

# **MINI PROJECT REPORT**

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**In partial satisfaction of the requirements for the degree of**

## **BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE ENGINEERING**



**SCHOOL OF COMPUTING**

**COLLEGE OF ENGINEERING AND TECHNOLOGY  
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## SRM INSTITUTE OF SCIENCE AND TECHNOLOGY KATTANKULATHUR-603203

### **BONAFIDE CERTIFICATE**

Certified that this mini project report titled “**Car Sales Management System**” is the bonafide work done by Shubham Kumar Gupta (RA2211003010534) and Hemanth S (RA2211003010566) who completed the project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other work.

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## TABLE OF CONTENTS

<b>S.No</b>	<b>CONTENTS</b>	<b>PAGE NO</b>
1.	Problem Statement	<b>4</b>
2.	Modules of Project	<b>4</b>
3.	Diagrams	<b>5</b>
	a. Use case Diagram	<b>5</b>
	b. Class Diagram	<b>5</b>
	c. Sequence Diagram	<b>6</b>
	d. Activity Diagram	<b>6</b>
	e. Component Diagram	<b>7</b>
	f. Deployment Diagram	<b>7</b>
4.	Code/Output Screenshots	<b>8</b>
5.	Conclusion and Results	<b>14</b>
6.	References	<b>15</b>

## **PROBLEM STATEMENT**

To Create a Car Sales Management System using C++ Programming Language

## **MODULES OF PROJECT**

This project has been made with the help of the pre-processors like dos.h, string.h, fstream, iostream, stdio.h, process.h in order to import some necessary function required in making the same.

User Defined Functions such as:

- : class for handling data of each entry = Class car\_ resale
- : function to get data from the user = Void car\_ resale::get()
- : function to show the data of a specific entry or all entries = Void car\_ resale::show( )
- : function to return the vin number for tracking = Long car\_ resale::ret no( )
- : driver program
- : Append
- : Modify
- : Search
- : Display
- : Exit

Above User Defined Functions has been used in order to increase the efficiency of the code.

# DIAGRAMS

## a) USE CASE DIAGRAM

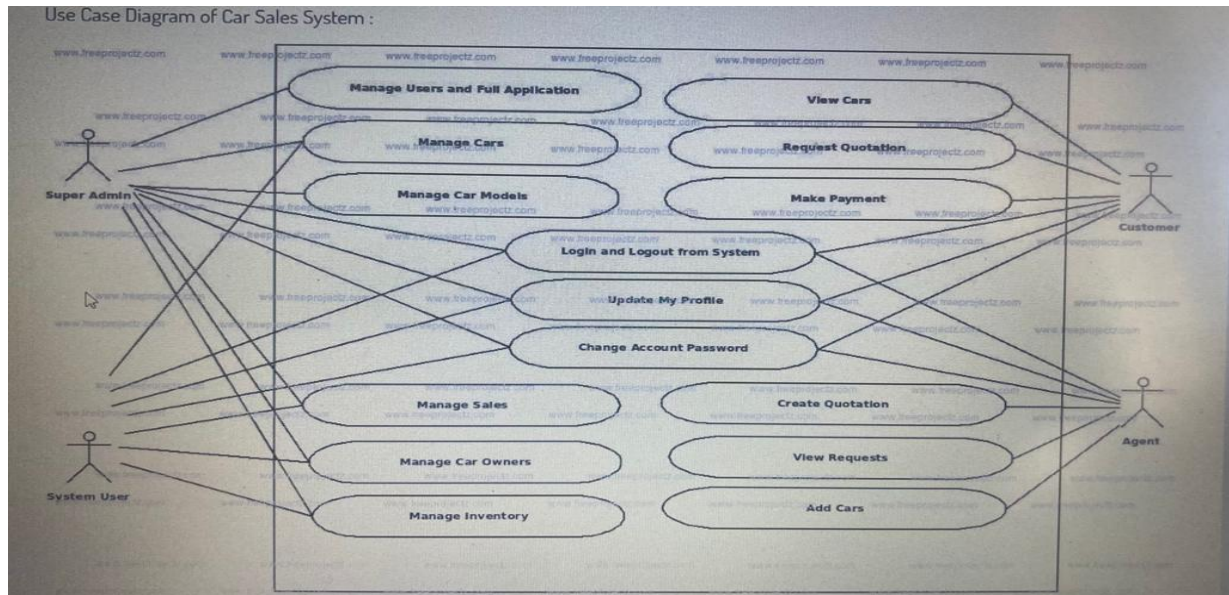


Fig 3a. Use Case Diagram of Car Sales Management System

## b) CLASS DIAGRAM

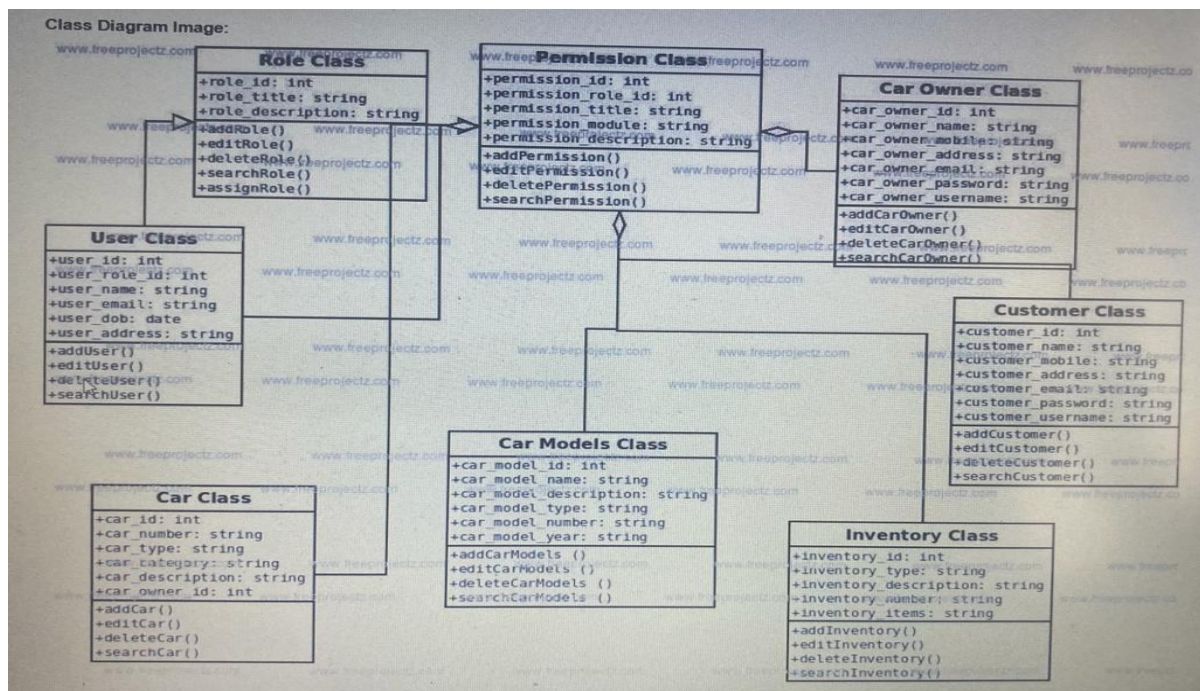


Fig 3b. Class Diagram of Car Sales Management System

### c) SEQUENCE DIAGRAM

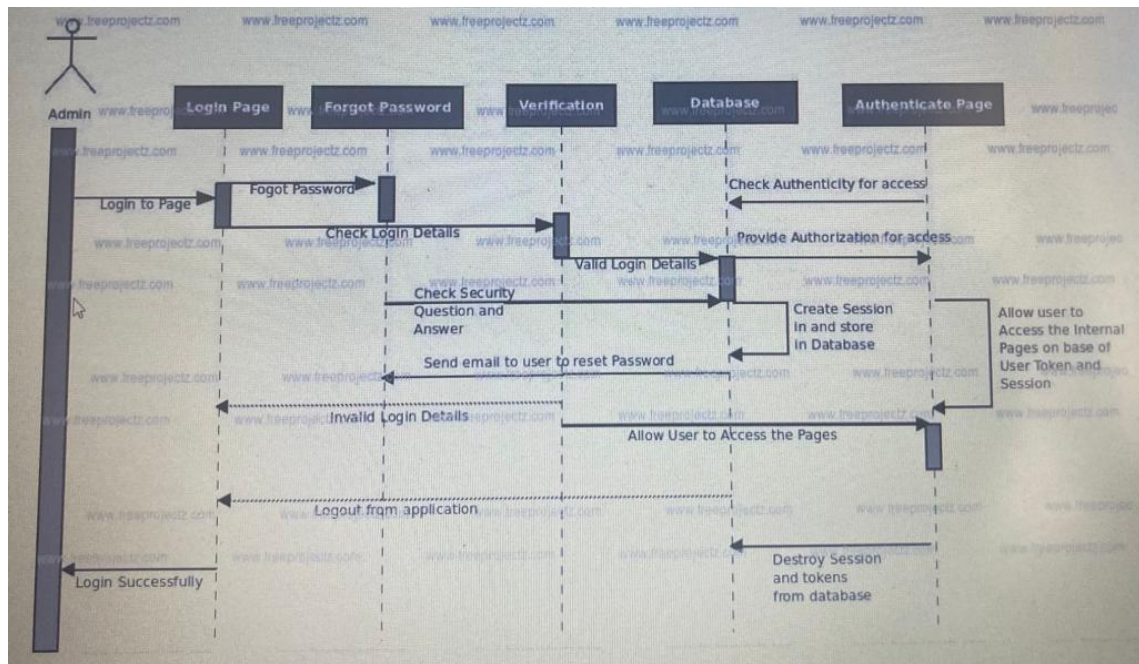


Fig 3c. Sequence Diagram of Car Sales Management System

### d) ACTIVITY DIAGRAM

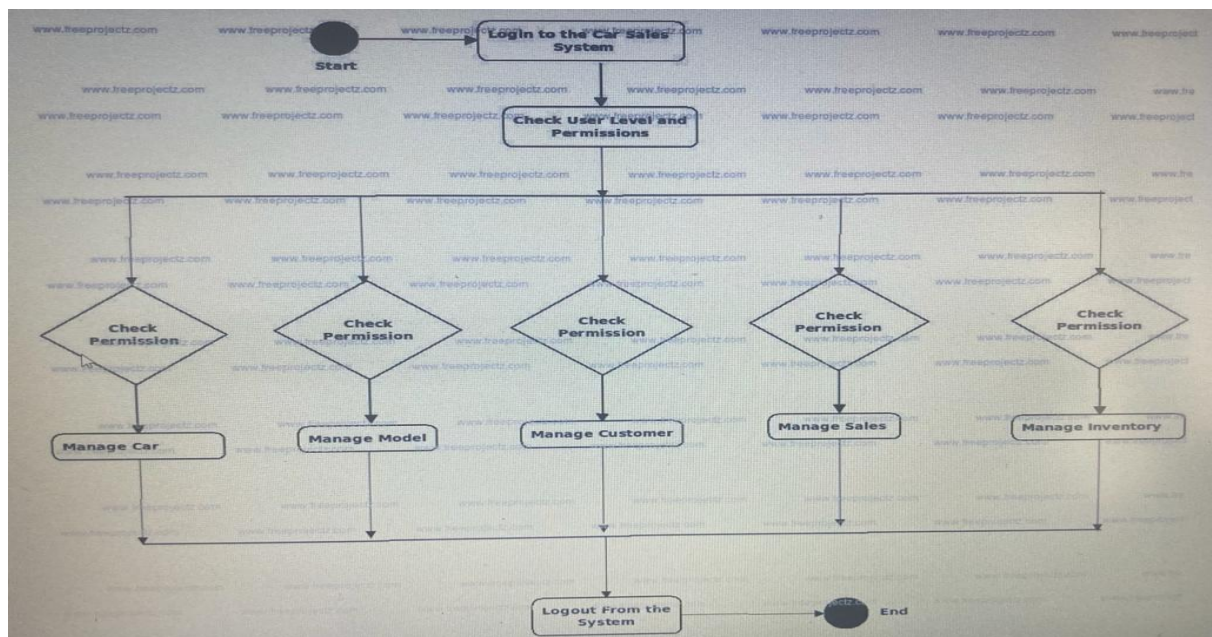


Fig 3d. Activity Diagram of Car Sales Management System

## e) COMPONENT DIAGRAM

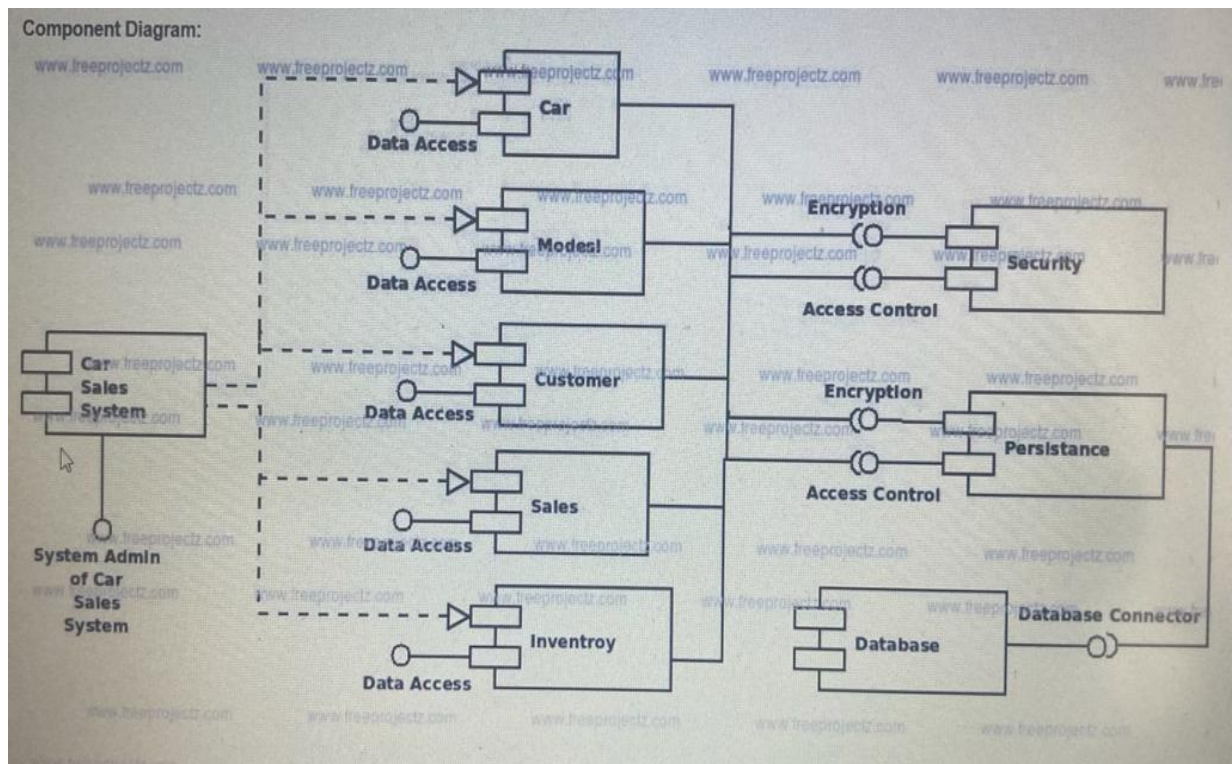


Fig 3e. Component Diagram of Car Sales Management System

## f) DEPLOYMENT DIAGRAM

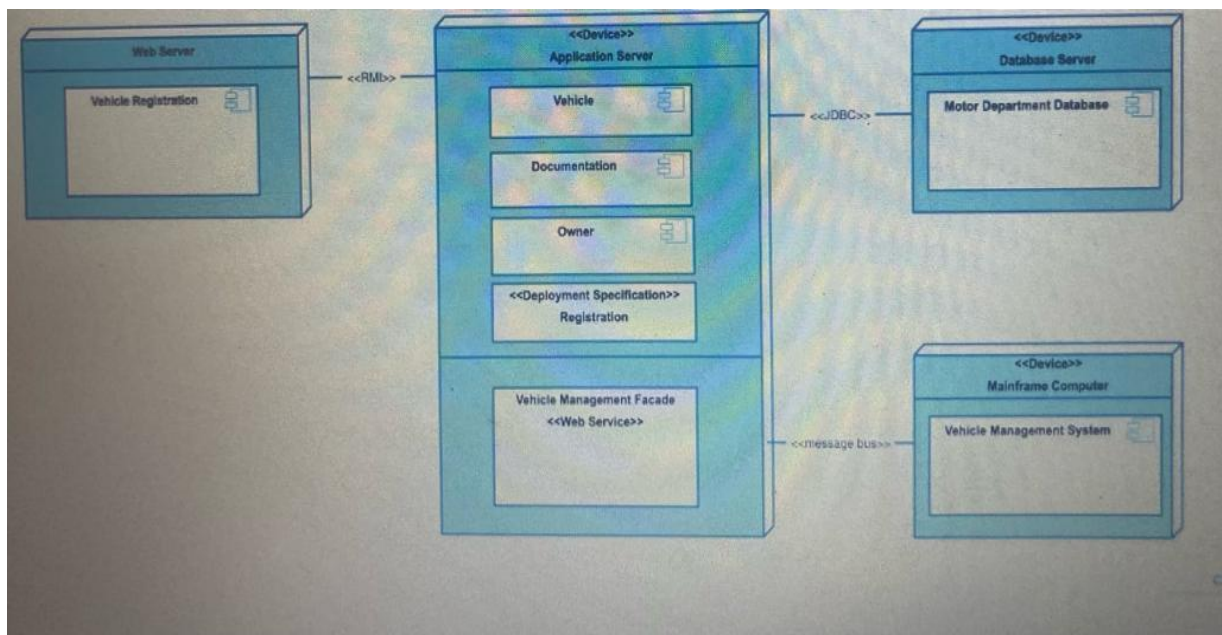


Fig 3f. Deployment Diagram of Car Sales Management System

## SOURCE CODE

```
#include<dos.h>
#include<string.h>
#include<fstream>
#include<iostream>
#include<stdio.h>
#include<process.h>
using namespace std;

//Class for handling data of each entry.
class car_resale
{
    private:
        char model[50]; //Model Name
        float price; //Car Price
        int use; //Years in use
        float dist; //Distance used for
        long idno; //VIN number for tracking
    public:
        void get();
        void show();
        long retno();
};

//Function to get data from the user.
void car_resale::get()
{
    cout<<"Enter car model: "; gets(model);
    cout<<"Enter VIN number: "; cin>>idno;
    cout<<"How much do you want to sell your vehicle for?"; cin>>price;
    cout<<"How many years has the vehicle been in use?"; cin>>use;
    cout<<"Approximate usage of vehicle? (in kilometers)"; cin>>dist;
}
```

//Function to show the data of a specific entry or all entries.

```
void car_resale::show()
{
    cout<<"\n\nCar model: "; puts(model);
    cout<<"VIN number: "<<idno;
    cout<<"\nPrice: "<<price;
    cout<<"\nUsage: "<<use;
    cout<<"\nDriven for(in kilometers): "<<dist;
}
```

//Function to return the VIN number for tracking.

```
long car_resale::retno()
{
    return idno;
}
```

//Driver Program

```
int main()
{
    system("clear");
    //Welcome screen
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<endl;
    cout<<"*****";
    cout<<endl;
    cout<<"          WELCOME TO FPCS CAR SALES          ";
    cout<<endl<<"*****";
    _sleep(3000);
    system("clear");
    //Data entry
    ofstream f1; car_resale a; int n, ch; char ch1;
```

```

f1.open("car.dat", ios::out|ios::binary);
cout<<"\nHow many records do you wish to store? "; cin>>n;
for(int i=0; i<n; i++)
{
    a.get();
    f1.write((char*)&a,sizeof(a));
}
f1.close();
//Menu-driven program
do
{
    system("clear");
    cout<<"\nOption 1: Append";
    cout<<"\nOption 2: Modify";
    cout<<"\nOption 3: Search";
    cout<<"\nOption 4: Delete";
    cout<<"\nOption 5: Display";
    cout<<"\nOption 6: Exit";
    cout<<"\nEnter your choice: "; cin>>ch;
    switch(ch)
    {
        case 1: //Takes a single entry from the user and appends into the file.
        {
            f1.open("car.dat",ios::app|ios::binary);
            a.get();
            f1.write((char*)&a,sizeof(a));
            f1.close();
            break;
        }
        case 2: //Searches for a specific entry and rewrites it.
        {
            ofstream f2;
            f2.open("car.dat", ios::out|ios::ate|ios::binary);
            int n1;
            cout<<"\nEnter the record which has to be modified: "; cin>>n1;
            int x=(n1-1)*sizeof(a);
            f2.seekp(x,ios::beg);

```

```

a.get();
f2.write((char*)&a,sizeof(a));
f2.close();
break;
}

```

case 3: //Searches for a specific entry and shows its details.

```

{
    ifstream f3; int flag=0;
    f3.open("car.dat",ios::in|ios::binary);
    f3.seekg(0,ios::beg);
    long id;
    cout<<"\nEnter VIN number: "; cin>>id;
    while(f3.read((char*)&a,sizeof(a)))
    {
        if(a.retno()==id)
        {
            a.show();
            flag=1;
        } }
    if(flag==0)
        cout<<"\nID number not found. SORRY!";
    f3.close();
    break;
}

```

case 4: //Copies all data to a new file except the selected record. Deletes the old file.

```

{
    ofstream f41; ifstream f42; long c;
    f42.open("car.dat",ios::in|ios::binary);
    f41.open("newcar.dat",ios::out|ios::app|ios::binary);
    f42.seekg(0,ios::beg);
    cout<<"\nEnter vin number: "; cin>>c;
    while(f42.read((char*)&a,sizeof(a)))
    {
        if(c!=a.retno())
            f41.write((char*)&a,sizeof(a));
    }
    remove("car.dat"); rename("newcar.dat","car.dat");
}

```

```

        f41.close(); f42.close();
        break;
    }
    case 5: //displays all data in the file.
    {
        ifstream f5;
        f5.open("car.dat",ios::in|ios::binary);
        f5.seekg(0,ios::beg);
        while(f5.read((char*)&a,sizeof(a)))
            a.show();
        f5.close();
        break;
    }
    case 6: //Exits the program. Shows a Thank You slide.
    {
        system("clear");
        cout<<"***** _____";
        cout<<"          *****";
        cout<<"\n          *    Thank you for using FPCS!!    *    ";
        cout<<"          *****";
        cout<<"***** _____";
        _sleep(3000);
        exit(0);
    } }
    cout<<"\nDo you wish to continue? "; cin>>ch1;
}
while(ch1=='Y'||ch1=='y');
return 0;
}

```

## OUTPUT SCREENSHOTS

```
*****
***** WELCOME TO FPCS CAR SALES
***** 'clear' is not recognized as an internal or external command,
operable program or batch file.

How many records do you wish to store? 2
Enter car model: Enter VIN number: 2222
How much do you want to sell your vehicle for? 2345677
How many years has the vehicle been in use? 4
Approximate usage of vehicle? (in kilometers) 23454
Enter car model: Enter VIN number: 3456
How much do you want to sell your vehicle for? 345999
How many years has the vehicle been in use? 3
Approximate usage of vehicle? (in kilometers) 34245
'clear' is not recognized as an internal or external command,
operable program or batch file.

Option 1: Append
Option 2: Modify
Option 3: Search
Option 4: Delete
Option 5: Display
Option 6: Exit
Enter your choice: 1
Enter car model: Enter VIN number: 3452
How much do you want to sell your vehicle for? 234567
How many years has the vehicle been in use? 2
Approximate usage of vehicle? (in kilometers) 23456
Do you wish to continue?
```

C:\Users\Administrator\Documents\car.exe

```
*****
***** WELCOME TO FPCS CAR SALES
***** 'clear' is not recognized as an internal or external command,
operable program or batch file.

How many records do you wish to store? 1
Enter car model: Enter VIN number: 3333
How much do you want to sell your vehicle for? 3333333
How many years has the vehicle been in use? 3
Approximate usage of vehicle? (in kilometers) 333333
'clear' is not recognized as an internal or external command,
operable program or batch file.

Option 1: Append
Option 2: Modify
Option 3: Search
Option 4: Delete
Option 5: Display
Option 6: Exit
Enter your choice: 2

Enter the record which has to be modified: 1
Enter car model: Enter VIN number: 2222
How much do you want to sell your vehicle for? 333332
How many years has the vehicle been in use? 1
Approximate usage of vehicle? (in kilometers) 2345
Do you wish to continue?
y
'clear' is not recognized as an internal or external command,
operable program or batch file.

Option 1: Append
Option 2: Modify
Option 3: Search
Option 4: Delete
Option 5: Display
Option 6: Exit
Enter your choice: 3

Enter VIN number: 2222

Car model:
VIN number: 2222
Price: 333332
Usage: 1
Driven for(in kilometers): 2345
```

## **CONCLUSION AND RESULTS**

The Car Sales Management System project is a valuable tool for car dealerships and businesses in the automotive industry. The system is designed to automate the car sales process, from the initial inquiry to the final sale and after-sales service, providing a more efficient and streamlined

The system is built using the C++ programming language, which provides high performance and flexibility. The object-oriented approach used in the design of the system enhances its functionality and makes it easier to maintain and update.

Overall, the Car Sales Management System project in C++ is a valuable tool for businesses looking to streamline their car sales process, enhance customer service, and improve sales performance.

## REFERENCES

1. 'Google' for Problem Solving
2. <https://www.freeprojectz.com> for diagrams
3. <https://www.researchgate.net> for diagrams