PREMIER UNIVERSITY

Department of Computer Science & Engineering

Assignment Report

"Vehicle Parking System"

Course Title : Structured Programming

Course Code : CSE 111

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- **Introduction:**

The console-based parking management system in C using the function, loop, and Conditional Statement is a program created for parking bus, truck and car information and total amount written in the C programming language. This system was developed as a small, straightforward project using the Code::Blocks IDE & the GCC compiler. The vehicle record is kept in this system. The records item includes vehicle number and amount.

Input: The details of input of the program are given below:

This program shows a menu that includes several options and asks to give input for the specified options.

The menu is given below:

1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit

If the input is '1': the program asks to enter a car, then it saves the count variable & amount is saved total amount variable.

If the input is '2': the program asks to enter a bus, then it saves the count variable & amount is saved total amount variable.

If the input is '3': the program asks to enter a truck, then it saves the count variable & amount is saved total amount variable.

Process: The processing of input that leads to expected output is given below:

This program shows a menu that includes several options and asks to give input for the specified options.

The menu is given below:

1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit

If the given input is '1', the program asks to Enter Car(100tk). When entering a car print a message Enter Successfully.

If the given input is '2', the program asks to Enter Bus(200tk). When entering a bus print a message Enter Successfully.

If the given input is '3', the program asks to Enter Truck(300tk). When entering a truck print a message Enter Successfully.

If the given input is '4', the program asks to Show Status. In this status, we show the

Number of cars.
Number of Bus.
Number of Truck.
A total number of vehicles.
Total gain amount.

If the given input is '5', the program asks for Delete Data. When click the delete data option all vichels data will remove and show,

Number of Car=0
Number of Bus=0
Number of Truck=0
Total number of vehicle=0
Total gain amount=0

If the given input is '6', the program terminates as the sixth option is linked to exit()
function.

Output: the details of the output of the program are given below:

This program shows a menu that includes several options and asks to give input for the specified options.

The menu is given below:

1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit

If the input is '1": the program shows Entry Successfully.

If the input is '2": the program shows Entry Successfully.

If the input is '3": the program shows Entry Successfully.

If the input is '4": the program shows show status where
We show the number of cars, numbers of buses, numbers of trucks, the total number of vehicles, and the total gain amount.

If the input is '5": the program shows show status where
We show that the number of cars=0, Number of buses=0, Number of trucks=0, the total number of vehicles=0, and total gain amount=0.

Source Code:

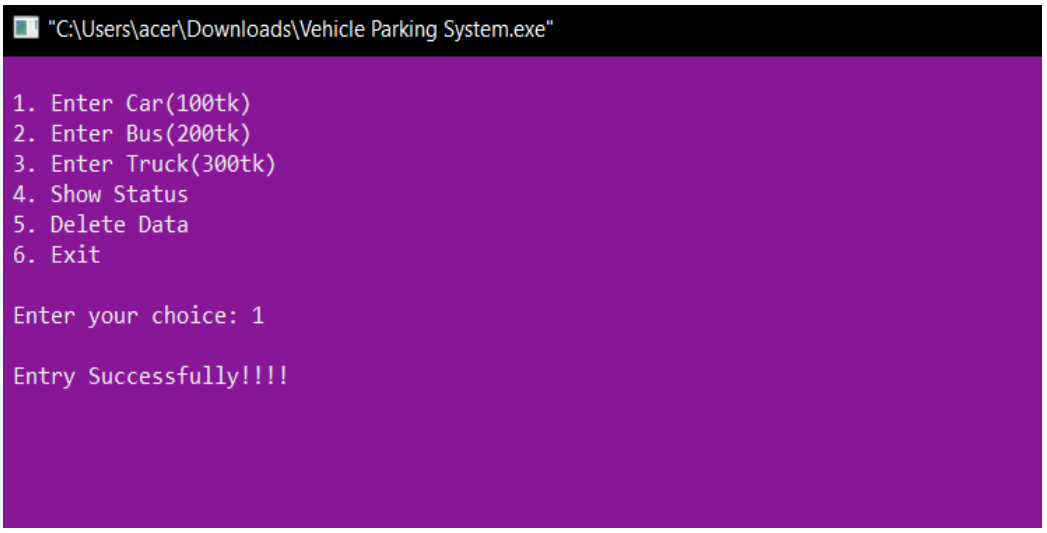
```
#include<stdio.h>
#include<windows.h>
#include<conio.h>

int Menu();
void car();
void bus();
void truck();
void Showdetails();
void Delete();
int no_of_car=0, no_of_bus=0, no_of_truck=0, amount=0, total_count=0;

void main()
{
   system("color 5f");
   while(1)
   {
      system("cls");
      switch(Menu())
      {
      case 1:
         car();
         break;
      case 2:
         bus();
         break;
      case 3:
         truck();
         break;
      case 4:
         Showdetails();
         break;
      case 5:
         Delete();
         break;
      case 6:
         exit(0);
```

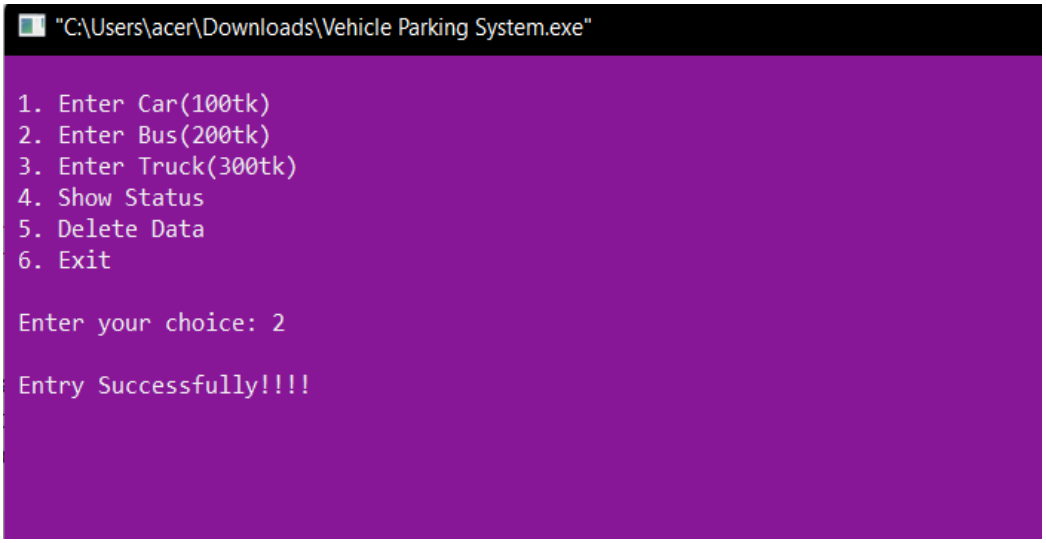
```
default :
            printf("\nInvalid Choice!!");
        }
        getch();
    }
}

int Menu()
{
    int choose;
    printf("\n 1. Enter Car(100tk) ");
    printf("\n 2. Enter Bus(200tk) ");
    printf("\n 3. Enter Truck(300tk) ");
    printf("\n 4. Show Status ");
    printf("\n 5. Delete Data ");
    printf("\n 6. Exit ");

    printf("\n\n Enter your choice: ");
    scanf("%d",&choose);
    return(choose);
}

void Delete()
{
    no_of_car = 0;
    no_of_bus = 0;
    no_of_truck = 0;
    amount = 0;
    total_count = 0;
}

void Showdetails()
{
    printf("\n Number of Car = %d",no_of_car);
    printf("\n Number of Bus = %d",no_of_bus);
    printf("\n Number of Truck = %d",no_of_truck);
    printf("\n Total number of vehicle = %d",total_count);
    printf("\n Total gain amount = %d",amount);
```

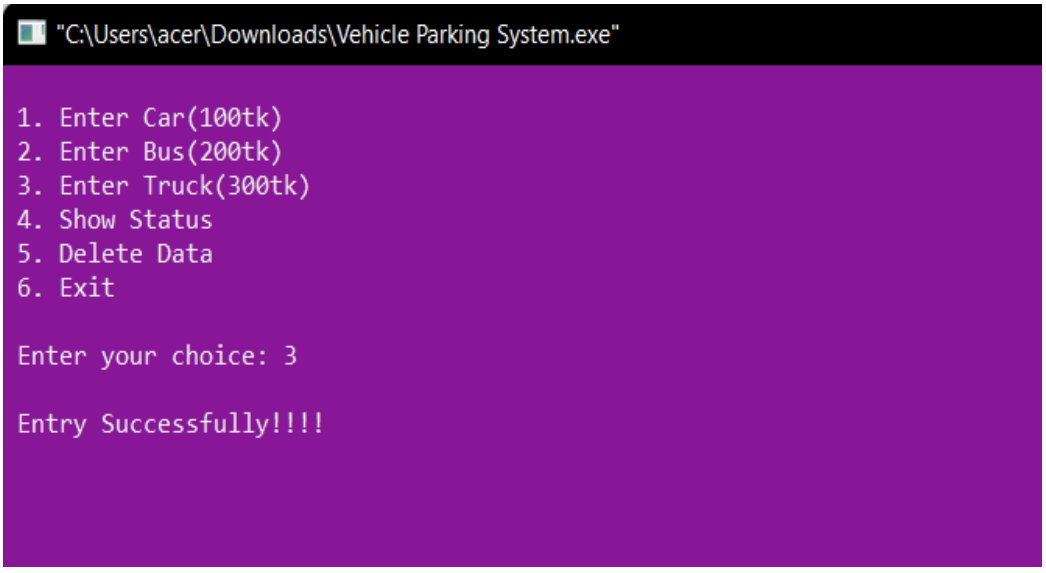
```
}
void car()

{
   printf("\n Entry Successfully!!!!");
   no_of_car++;
   amount = amount + 100;
   total_count++;
}

void bus()
{
   printf("\n Entry Successfully!!!!");
   no_of_bus++;
   amount = amount + 200;
   total_count++;
}

void truck()
{
   printf("\n Entry Successfully!!!!");
   no_of_truck++;
   amount = amount + 300;
   total_count++;
}
```

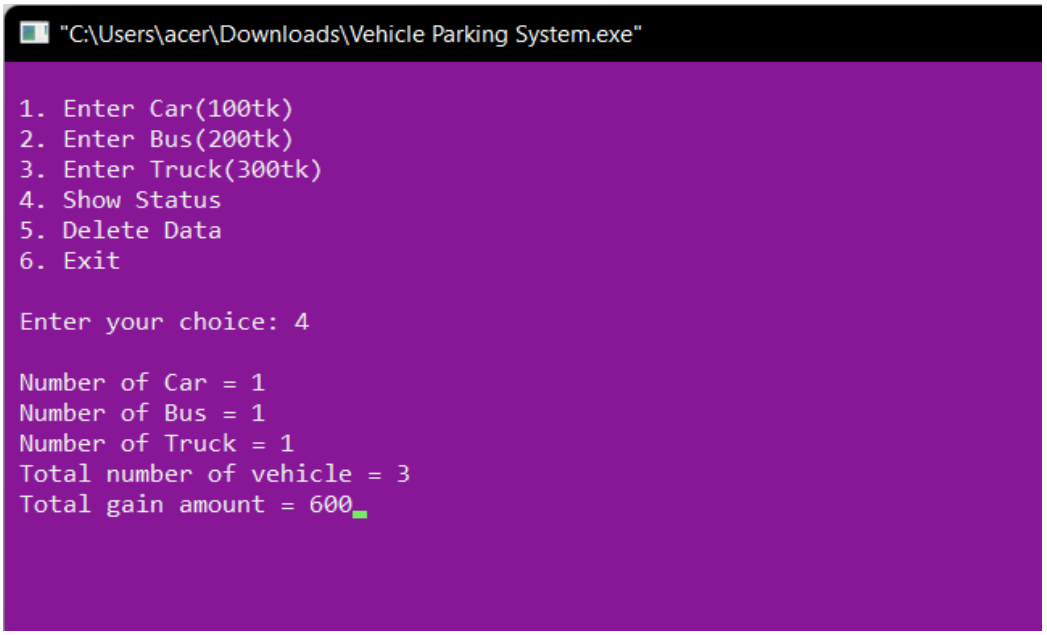
Sample Input & Output:

- **Input & Output for first time ‘Show Status’:**

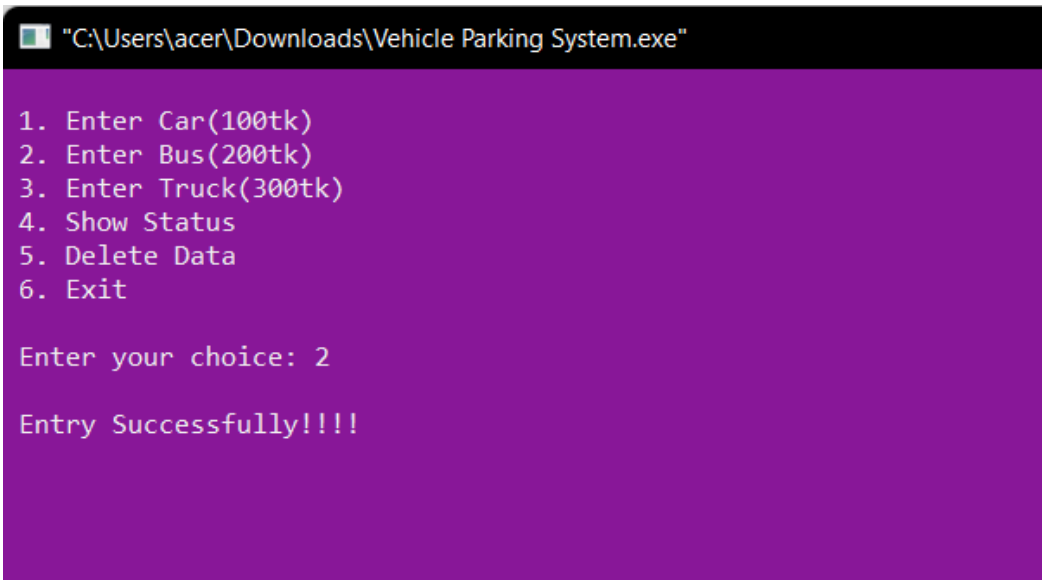


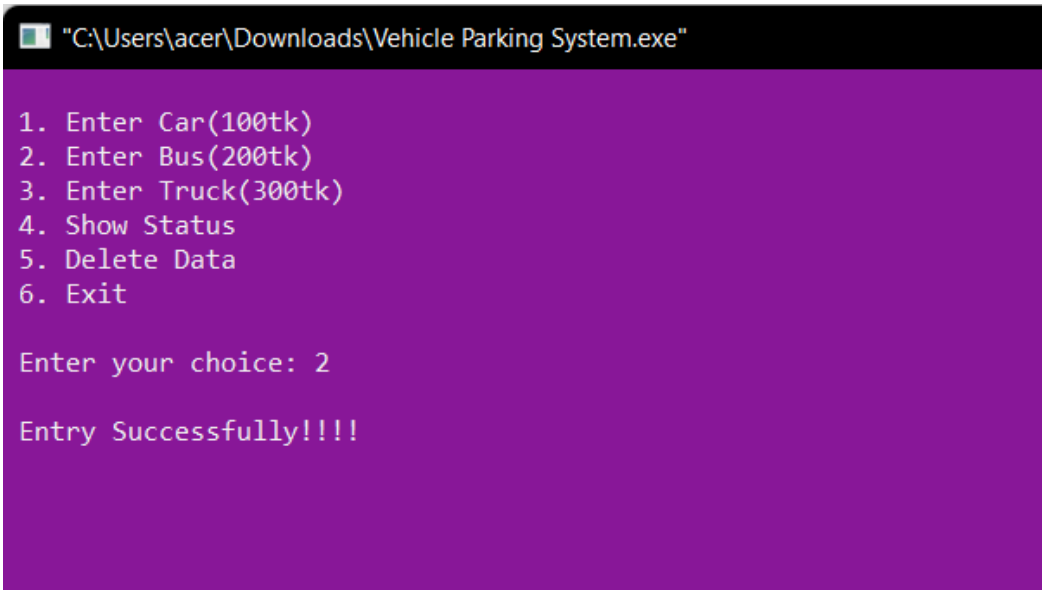


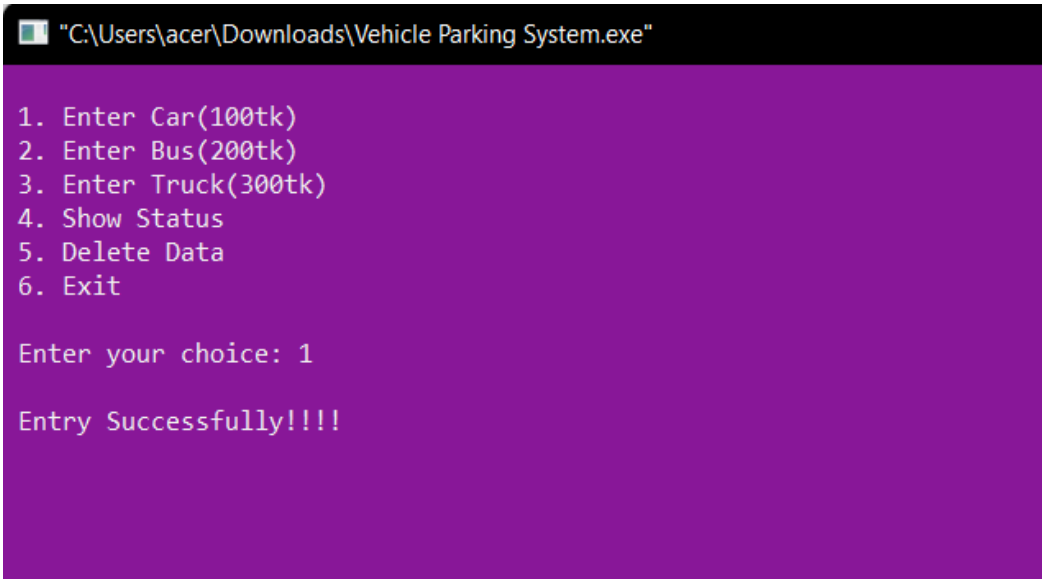


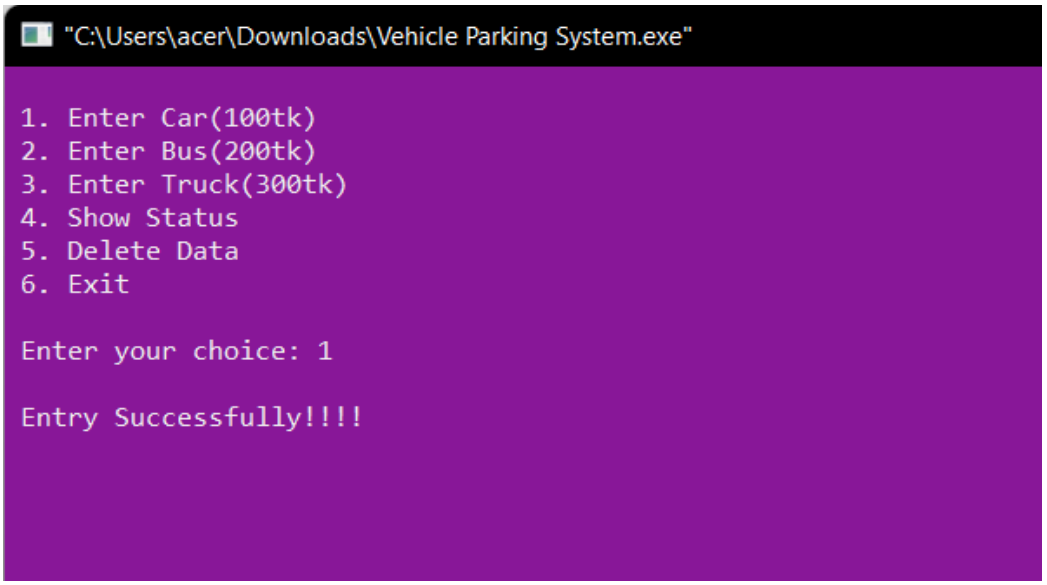


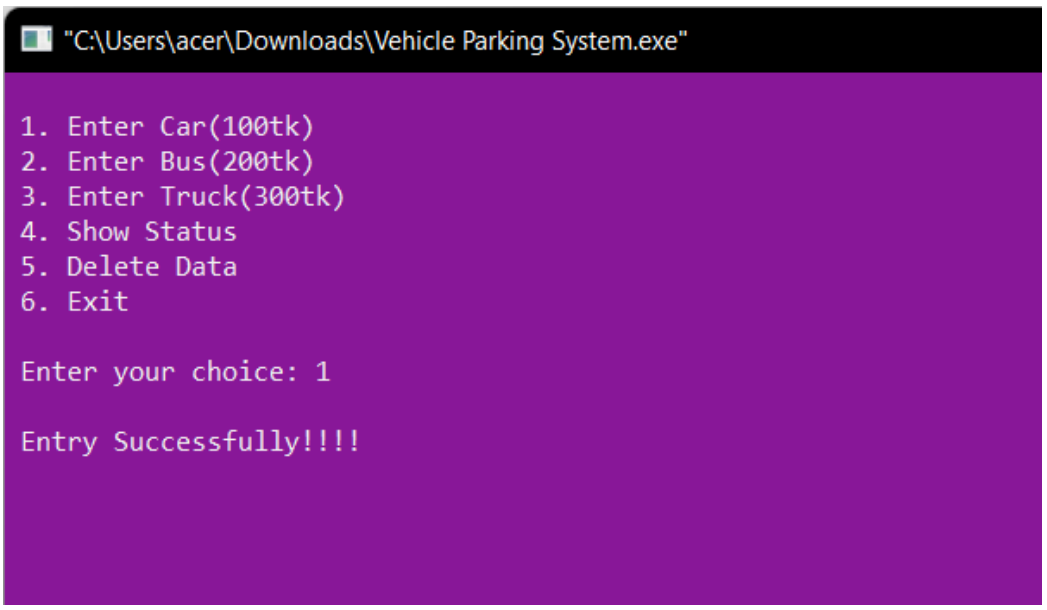
- **Input & Output for second time 'Show Status':**

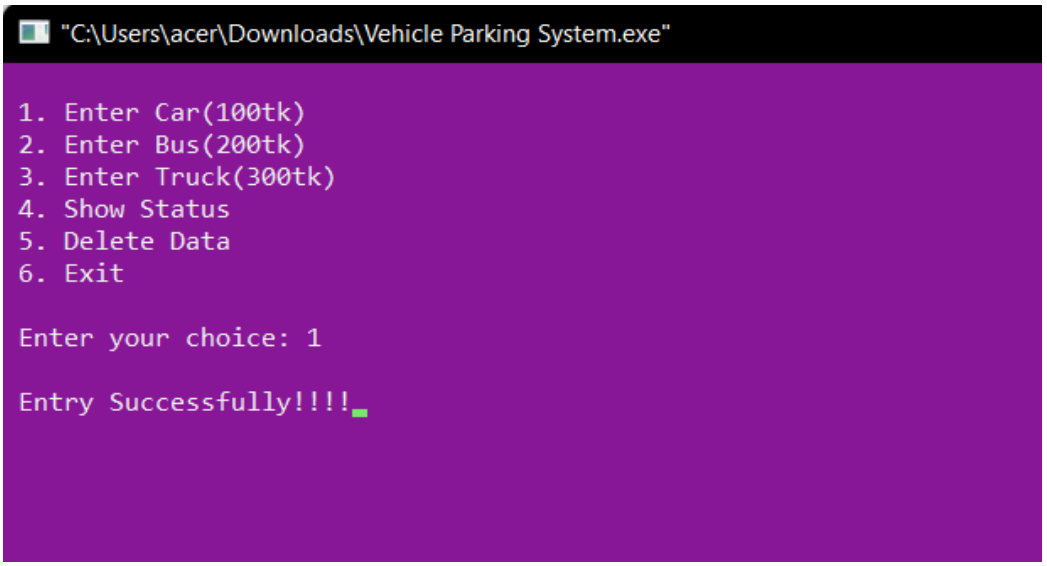


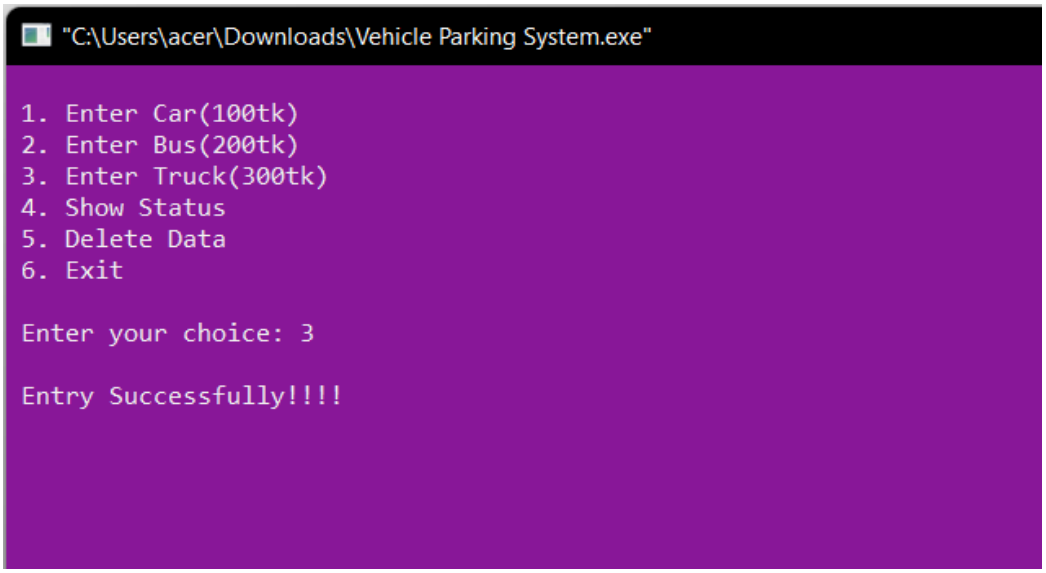


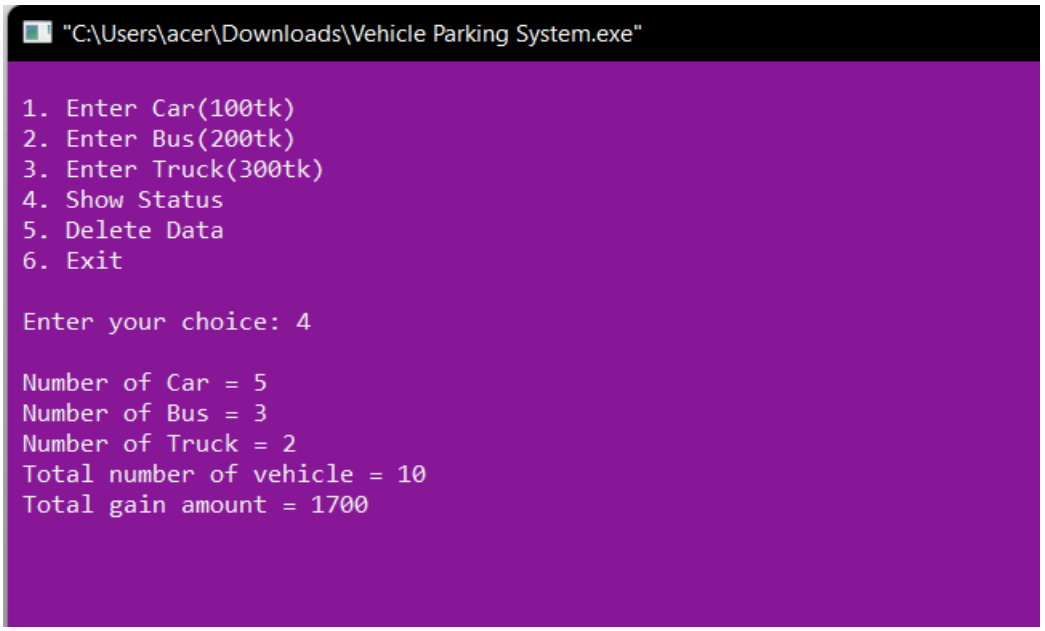

"C:\Users\acer\Downloads\Vehicle Parking System.exe"
1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit
Enter your choice: 1
Entry Successfully!!!!


"C:\Users\acer\Downloads\Vehicle Parking System.exe"
1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit
Enter your choice: 1
Entry Successfully!!!!

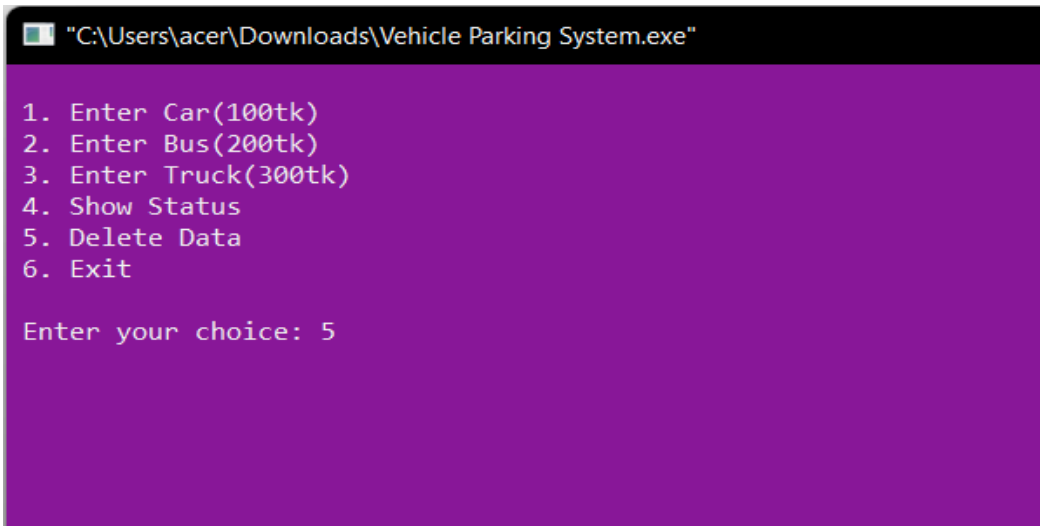

"C:\Users\acer\Downloads\Vehicle Parking System.exe"
1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit
Enter your choice: 1
Entry Successfully!!!!

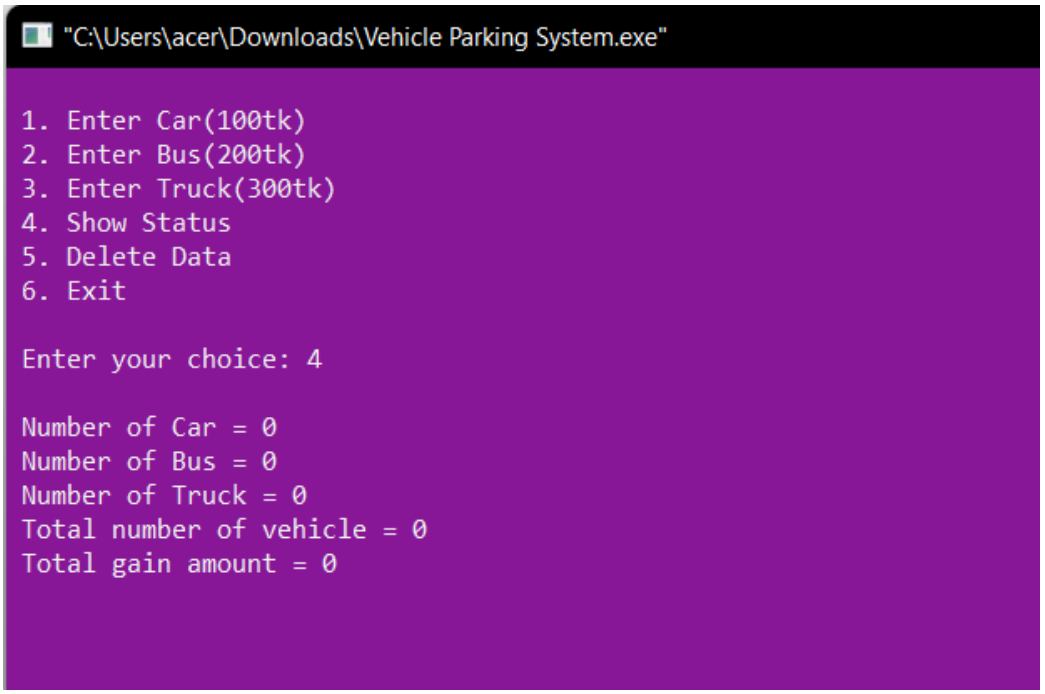

"C:\Users\acer\Downloads\Vehicle Parking System.exe"
1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit
Enter your choice: 1
Entry Successfully!!!!


"C:\Users\acer\Downloads\Vehicle Parking System.exe"
1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit
Enter your choice: 3
Entry Successfully!!!!

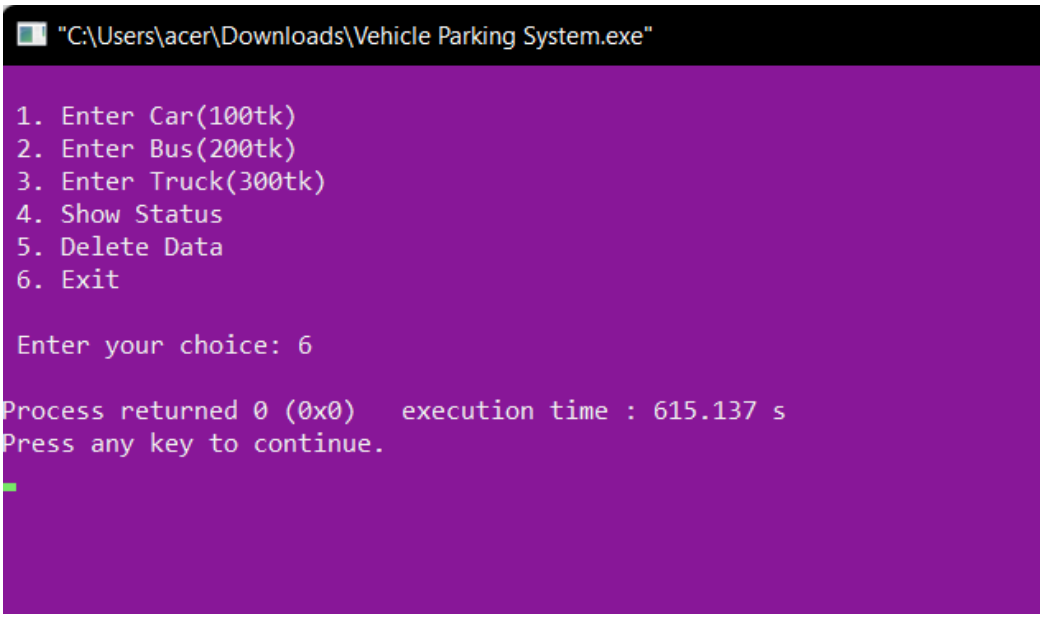

"C:\Users\acer\Downloads\Vehicle Parking System.exe"
1. Enter Car(100tk)
2. Enter Bus(200tk)
3. Enter Truck(300tk)
4. Show Status
5. Delete Data
6. Exit
Enter your choice: 4
Number of Car = 5
Number of Bus = 3
Number of Truck = 2
Total number of vehicle = 10
Total gain amount = 1700

- **For ‘Delete Data’:**





- **For ‘Exit’:**



Discussion:

We know that with advanced token based parking system it is completely appropriate, comfortable and adjustable to regulate the entry and exit of vehicles in the parking facility.

The authorities can smoothly enhance their parking system and manage free flowing vehicles, all throughout the day.But in this pparking management system have some limitation.These are we did not generate any token for vehicles,than we did not add any sequrity issues in our project thats why this project have some limitation.

Adding these things in the future will remove the limitation of the project to a large extent and it will be possible to set up a complete parking management project.