

Name : Yunus Emre

Surname: Akgün

Student ID: 21726875

Department: Computer Engineering

- **Problem Definition of Car Class:** Problem is creating enemy cars and move them towards player's car and to check for any collisions in every move of rivals car while player's car is moving
- Solution Approach of Car Class: The Car class created as a rectangle with move methods to move car and every car is placed by the program randomly on the screen. When animation timer start every car moved and collisions is check by intersects method.
- **Problem Definition of Bush Class:** The problem is creating bushes and placed them randomly two side of screen and move them when players press the up keys.
- Solution Approach of Bush Class: The Bush class created as a circle and the randomBushes methods is created to placed bushes two side of screen and the move methods implemented to move every bushes when user pressed up key.
- **Problem Definition of StopGame Methods:** The Problem is this method stopped moving of all object and disable to keyboard keys except Enter key and restart the game when user press Enter key
- Solution Approach of StopGame Methods: When the collision between the two cars takes place, the animation timer will stop and according to that the current score placed on center of screen and if player press enter the scene will closed and startGame methods called by StopGame methods

- **Problem Definition of Level And Score Methods:** The problem is this methods is to determine how many vehicles pass and update the score.
- Solution Approach of Level and Score Methods: When the game starts, each car will move towards the player depending on a variable. The player's car is positioned at 600 y axis of screen and if other cars pass this coordinate, the score will updated according the information that is $S_n = S_c + L_c$ and the level and speed will be determined according to the score ranges
- Problem Definition of randomX and randomBush
 Methods: The problem is to leave space between the cars to pass the user's vehicle and add random bushes on both sides of the path
- Solution Approach of randomX and randomBush
 Methods: to solve that problem first imported random
 modules ,then a random number was used to pass a car
 between each car. Different intervals were determined
 according to the bush or car and the number of intervals
 was selected.