**SUKKUR IBA UNIVERSITY**

**DEPARTMENT OF COMPUTER SCIENCE**



Project Name : Car Racing Game

Subject: Visual Programming

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**Car Racing Game**

**Overview:**

In this game user car moves forward and enemy cars move in opposite direction, user car tries to not hit with enemy cars and tries to collect coins which increase the score. If user car hit with enemy car the game will stop, a game over label and restart button will appear in the center, restart button will restart the game. User car can control the speed by up and down keys. Left and right movement can be handle with left and right keys.

**Development:**

**Programing Language:**

This game was created in C# visual Basic 2022.

**Picture Boxes:**

The game contains 13 picture Boxes

1picture box for user car

3 picture boxes for enemy Cars

4 picture boxes for coins

4 for picture boxes for road lines

**Buttons and Labels:**

One Button to restart the application

One label to show Game Over Message

**Timer:**

I use Timer control to handle the movements of all the cars, the road Lines and all the coins. Timer Control calls five functions including moveline(), enemy(), coins(), collections funtions.

**Functions used in the game:**

***Moveline Funciton():***

This function controls the movement of the road lines, the road lines move downward if they touch the bottom of the frame they start again the movement from the top.

***Coins():***

This function controls the movement of the coins, the coins move downward if they touch the bottom of the frame they start again the movement from the top.

***Gameover():***

This function appears Game over label and restart button if user car hits the enemy car and the game stops.

***Collections():***

This function collects the score, if user car hits the coins the score will be increasing by increment in counter.

**Variables:**

Gamespeed of datatype int is set to 2 by default, later it can be increase and decrease with up and down keys.

Coincounter is a counter variable that adds the score by collecting the coins by the user car.

**Events:**

***Btn1\_Click:***

The event is triggered by pressing the restart button.

By pressing the button the button will be disappear and the Application.Restart() will restart the application.

***Form1\_KeyDown:***

This event is used to identify the keys of the keyboard, there are four keys that I used in the game.

***Keys.left*** uses to capture left key movement which moves the car towards left.

***Keys.Right*** uses to capture Right key movement which moves the car towards right.

***Keys.Up*** uses to capture up key movements which speed up the car.

***Keys.Down*** uses to capture down key movement which reduces the speed of the car.