AMITY UNIVERSITY JHARKHAND

C++ Assignment

Topic: Vehicle Management System Using OOPs in C++

Course Title : Object Oriented Programming in C++

Course Code : ES203

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Programme : B-Tech CSE

Section : A

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INTRODUCTION

This C++ project is a basic implementation of a vehicle management system. It provides essential functionalities buying used car and bike and selling used car and bike to users.

Features:

BUYING CAR MENU: This helps to buy car by checking with details like car company, model, number, distance travelled, state registered and price.

SELLING CAR MENU: The system lists provides users to sell their used car by adding all the details and information of the car.

BUYING BIKE MENU: This helps to buy bike by checking with details like bike company, model, number, distance travelled, state registered and price.

SELLING BIKE MENU: Users can add their bike information with all the details to the

customer

EXIT: When you are done you can leave the program and go back to the home page.

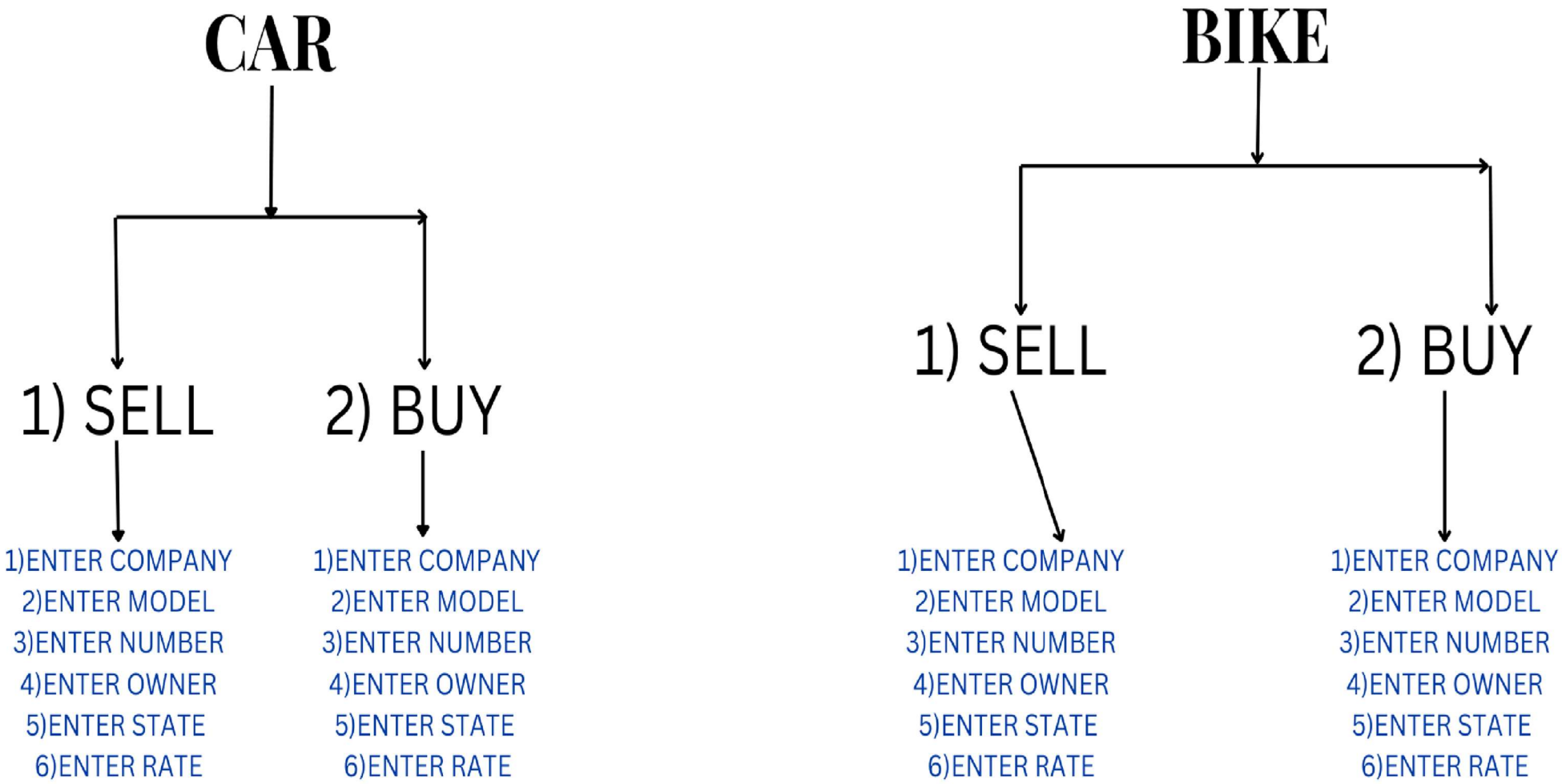
SYSTEM REQUIREMENTs

Minimum:

1. **Operating System:** Windows 7 or later, Ubuntu 16.04 or later, - macOS 10.1 or later.
2. **Software:** C++ compiler, Integrated Development Environment (IDE) such as Visual Studio, Standard C++ libraries.
3. **Hardware:** Intel Core i3 processor (or equivalent AMD),4 GB RAM ,100 MB free space.

WORKING FLOWCHART

MENU BASED PROGRAM



CODE:

```
#include <iostream>
#include <stdlib.h>
#include <string.h>
using namespace std;

class car
{

   string company;
   char model[20];
   char num[12];
   char owner[10];
   char fuel[10];
   int distance;
   char state_regi[30];
   float rate;

public:
   static int total_car;
   void add_details();
   friend void show_details(car *ob);
};
class bike
{

   string company;
   char model[20];
   char num[20];
   char owner[10];
   // char fuel[10];
   int distance;
   char state_regi[30];
   float rate;
```

```
public:
   static int total_bike;
   void add_details();
   friend void show_details(bike *ob);
   friend void bike_txt(bike *ob);
};

void car::add_details()
{
   cout << "Enter company : ";
   cin >> ws;
   getline(cin, company);
   cout << "Enter Model : ";
   cin >> model;
   cout << "Enter car number : ";
   cin >> num;
   cout << "Enter ownership : ";
   cin >> owner;
   cout << "Enter fuel type : ";
   cin >> fuel;
   cout << "Enter distance travelled : ";
   cin >> distance;
   cout << "Enter state registered : ";
   cin >> state_regi;
   cout << "Enter rate : ";
   cin >> rate;
   total_car++;
}

void bike::add_details()
{
   cout << "Enter company : ";
   cin >> ws;
   getline(cin, company);
   cout << "Enter Model : ";
   cin >> model;
   cout << "Enter bike number : ";
   cin >> num;
   cout << "Enter ownership : ";
```

```
    cin >> owner;
    cout << "Enter distance travelled : ";
    cin >> distance;
    cout << "Enter state registered : ";
    cin >> state_regi;
    cout << "Enter rate : ";
    cin >> rate;
    total_bike++;
}

void show_details(car *ob)
{
    int count = 0;
    cout << "Choose company :\n";
    cout << "1.Maruti suzuki" << endl;
    cout << "2.Hyundai" << endl;
    cout << "3.Mahindra" << endl;
    cout<<"(type company name)\n";
    string s;
    cin >> ws;
    getline(cin, s);
    for (int i = 0; i < car::total_car; i++)
    {
        if (ob[i].company == s)
        {
            cout << endl
                 << "company--->" << ob[i].company << endl;
            cout << "Model--->" << ob[i].model << endl;
            cout << "Vehicle Number--->" << ob[i].num << endl;
            cout << "Owner--->" << ob[i].owner << endl;
            cout << "Fuel--->" << ob[i].fuel << endl;
            cout << "Distance driven--->" << ob[i].distance << endl;
            cout << "State registered--->" << ob[i].state_regi << endl;
            cout << "RATE --->" << ob[i].rate << endl<<endl;
            count++;
        }
    }
    if (count < 1)
        cout << "Oops !!! No details found...." << endl;
```

```
}

void show_details(bike *ob)
{
   int count = 0;
   cout << "Choose company :\n";
   cout << "1.Honda" << endl;
   cout << "2.Bajaj" << endl;
   cout << "3.Yamaha" << endl;
   cout << "(type company name)" << endl;
   string s;
   cin >> ws;
   getline(cin, s);
   for (int i = 0; i < bike::total_bike; i++)
   {

      if (ob[i].company == s)
      {
         cout << endl
             << "company--->" << ob[i].company << endl;
         cout << "Model--->" << ob[i].model << endl;
         cout << "Vehicle Number--->" << ob[i].num << endl;
         cout << "Owner--->" << ob[i].owner << endl;
         cout << "Distance driven--->" << ob[i].distance << endl;
         cout << "State registered--->" << ob[i].state_regi << endl;
         cout << "RATE --->" << ob[i].rate << endl<<endl;;
         count++;
      }
   }
   if (count < 1)
      cout << "Oops !!! No details found...." << endl;
}


int car::total_car;
int bike::total_bike;

// main
int main()
```

```
{
   bike obj[10];
   car ob[10];

   cout << "WELCOME TO SECOND HAND VEHICLE BYE & SELL \n\n";
   while (true)
   {
      char c;
      cout << "choose : " << endl;
      cout << "1.Sell" << endl;
      cout << "2.Bye" << endl;
      cout << "3.Exit" << endl;
      cin >> c;
      if (c == '1')
      {
         while (true)
         {
            char c;
            cout << "choose :" << endl;
            cout << "1.Bike\n";
            cout << "2.Car" << endl;
            cin >> c;
            if (c == '1')
            {
               obj[bike::total_bike].add_details();
               break;
            }
            else if (c == '2')
            {
               ob[car::total_car].add_details();
               break;
            }
            else
               cout << "Wrong input" << endl;
         }
      }
      else if (c == '2')
      {
         while (true)
```

```
        {
            char c;
            cout << "choose :" << endl;
            cout << "1.Bike\n";
            cout << "2.Car" << endl;
            cin >> c;
            if (c == '1')
            {
                show_details(obj);
                break;
            }
            else if (c == '2')
            {
                show_details(ob);
                break;
            }
            else
                cout << "Wrong input" << endl;
        }
    }
    else if (c == '3')
    {
        break;
  }

  }
  return 0;
}
```

THANK YOU !