Car Rental System

MINOR PROJECT REPORT

By

SHANMUGAPRIYAN(RA2211003010145)

MOHAMMED ARSHAK(RA2211003010156)

DHANUSH(RA2211003010158)

Under the guidance of
Dr. Revathi M
In partial fulfillment for the Course

of

21CSC201T – Data Structures and Algorithms

in CTECH

FACULTY OF ENGINEERING AND TECHNOLOGY

SCHOOL OF COMPUTING

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

KATTANKULATHUR

NOVEMBER 2023

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

TECHNOLOGY

(Under Section 3 of UGC Act, 1956)

BONAFIDE CERTIFICATE

Certified that this minor project report for the course **21CSC201J Data Structures and Algorithms** entitled in **" Car Rental System**" is the bonafide work of **SHANMUGAPRIYAN(RA2211003010145), MOHAMMED ARSHAK(RA2211003010156)**and **DHANUSH(RA2211003010158)** who carried out the work under my supervision.

SIGNATURE

Dr. Revathi M

Asst. Professor

CTECH

SRM Institute of Science and Technology

Kattankulathur

Introduction of the Project :

A car rental system is designed to streamline the process of renting vehicles to customers. It involves managing vehicle inventory, customer reservations, bookings, payments, and other related functionalities. Our goal is to create a software solution that automates these processes, enabling a seamless and user-friendly experience for both rental agencies and customers.

OBJECTIVES :

1. To streamline the process of selecting and confirming car booking. In this car rental system, we will give the users options for selecting a car, choosing the model and color of the car, and finally paying the required amount for renting the car.

2. To create a fully automated interface that is very easy and convenient for the users.

Requirements :

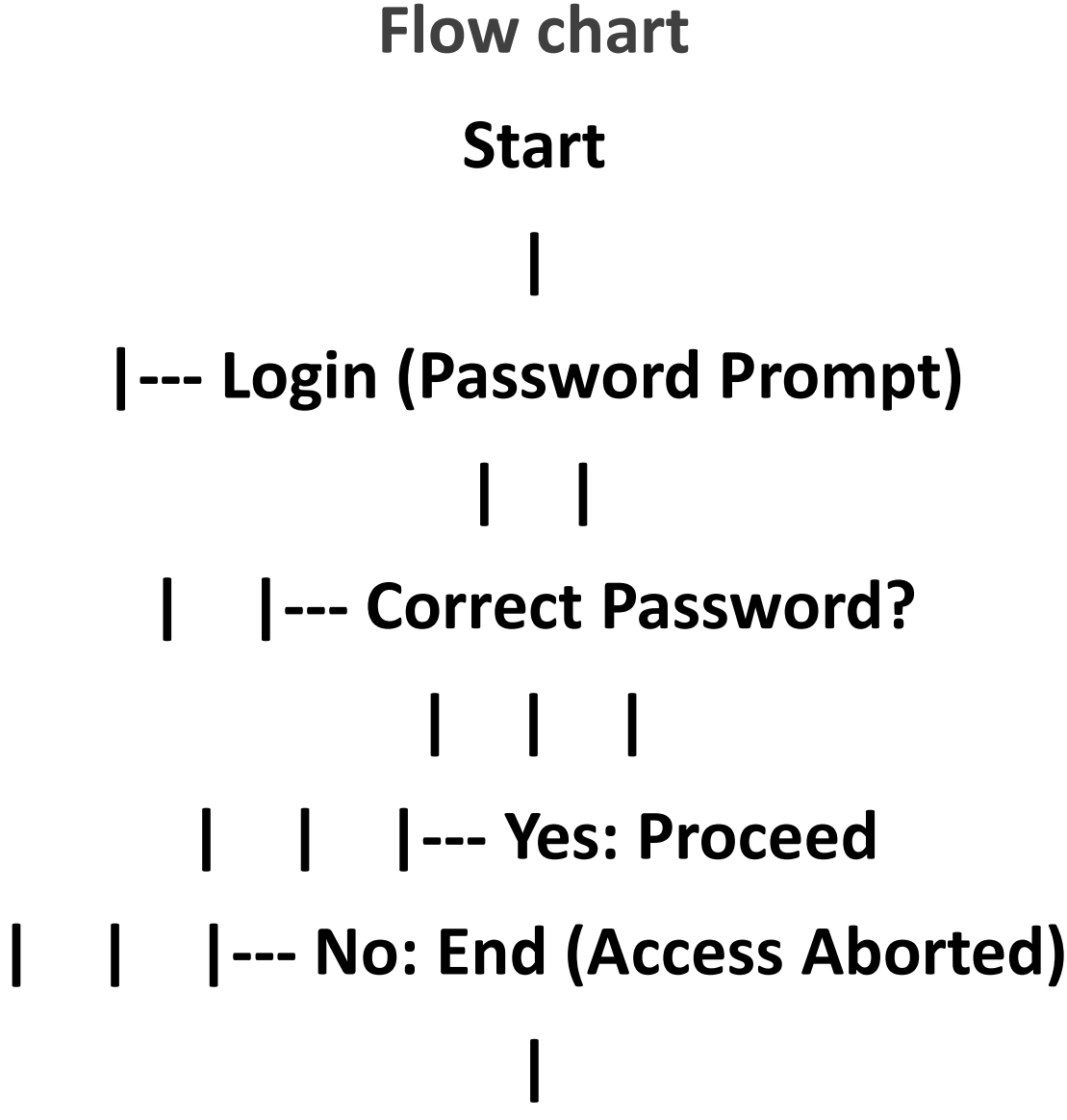
To run this car rental system with C++ project, you must have the following prerequisites.

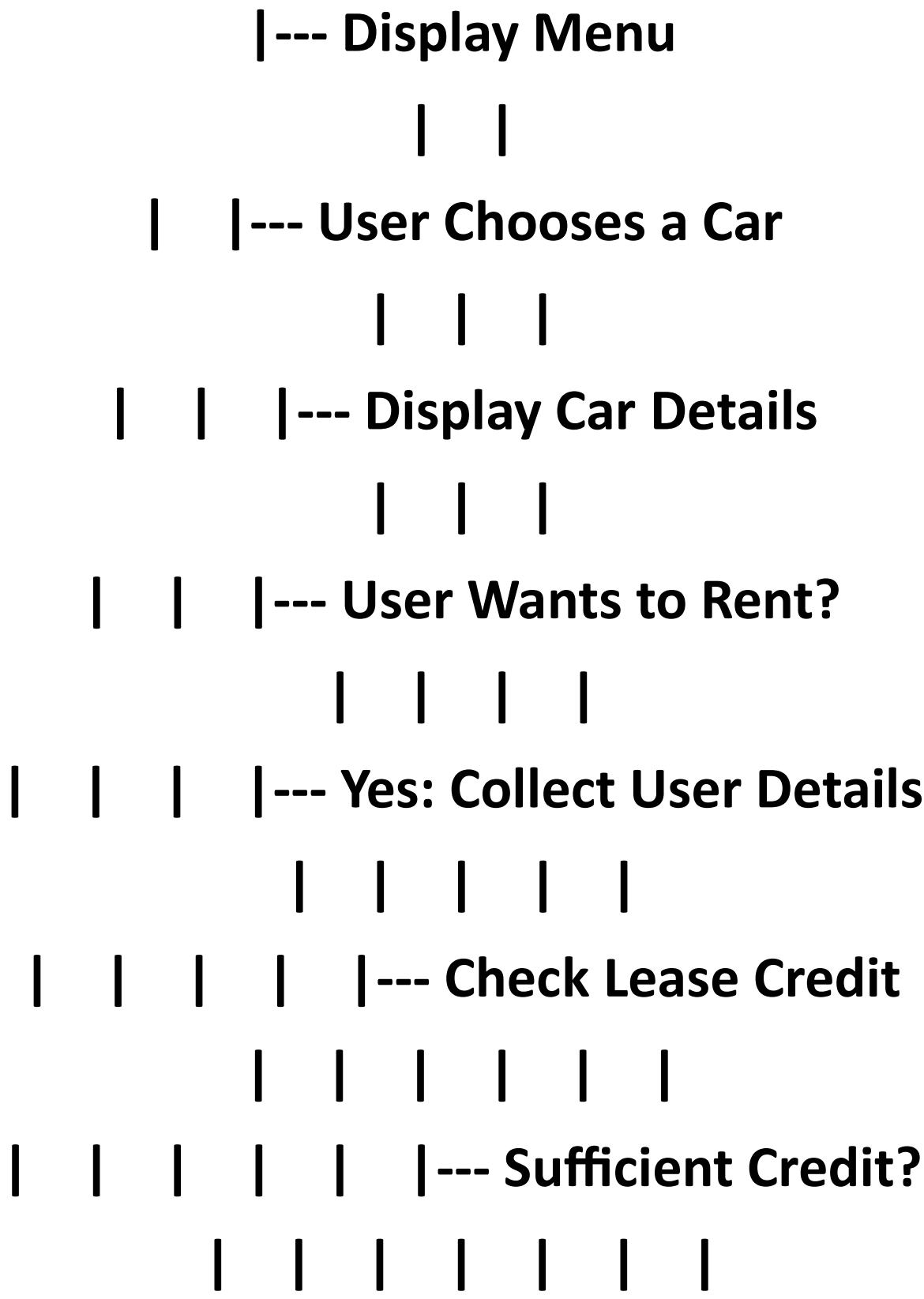
1. Basic knowledge of C++ programming concepts

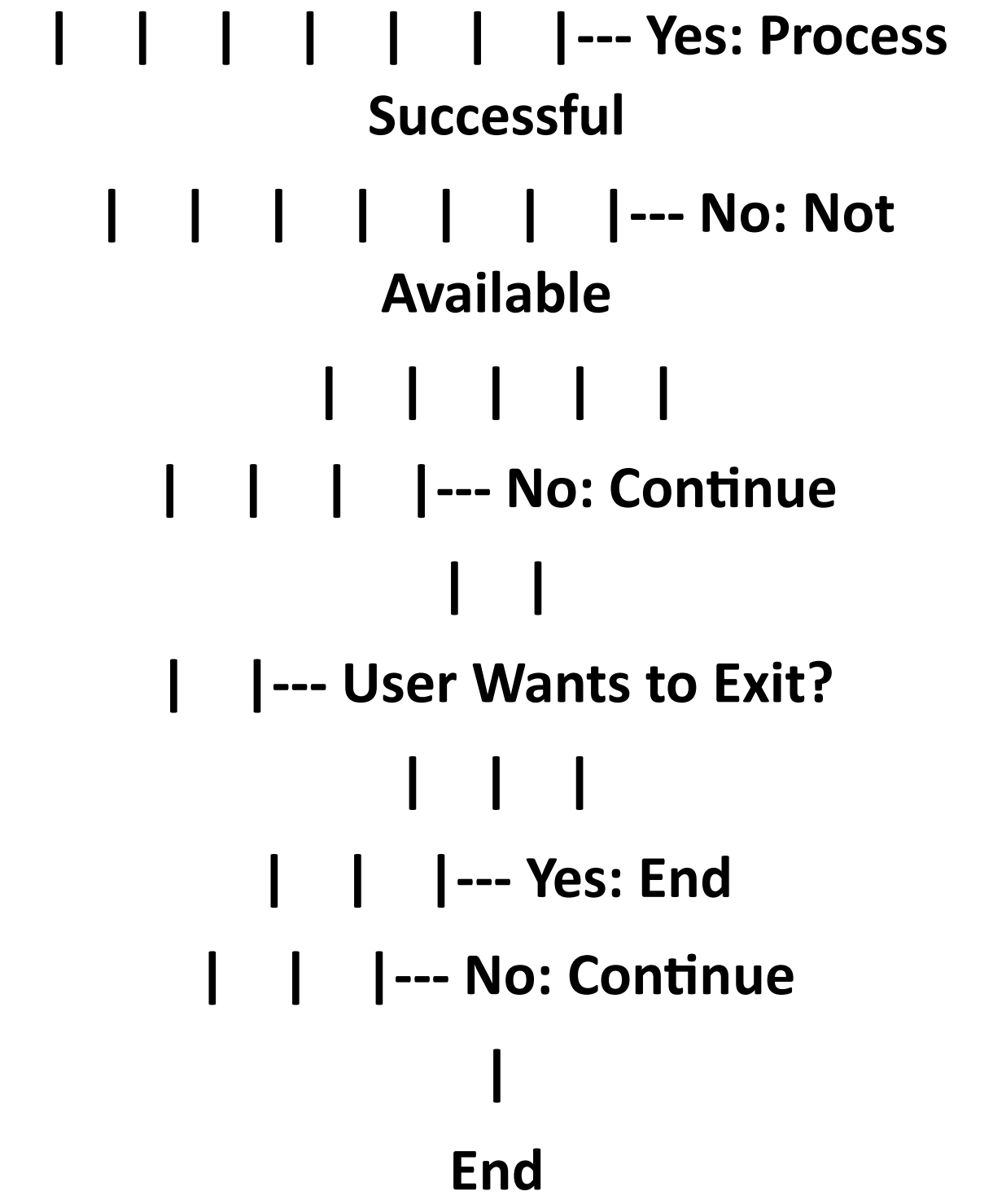
2. IDE for running and compiling the C++ source code: Dev C++, Code Blocks, or VS code is recommended for a better experience.

3. Windows 10 operating system (or any latest version)

Flow chart




|--- Display Menu
| |
| |--- User Chooses a Car
| | |
| | |--- Display Car Details
| | |
| | |--- User Wants to Rent?
| | | |
| | | |--- Yes: Collect User Details
| | | | |
| | | | |--- Check Lease Credit
| | | | | |
| | | | | |--- Sufficient Credit?
| | | | | | |



MAIN CODE

```
#include <iostream>
#include <conio.h>
```

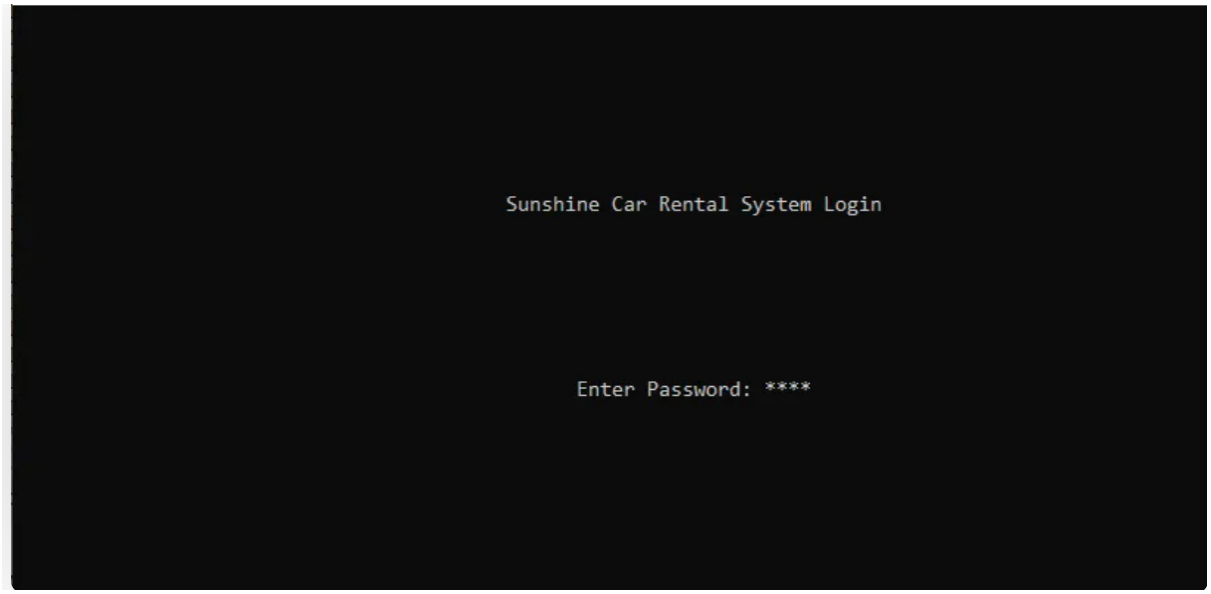
```
#include <stdlib.h>
using namespace std;

struct Cars {

    string company[200]= {"Maruti
Suzuki","Volkswagun","BMW","Audi","KIA","Tesla","Mercedes","Mahindra","TATA"};

    string model[200]= {"800","2020","Q7","R8","Saltos","S-
Series","Benz","Thar","Nano"};

    string
color[200]={"Yellow","Black","Red","Brown","Blue","Silver","Balck","Grey","Red
"};

    string max_speed[200]={"80 Km/h ","200 Km/h","300 Km/h","250 Km/h","320
Km/h","400 Km/h","200 Km/h","250 Km/h","280 Km/h"};

    int price[100]={10000,20000,50000,40000,50000,50000,20000,20000,20000};

    int date [100] = {2020,2012,2019,2018,2017,2016,2015,2021,2010};
   }car;

  struct Lease_info{

   string Name[100];
   string Natio_ID[100];
   int payment_acc[100] ;
   }lease;


//First output
   void Menu ()
{
    int num=1;
  for(int i=0 ;i<9;++i)
{
    cout<<"\t\t\t";
    cout<<"Enter "<<num<<"\t- To Select  "<<car.company[i]<<endl;
    num++ ;
}

}

//Second output
void Details (int Choice)
  {
   system("CLS");
   cout<<"\n\n\n\t\t\t----------------------------\n";
```

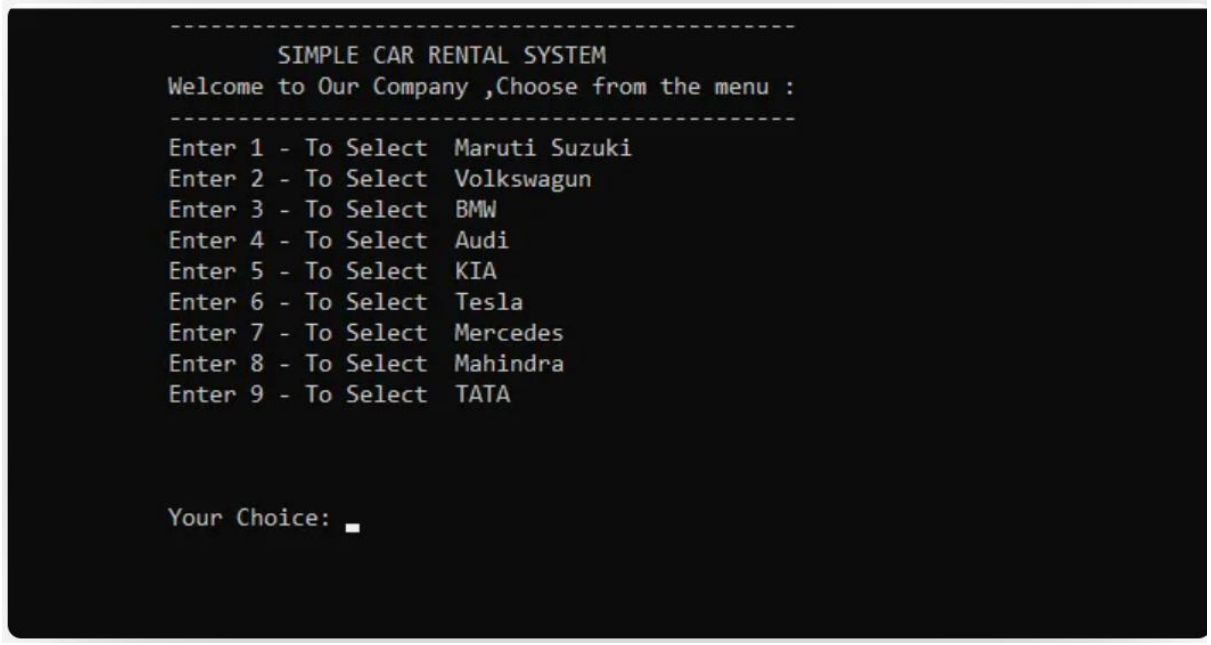
```
     cout<<"\t\t\tYou Have Selected - "<<car.company[Choice-1]<<endl;
     cout<<"\t\t\t----------------------------\n\n\n";
     cout<<"\t\t\tModel : "<<car.model[Choice-1]<<endl;
     cout<<"\t\t\tColor : "<<car.color[Choice-1]<<endl;
     cout<<"\t\t\tMaximum Speed : "<<car.max_speed[Choice-1]<<endl;
     cout<<"\t\t\tPrice : "<<car.price[Choice-1]<<endl;


  }
   //check lease credit

   void checklease (int k )
  {
      if(lease.payment_acc[k]>=car.price[k])
           cout<<"\n\n\n\t\t\tProcess has been done successfully!! "<<endl;
           else
              cout<<"\n\n\n\t\t\tNot Available "<<endl;

  }
//User Inputcpo
  void user_input (int theChoice)
   {
   system("CLS");
   int i;
        int j=theChoice-1 ;
       cout<<"\t\t\t---------------------------------------\n";
       cout<<"\t\t\tPlease Provide Your Personal Details  : \n";
       cout<<"\t\t\t---------------------------------------\n\n";
       cout<<"\n\tNOTE: PROVIDE FIRST NAME ONLY, DONOT ENTER SPACE WHILE
PROVIDING NAME,\n\tPAYMENT WON'T PROCEED IF THE GIVEN AMOUNT IS LESS THEN THE
RATE OF CAR\n\n\n\n";
       cout<<"\t\t\tEnter Your Name : ";
       cin>>lease.Name[100];
       cout<<"\t\t\tEnter Your National ID : ";
       cin>>lease.Natio_ID[j] ;
       cout<<"\t\t\tPayment Amount: " ;
       cin>>lease.payment_acc[j] ;


     checklease( j ) ;
   }


int main()
{
int login();
    login();

     string decide ="yes" ;
```

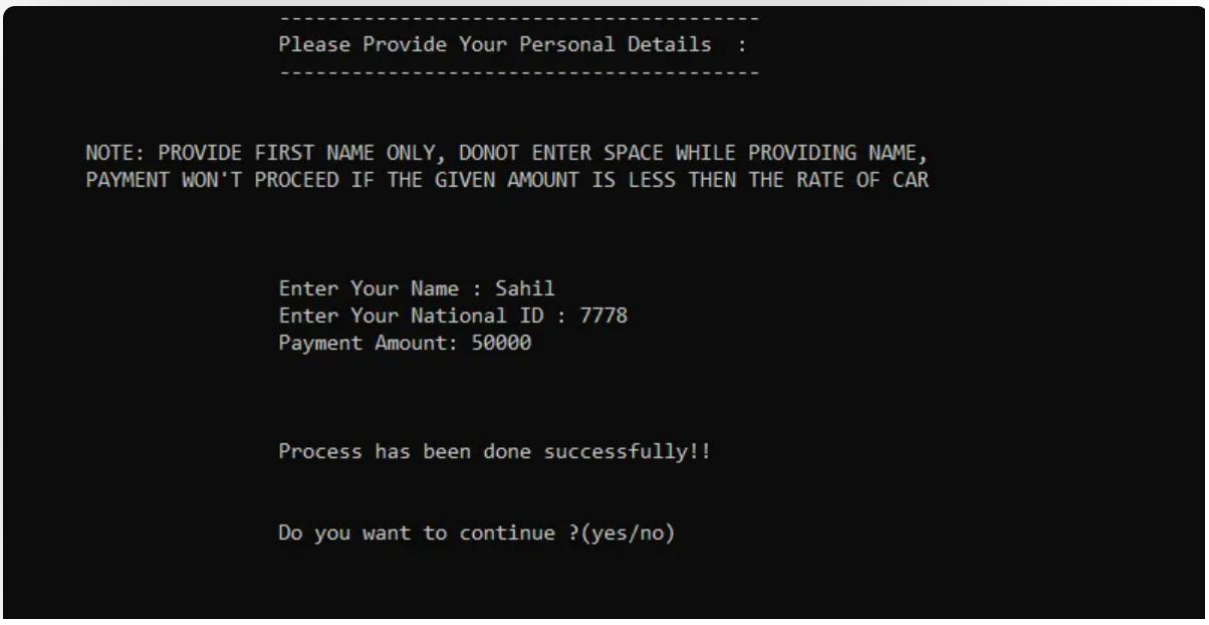
```
     cout<<"\t\t\t-----------------------------------------------\n";
     cout<<"\t\t\t\tSIMPLE CAR RENTAL SYSTEM \n";
     cout<<"\t\t\tWelcome to Our Company ,Choose from the menu : "<<endl;
     cout<<"\t\t\t-----------------------------------------------\n";
     while(decide!="exit")
     {
         Menu();
     cout<<"\n\n\n\t\t\tYour Choice: ";
     int theChoice ;
     cin>>theChoice ;
     Details(theChoice);
     cout<<"\n\n\n\t\t\tAre You Sure, you want to rent this Car? (yes /no
/exit ) : ";
     cin>>decide ;
     if(decide=="yes") {
        user_input(theChoice);
        cout<<"\n\n\t\t\tDo you want to continue ?(yes/no) ";
        cin>>decide;
        if (decide=="no") break ;
system("CLS");
     }

   else {
      if(decide=="no")
      {
       system("CLS");
          continue ;
      }
     else if  (decide=="exit")
     {
     system("CLS");

         break ;
     }

   }
     }

    getch();
    return 0;
}
//cpo
int login(){
   string pass ="";
   char ch;
   cout <<"\n\n\n\n\n\n\n\t\t\t\t\t  Sunshine Car Rental System Login";
   cout <<"\n\n\n\n\n\n\n\t\t\t\t\tEnter Password: ";
   ch = _getch();
```

```
   while(ch != 13){//character 13 is enter
      pass.push_back(ch);
      cout<<'*';
      ch = _getch();
   }
   if(pass == "pass"){
      cout <<"\n\n\n\n\t\t\t\t\t  Access Granted! Welcome To Our System \n\n";
      system("PAUSE");
      system("CLS");

   }else{
      cout <<"\n\n\n\n\t\t\t\t\tAccess Aborted...Please Try Again!!\n";
      system("PAUSE");
      system("CLS");
      login();
   }
}
```

OUTPUT




SIMPLE CAR RENTAL SYSTEM
Welcome to Our Company ,Choose from the menu :
Enter 1 - To Select Maruti Suzuki
Enter 2 - To Select Volkswagun
Enter 3 - To Select BMW
Enter 4 - To Select Audi
Enter 5 - To Select KIA
Enter 6 - To Select Tesla
Enter 7 - To Select Mercedes
Enter 8 - To Select Mahindra
Enter 9 - To Select TATA
Your Choice:


Please Provide Your Personal Details :
NOTE: PROVIDE FIRST NAME ONLY, DONOT ENTER SPACE WHILE PROVIDING NAME,
PAYMENT WON'T PROCEED IF THE GIVEN AMOUNT IS LESS THEN THE RATE OF CAR
Enter Your Name : Sahil
Enter Your National ID : 7778
Payment Amount: 50000
Process has been done successfully!!
Do you want to continue ?(yes/no)

CONCLUSION

We have successfully built a Car Rental System with C++. Through this system interface, we can access various cars which we desire to rent and can even choose them on the basis of color, model, rental payment, etc. This is a very simple, automated, and convenient system that helps the user to access numerous cars for rent as per need. This car rental system with C++ has the following functionalities

- To provide online service to customers at their convenience.
- To lessen human error
- Providing high security and making data handling easy
- Generating data backup is easy
- Keeps record properly and safely
- Helps to rent a car anytime and anywhere
- Provides transparency to the system