Topic : Online Cab and Taxi Reservation

Group no : Y1_S2_22_MTR_01

Campus : Matara

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We declare that this is our own work, and this Assignment does not incorporate without acknowledgment any material previously submitted by anyone else in SLIIT or any other university/Institute. And we declare that each one of us equally contributed to the completion of this Assignment.

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Requirements

- There are two types of customers. They are registered customer and unregistered customer.
- Unregistered customers are only allowed to book a cab.
- Registered customers have access to the entire system
- A registered customer can view and update their profiles after logging in
- The unregistered customer can register with the system by providing his details (name, id, password, email, username…). This allows you to create a new account only if the password is valid. Customer can also cancel the registration if he wants to.
- The registered customer can login to the system using the username and password. After that the system check password is valid or not. finally customer can logout the system.
- The administrator also can add drivers to the system or remove drivers from the system and update driver's details (Id, login credentials).
- Customer can request for a reservation through the system.
- A customer can reserve a booking for any occasion from variety of vehicle.
- When a customer creates a reservation, they can make booking according to their requirements. (Terms and conditions applied).
- A Customer should choose the package, location and date and time for the reservation request
- A customer can make a reservation or cancel a reservation, choose the type of the vehicle, and make payments.
- Customer can receive refunds when cancelled the reservation or ticket. (Terms and conditions applied).
- A Customer should provide their name, address, telephone number and register in the system when confirming the reservation.
- the customer must complete the payment when confirming the reservation.
- the payment made by the registered customer can qualify for a discount.
- customer can make the payment through any mode such as credit card, debit card etc.
- A driver can search for a ride and accept any ride through the map.
- The driver should have the ability to accept a ride and cancel a ride.

- Once the payment has been confirmed, the driver can finish the journey.
- The client review page should be visible to the driver.
- The opportunity to provide comments on the system should also be available to drivers.
- The drivers can change their login credentials.
- Drivers should be able to send in a request form to change information about their vehicle.
- Admin can issue a referral code for their newly added drivers and let them register themselves as driver using the code.
- Admin can make a payment for the driver and receive payments.
- Admin can add new service types for the system and remove services they provide.
- Customer can give the feedback regarding the quality of the service.
- A news section will show the latest partnerships and our latest achievements.

CRC cards

Registered customer	
Responsibility	**Collaborators**
Book a cab	Booking
Give feedback	Feedback

Unregistered customer	
Responsibility	**Collaborators**
Book a cab	Booking

Driver	
Responsibility	**Collaborators**
Search bookings	Booking
Accept ride	
Cancel ride	
Search vehicle details	Vehicle

Booking	
Responsibility	**Collaborators**
Keep booking details	
Assign customer details	Registered User
Assign payment details	Payment
Make cancel booking	Cancel Booking
Assign drivers' details	Driver

Vehicle	
Responsibility	**Collaborators**
Keep vehicle details	
Assign drivers' details	Driver

Cancel booking	
Responsibility	**Collaborators**
Keep cancel booking details	
Keep booking details	Booking

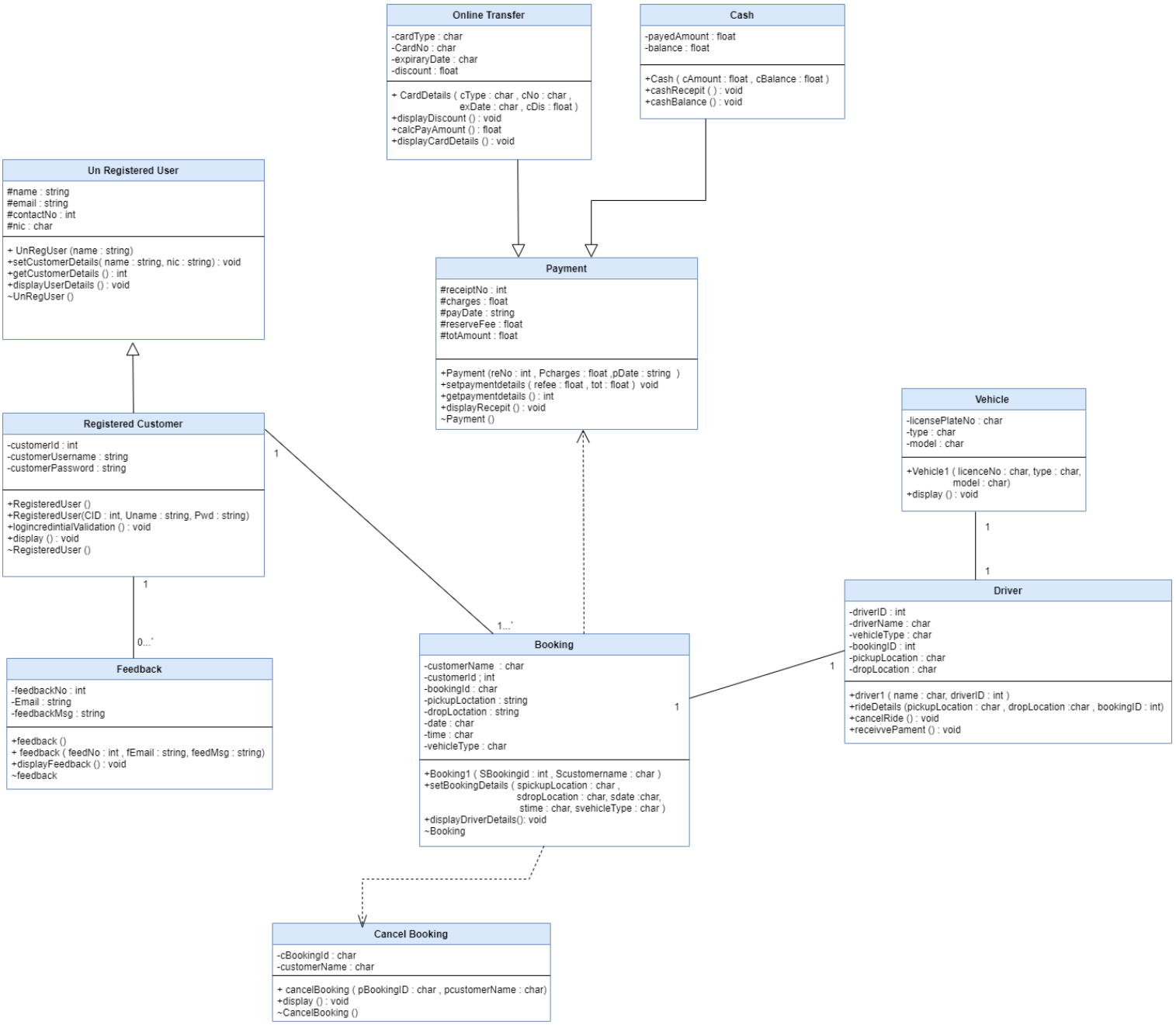
Payments	
Responsibility	**Collaborators**
Check the balance	
Assign online transaction details	Online transfer
Assign online transaction details	Cash
Assign booking details	Booking
Confirm the transaction	

Online transfer	
Responsibility	**Collaborators**
Keep online transfer details	
Check payment process	Payment

Cash	
Responsibility	**Collaborators**
Keep cash details	
Check payment process	Payment

Feedback	
Responsibility	**Collaborators**
Keep feedback details	
Assign customer details	Registered User

UML Diagram


Online Transfer
-cardType : char
-CardNo : char
-expiraryDate : char
-discount : float
+ CardDetails (cType : char , cNo : char , exDate : char , cDis : float)
+displayDiscount () : void
+calcPayAmount () : float
+displayCardDetails () : void
Cash
-payedAmount : float
-balance : float
+Cash (cAmount : float , cBalance : float)
+cashRecepit ( ) : void
+cashBalance () : void
Un Registered User
#name : string
#email : string
#contactNo : int
#nic : char
+ UnRegUser (name : string)
+setCustomerDetails(name : string, nic : string) : void
+getCustomerDetails () : int
+displayUserDetails () : void
~UnRegUser ()
Payment
#receiptNo : int
#charges : float
#payDate : string
#reserveFee : float
#totAmount : float
+Payment (reNo : int , Pcharges : float ,pDate : string)
+setpaymentdetails (refee : float , tot : float) void
+getpaymentdetails () : int
+displayRecepit () : void
~Payment ()
Registered Customer
-customerId : int
-customerUsername : string
-customerPassword : string
+RegisteredUser ()
+RegisteredUser(CID : int, Uname : string, Pwd : string)
+logincredintialValidation () : void
+display () : void
~RegisteredUser ()
Vehicle
-licensePlateNo : char
-type : char
-model : char
+Vehicle1 (licenceNo : char, type : char, model : char)
+display () : void
Driver
-driverID : int
-driverName : char
-vehicleType : char
-bookingID : int
-pickupLocation : char
-dropLocation : char
+driver1 (name : char, driverID : int)
+rideDetails (pickupLocation : char , dropLocation :char , bookingID : int)
+cancelRide () : void
+receivvePament () : void
Booking
-customerName : char
-customerId ; int
-bookingId : char
-pickupLoctation : string
-dropLoctation : string
-date : char
-time : char
-vehicleType : char
+Booking1 (SBookingid : int , Scustomername : char)
+setBookingDetails (spickupLocation : char , sdropLocation : char, sdate :char, stime : char, svehicleType : char)
+displayDriverDetails(): void
~Booking
Feedback
-feedbackNo : int
-Email : string
-feedbackMsg : string
+feedback ()
+ feedback (feedNo : int , fEmail : string, feedMsg : string)
+displayFeedback () : void
~feedback
Cancel Booking
-cBookingId : char
-customerName : char
+ cancelBooking (pBookingID : char , pcustomerName : char)
+display () : void
~CancelBooking ()
1
1...*
0...*
1
1
1
1

Code

Unregistered User

```
#include <iostream>
#include <cstring>

using namespace std;

//UnRegisteredUser.h

class UnRegisteredUser {

protected:

	string name;
	string email;
	int contactNo;
	string nIC;


public:

	UnRegisteredUser(string uname);
	void setCustomerDetails(string uname, string nic);
	int getCustomerDetails();
	void displayUserDetails();
	~UnRegisteredUser();


};

//UnRegisteredUser.cpp

UnRegisteredUser::UnRegisteredUser(string uname)
{
	name = uname;
}

void UnRegisteredUser::setCustomerDetails(string uname, string nic)
{

}

int UnRegisteredUser::getCustomerDetails()
{

}

void UnRegisteredUser::displayUserDetails()
{

}

UnRegisteredUser :: ~UnRegisteredUser()
{

}
```

Registered User

```
#include<iostream>
#include"cstring"
using namespace std;

//call Registered User
class RegisteredUser : public UnregisteredUser
{
private:
	//class relationship
	Booking* booking[SIZE];
	Feedback* feedback[SIZE];

	int customerId;
	char customerUsername[10];
	char customerPassword[10];

public:
	RegisteredUser();
	RegisteredUser(int CID, const char Uname[], const char Pwd[]);
	void addBooking(Booking* B);
	void addFeedback(Feedback* F);
	void logincredintialValidation();
	void display();
	~RegisteredUser();
};

//methods of Registered User
RegisteredUser::RegisteredUser()
{
	customerId = 0;
	strcpy_s(customerUsername, "");
	strcpy_s(customerPassword, "");
}

RegisteredUser::RegisteredUser(int CID, const char Uname[], const char
Pwd[],const char Cname[],const char Cemail[],const char Cnic,int Cno)
	: UnregisteredUser(Cname,Cemail,Cnic,Cno)
{
	customerId = CID;
	strcpy_s(customerUsername, Uname);
	strcpy_s(customerPassword, Pwd);
	strcpy_s(name, Cname);
	strcpy_s(email, Cemail);
	strcpy_s(nic, Cnic);
	contactNo = Cno;
}

void RegisteredUser::logincredintialValidation()
{

}

void RegisteredUser::addFeedback(Feedback* F)
{

}

void RegisteredUser::addBooking(Booking* B)
{
```

```
}

void RegisteredUser::display()
{
	cout << "Customer ID = " << customerId << endl;
	cout << "Customer name = " << name << endl;
	cout << "Customer email = " << email << endl;
	cout << "Customer contact number = " << contactNo << endl;
	cout << "Customer NIC number = " << nic << endl;
}

RegisteredUser::~RegisteredUser()
{
	cout << "Delete Registerd User details!!!" << endl;
}
```

Feedback

```
#include<iostream>
#include"cstring"
using namespace std;

//call Feedback
class Feedback
{
private:
	int feedbackNo;
	char Email[20];
	char feedbackMsg[300];
	RegisteredUser* RegUser;
public:
	Feedback();
	Feedback(int feedNo, const char fEmail[], const char feedMsg[],
RegisteredUser* Rus);
	void displayFeedback();
	~Feedback();
};

//methods of Feedback
Feedback::Feedback()
{
	feedbackNo = 0;
	strcpy_s(Email, "");
	strcpy_s(feedbackMsg, "");
}

Feedback::Feedback(int feedNo, const char fEmail[], const char feedMsg[],
RegisteredUser* Rus)
{
	feedbackNo = feedNo;
	strcpy_s(Email, fEmail);
	strcpy_s(feedbackMsg, feedMsg);
	RegUser = Rus;
	RegUser->addfeedback(this);
}

void Feedback::displayFeedback()
{
	cout << "Feedback No = " << feedbackNo << endl;
	cout << "Email = " << Email << endl;
	cout << "Message = " << feedbackMsg << endl;
}

Feedback::~Feedback()
{
	cout << "Delete Feedback!!!" << endl;
}
```

Booking

```
#include <iostream>

#include<cstring>

using namespace std;

class Booking
{
private:

    char customerName[20];
      int custermerid;
      int  bookingid;
      char pickupLocation[20];
      char dropLocation[20];
      char date[20];
      char time[20];
      char vehicleType[20];

public:

      int Booking1(int SBookingid,const char ScustomerName[]);

      void setBookingDetails( const char spickupLocation[], const char
sdropLocation[], const char sdate[],const char stime[], const  char
svehicleType[]);

      void displayDriverDetails();

};

int Booking::Booking1(int SBookingid, const char ScustomerName[])
{
      strcpy_s(customerName,ScustomerName);
      bookingid = SBookingid;

      return bookingid;
}
void Booking::setBookingDetails(const char spickupLocation[], const char
sdropLocation[], const char sdate[],const char stime[], const  char
svehicleType[])
{
      strcpy_s(pickupLocation,spickupLocation);

      strcpy_s(dropLocation, sdropLocation);

      strcpy_s(date, sdate);

      strcpy_s(time, stime);

      strcpy_s(vehicleType, svehicleType);

      cout << " -------------------------" << endl;
      cout << "Pickup Location  : " << pickupLocation << endl;
      cout << "Drop Location    : " << dropLocation << endl;
      cout << "Date             : " << date << endl;
      cout << "time             : " << time << endl;
      cout << "Vehicle type     : " << vehicleType << endl;
      cout << " -------------------------" << endl;
}
```

Cancel Booking

```
#include<iostream>
#include<cstring>

using namespace std;

class CancelBooking
{
private:
	char cBookingID[20];
	char customerName[20];

public:
	int cancelBooking(const char pBookingID[], const char pcustomerName[]);
	void display();



};


int CancelBooking::cancelBooking(const char pBookingID[], const char
pcustomerName[])
{
	strcpy_s(customerName, pcustomerName);
	strcpy_s(cBookingID, pBookingID);
	return 0;

}
void CancelBooking::display()
{
	cout << endl;
	cout << "   Book ID          : " << cBookingID << endl;
	cout << "   Customer Name    : " << customerName << endl;

	cout << endl;
	cout << "---------- Canseled Book Now --------" << endl;



}
```

Payment

```
#include <iostream>
#include <cstring>

using namespace std;

//Payment.h
class Payment {

protected:

	int teceiptNo;
	float charges;
	string payDate;
	float reserveFee;
	float totAmount;


public:

	Payment(int reNo, float pcharges, string pDate);
	void setPaymentDetails(float reFee, float tot);
	int getPaymentDetails();
	void displayPayDetails();
	~payment();


};


//Payment.cpp

Payment::Payment(int reNo, float pcharges, string pDate)
{
	receiptNo = reNo;
	charges = pcharges;
	payDate = pDate;

}

void Payment::setPaymentDetails(float reFee, float tot)
{

}

int Payment::getPaymentDetails()
{

}

void Payment::displayPayDetails()
{

}

Payment :: ~payment()
{

}
```

Online transfer

```
#include <iostream>

#include<cstring>

using namespace std;

class OnlineTransfer
{
private:
	char cardType[20];
	char cardNo[20];
	char expiraryDate[20];
	float discount;

public:
	int CardDetails(const char cType[], const char cNo[], const char exDate[],
float cDis);

	void displayDiscount();
	void calcPayAmount();
	void displayCardDeatails();


};


int OnlineTransfer::CardDetails(const char cType[], const char cNo[], const char
exDate[], float cDis)

{
		strcpy_s(cardType,cType);

		strcpy_s(cardNo, cNo);

		strcpy_s(expiraryDate, exDate);

		discount = cDis;

		return discount;

 }

void OnlineTransfer:: displayDiscount()
{

}

void OnlineTransfer::calcPayAmount()
{

}

void OnlineTransfer::displayCardDeatails()
{
	cout <<"-----------------------------------" << endl;

	cout << endl;

	cout <<"Card Type     : " << cardType << endl;
```

```
        cout << "Card Number   : " << cardNo << endl;
        cout << "Expiry  Date  : " << expiraryDate << endl;
        cout << "Discount      : Rs." << discount << endl;
        cout << endl;
        cout << "**********************************" << endl;
}
```

Cash

```
#include<iostream>

using namespace std;

class Cash
{
private:

	float payedAmount;
	float balance;

public:

	float Cash1(float cAmount,float cbalance);
	void cashRecept();
	void cashBalance();

};



float Cash::Cash1(float cAmount,float cBalance)
{
	balance = cBalance - cAmount;

	return balance;
}

void Cash::cashRecept()
{

}
void Cash::cashBalance()
{

}
```

Driver

```
#include <iostream>

#include<cstring>

using namespace std;

class driver
{
private:

	int driverID;
	char driverName[15];
	char vehicleType[15];
	int bookingID;
	char pickupLocation[15];
	char dropLocation[15];

public:

	int driver1(const char name[], int driverID);

	int rideDetails(const char pickupLocation[],const char dropLocation[], int
bookingID);

	void cancelRide();

	void recievePayment();
};

using namespace std;


int driver::driver1(const char Sname[], int SdriverID)
{
	strcpy_s(driverName, Sname);
	driverID = SdriverID;

	return driverID;
}

int driver::rideDetails(const char SpickupLocation[], const char SdropLocation[],
int SbookingID)
{
	strcpy_s(pickupLocation, SpickupLocation);

	strcpy_s(dropLocation, SdropLocation);

	bookingID = SbookingID;

	return bookingID;

}

void driver::cancelRide()
{

}


void driver::recievePayment()
```

```
{
	cout << "-------------------------------------" << endl;
	cout << "  Pickup Location :     " << pickupLocation << endl;
	cout << "  Drop Location   :     " << dropLocation << endl;
	cout << "  Booking ID      :     " << bookingID << endl;
	cout << "-------------------------------------" << endl;
}
```

Vehicle

```
#include <iostream>

#include<cstring>

using namespace std;

class Vehicle
{
private:

	char licensePlateNo[20];
	char type[20];
	char model[20];

public:

	int Vehicle1(const char  licenseNo[], const char type[], const char
model[]);
	void display();


};


int Vehicle::Vehicle1(const char licenseNo[], const char ptype[], const char
pmodel[])
{
	strcpy_s(type, ptype);
	strcpy_s(licensePlateNo, licenseNo);
	strcpy_s(model, pmodel);

	return 0;
}

void Vehicle::display()
{
	cout << "******************************" << endl;
	cout << "License plate no  : " << licensePlateNo << endl;
	cout << "Type              : " << type << endl;
	cout << "Model             : " << model << endl;


}
```

Main Programme

```
int main() {

	UnRegisteredUser* nUser;
	nUser = new UnRegisteredUser("Kamal");//create unreguser object
	nUser->setCustomerDetails("Kamal", "200145630V");//set details to
attributes
	nUser->displayUserDetails();//display details

-------------------------------------------------------------
	RegisteredUser* Ruser;
	Ruser = new RegisteredUser(001, "Shakya123", "258964*SKY", "Shakya
Abiman", "shakya123@gmail.com", "200014789652V", 94716425783);
	Ruser->display();

	delete Ruser;

-------------------------------------------------------------
	Feedback* feedB;
	feedB = new Feedback(101, "shakya123@gmail.com", "I am very happy about
the service");
	feedB->displayFeedback();

	delete feedB;
-------------------------------------------------------------
	Booking book;

	book.Booking1(123, "Hasiru");

	book.setBookingDetails("Matara", "Galle", "2022/06/05", "6.34", "van");

-------------------------------------------------------------
	CancelBooking CB;

	CB.cancelBooking("1234", "Kasun");
	CB.display();

-------------------------------------------------------------
Payment* newpay;
newpay = new Payment(05, 5000.00, "Monday");//create payment object
newpay->setPaymentDetails(4000.00, 3500.00);//set details to attributes
newpay->displayPayDetails();//display details
-------------------------------------------------------------
	OnlineTransfer onf;

	onf.CardDetails("Debit","1234 6598 5632 5478", "27/04", 540.0);

	onf.displayDiscount();

	onf.calcPayAmount();

	onf.displayCardDeatails();

-------------------------------------------------------------
	float Cash1(500);
	void cashRecept();
	void cashBalance();

-------------------------------------------------------------
```

```
driver dr1;

    dr1.driver1("Wimal", 123);

    dr1.rideDetails("Colombo", "Kottawa", 123);

    dr1.recievePayment();

-------------------------------------------------------------
       Vehicle Vh;

    Vh.Vehicle1("CAB-5465", "Car", "2015");
       Vh.display();

-------------------------------------------------------------
       return 0;

}
```

Individual Contribution

	Student ID	Student Name	Individual Contribution
1	IT21216800	Kavindya J.P.D	✓ Unregistered User ✓ Payment
2	IT21204234	Kasiwaththa K.K.J.S	✓ Booking ✓ Cancel Booking
3	IT21260506	Ranaweera W.W	✓ Driver ✓ Vehicle
4	IT21205088	Liyanage D.P.K.D	✓ Online transfer ✓ Cash
5	IT21291364	Rashen W.G.M	✓ Registered User ✓ Feedback