

# REPORT OF PROGRAMMING ASSIGNMENT 4

## Problem Definition:

- In this assignment we are expected to simulate “Car Race” with using JavaFX. In this assignment we should simulate car race without collisions and animate objects properly as level increases.

## Problem Solution:

- In my assignment first I design and then load the game without collisions. When game window opens, game is starting with a clean road and you don't have to press anything to go forward but if you press up and down buttons your car can move vertically too. After a while other cars in the road started to come. Your goal is go as far as you can, without crash any other car. Every time you passed 5 cars your level increase and speeding up.

## Explanation of Classes:

- Main (Assignment4.java)

Includes main method, create necessary components and objects then send them to the relevant class method.

- Game

Game class has animation timer and that's where game starts, stops, check for collisions and calculate score and level.

- KeyBoardControl

In this class, I add all key events that is happening at the moment to the array list for use it after to manage my cars movement.

- BackGround

In Background class I get all background images, for adding them to the root.

- MyCar

In this class I add my players car.

- EnemyCars

In this class I add all the enemy cars and locate them without collision and separate each of them wisely for my car to pass smoothly.

- Sprite

Sprite class has attributes which are image, positionX, positionY, velocityX, velocityY, width, height and pass. I used this class to create objects for my car and all other enemy cars.

