# BBM104

# Assignment 4 Report

**Problem Definition:** The problem is implementation of an animation game in which player uses a car in traffic. The player gains score by passing cars in traffic and score is calculated with the level of game which decides the car's acceleration. When player's car collides with the rival car, the game is stopped, and the score is printed to screen. The game also contains randomly generated trees, lines of road and grasses.

**Solution Approach:** The solution approach is firstly creating shape objects like grasses around the road, trees and lines. Then rival cars are spawned randomly in x axis, so the complex traffic is supplied to stage of game. With Animation Timer, all moving objects' location is decided according to velocity. If there is a collision the game is paused, and score is printed to screen.

Main.java is everything in implementation. Graphical design, controls and mechanics designed in this class.

Group object is the root of scene and other objects added to this object.

Note: In my implementation, levels are incremented when every 5 cars overtaken. Levels are used in determination of the maximum velocity which the user's car can reach. The car accelerated to up and down in a constant value. So, the more level which player has, the more difficult to control the car.