our work being disconnected, we still managed to communicate as a group through various online tools which made our heavy work in a relatively short time much easier. Our choice of Java as our language, though useful, also presented a few setbacks as we needed time to refamiliarize ourselves with the language.

4. User's Guide

4.1 System Requirements & Installation

Road Blocker is implemented in Java, therefore Java Runtime Environment (JRE) must be installed to play the game. If JRE is not installed, you can download it from https://www.oracle.com/technetwork/java/javase/downloads/index.html . Once JRE is installed, Road Blocker can be opened by running its jar file or by compiling and running the code in a Java IDE.

4.2 How to Use

When a player runs the game, he will be directed to the main menu screen. The "New Game" option starts the game. According to the level, a table will be displayed on

screen with a red car and building. Beside the table will be blocks with police cars which the user can rotate and place on the grid in such a way that the red car cannot escape. As player completes available levels, more difficult ones will be unlocked.

4.3 Controls & Objects

To move a block, player has to click and drag the block with the mouse. ‘Q’ and ‘E’ keys are used to rotate the block left and right respectively. The user manipulates and places police cars on the table as obstacles. The red car cannot be moved by the user. The buildings can be seen as boundaries/obstacles, police cars or the red car cannot go over them.