



AMERICAN INTERNATIONAL UNIVERSITY–BANGLADESH (AIUB)

Dept. of Computer Science
Faculty of Science and Technology

CSC2210: OBJECT ORIENTED PROGRAMMING 2

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Section: *K*

Group No: 03

Project Report On *Car Shop Management System*

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CO2: Display and verify the mean of a real-life Project using the concepts of C# Graphical User Interface based environment with database integration to depict a desktop-based application.

Assessment Criteria	Not Attended/ Incorrect (0)	Inadequate (1-2)	Average (3)	Good (4)	Excellent (5)
Evaluation Criteria	Evaluation Definition				Total =
Requirement fulfillment	Properly demonstrate a real-life scenario-based project with proper functional requirement identification for the Object-Oriented Programming project development activities.				
Validation	Ensuring the ability of students' proper demonstration on validation forms in their system in terms of dealing with the data.				
Verification	Identifying if the students can verify the system data along with proper functional requirements in terms of data flow.				

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Chapter: 01 (Introduction)

The **Car Shop Management System** is a computer-based application that helps a car showroom run its business more smoothly. It allows customers to sign up, log in, see the available cars, and place orders. After a customer orders a car, the manager can handle the payment. Customers can also check their order history and payment status. Admins have full control over the system. They can add or remove managers, view customer and manager details, manage car information, and check all orders and payments. The system helps keep everything organized and saves time by reducing manual work.

Key features of the system include:

- **User Management** for Admins, Managers, and Customers.
- **Car Browsing and Ordering** for customers to explore and order cars.
- **Order and Payment Tracking** to keep records of orders and payments.
- **Manager Panel** to handle customer orders and payments.
- **Sales Report** to view monthly business performance.

The system is built using C# and SQL Server. It uses a well-organized database that keeps all the information safe, accurate, and easy to find. This system makes it easier for the car shop to provide fast and reliable service to its users.

Chapter: 02 (User Story)

As a Customer,

I want to **register and log in**,

So that I can securely access the system and use its features.

- The system stores my information in the UserInfo table.
- The system matches the Email and Password from UserInfo table while login.

As a Customer,

I want to **browse and search for my desired cars**,

So that I can view cars with different specifications and choose the one I prefer.

- The system shows the list of cars where the car status = 'Available'.
- Car details are fetched from Car, Color and Brand table.

As a Customer,

I want to place an order for a car,

So that I can proceed with purchasing my desired car.

- The system stores my order details in the Order table.
- Order status is initially marked as Pending.

As a Customer,

I want to view my order list and payment status,

So that I can track or cancel what I've ordered and how much I've paid or still owe.

- The system displays order entries for my userID from the Order table.
- Order details are fetched from Order, UserInfo and Car table.

As a Customer,

I want to update or edit my profile,

So that I can keep my personal information accurate and up to date.

- I can update my information in the UserInfo table.

As a Manager,

I want to view customer orders,

So that I can manage and process them efficiently.

- The system displays all the order entries made by the customers.
- I can update the status field in the Order table to either 'Delivered' or 'Cancelled'.

As a Manager,

I want to record payments made by customers,

So that payment records are accurately reflected in the system.

- I insert payment records into the payment table with references to the orderID and my managerID.

As a Manager,

I want to edit my profile information,

So that I can maintain accurate contact and identification details.

- I can update my information in the UserInfo table.

As an Admin,

I want to manage managers,

So that I can control and manage access to managerial features.

- I can perform CRUD operations on UserInfo table.

As an Admin,

I want to view customer and manager details,

So that I can monitor system usage and manage user accounts.

- I can view the UserInfo table containing all the users like customers and managers.

As an Admin,

I want to view all order lists,

So that I can oversee order activities and track sales performance.

- I can monitor the order list and handle the orders if needed.

As an Admin,

I want to manage cars and update car information,

So that the catalog remains accurate and appealing to customers.

- I can perform CRUD operation on Car, Color and Brand table.

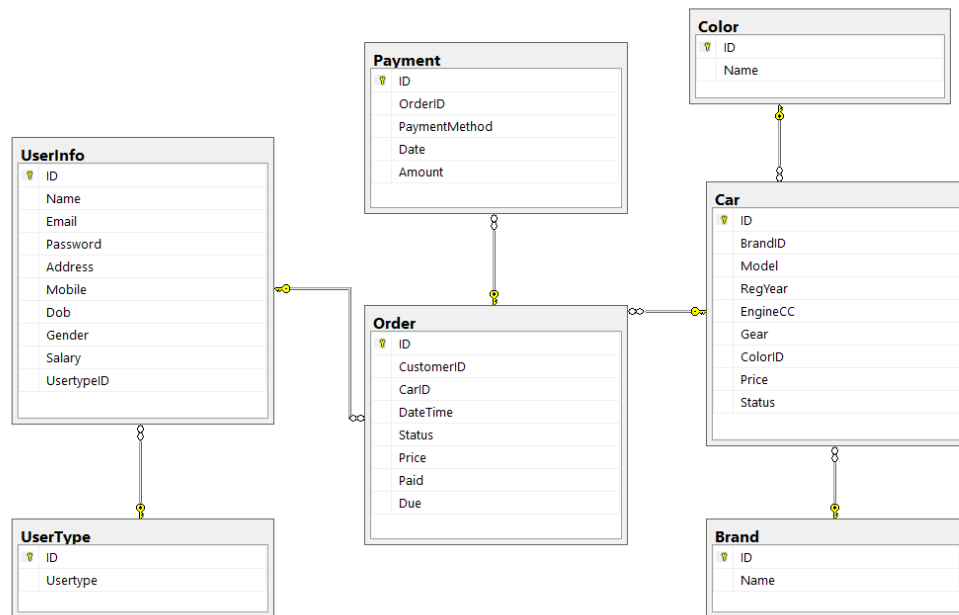
As an Admin,

I want to see the sales report,

So that I can evaluate business performance and make informed decisions.

- I can monitor the monthly sales records and the business performance.

Chapter: 03 (ER Diagram)



Chapter: 03 (SQL Queries)

1. INSERT INTO UserInfo (Name, Email, [Password], [Address], Mobile, Dob, Gender, UsertypeID) VALUES ('Rahim', 'rahim@gmail.com', '336a', 'Badda', 17345678541, '2000-02-01', 'Male', 2);
2. INSERT INTO UserInfo (Name, Email, [Password], [Address], Mobile, Dob, Gender, UsertypeID) VALUES ('Lamia', 'lamia@gmail.com', 'lamia321', 'Dhanmondi', 152233445, '2002-11-25', 'Female', 3);
3. INSERT INTO Color (Name) VALUES ('Teal');
4. INSERT INTO Brand (Name) VALUES ('BMW');
5. INSERT INTO Car (BrandID, Model, RegYear, EngineCC, Gear, ColorID, Price, [Status]) VALUES (1, 'Corolla', 2010, '1500', 'Automatic', 3, 2000000, 'Available');
6. SELECT Car.ID, Brand.Name AS Brand, Car.Model, Car.EngineCC, Car.RegYear, Color.Name AS Color, Car.Gear, Car.Price, Car.Status FROM Car, Brand, Color WHERE Car.BrandID = Brand.ID AND Car.ColorID = Color.ID;
7. SELECT ID AS OrderID, CustomerID, CarID, DateTime, Status, Price, Paid, Due FROM [Order] ORDER BY DateTime DESC;


8. SELECT ID, Name, Email, Password, Gender, DOB, Address, Mobile FROM UserInfo WHERE UserTypeID = 2;
9. UPDATE Car SET BrandID = 1, Model = 'Premio', RegYear = 2020, EngineCC = '2000', Gear = 'Automatic', ColorID = 3, Price = 4000000, Status = 'Available' WHERE ID = 22;
10. UPDATE UserInfo SET Name = 'Rahim', Email = 'rahim@gmail.com', Password = '1234', Gender = 'Male', Dob = '2000-01-01', Address = 'Badda', Mobile = 1734567890 WHERE ID = 23;
11. UPDATE [Order] SET [Status] = 'Delivered' WHERE ID = 13;
12. DELETE FROM Car WHERE ID = 2;
13. INSERT INTO Payment (OrderID, ManagerID, PaymentMethod, Date, Amount) VALUES (13, 20, 'Card', '2025-06-28 10:30:00', 500000);
14. DELETE FROM Brand WHERE ID = 1;
15. SELECT COUNT(*) AS CT FROM Car;

Chapter: 04 (Screenshots)



Login

Email:

Password: 

Login

Don't have an account? [Register Now!](#)

Close

Login Form

SignUp

Name:

Email:

Password:

Confirm Pass...:

Gender: ☐ Male ☐ Female

Date of Birth:

Address:

Mobile (+880):




Back

Register

Close

Registration Form for customer

Cars



Admin

- Cars
- Customers
- Orders
- Managers
- Report
- Log Out

ID	Brand	Model	EngineCC	RegYear	Color	Gear	Price	Status
22	Toyota	Corolla	1200	2005	White	Automa...	1200000	Delivered
23	Nissan	X-Trial	1500	2018	Black	Automa...	5000000	Sold
24	Mitsubis...	Lancer	2000	2010	Green	Automa...	8000000	Available
25	Toyota	Probox	1500	2000	White	Automa...	700000	Available

BrandsColors

Car ID:

Brand:

Model:

Reg Year:

Engine CC:

Gear: ☒ Automatic ☐ Manual

Color:

Price:

Status:

Manage Cars

Cars

Admin

Cars

Customers

Orders

Managers

Report

Log Out

Search Model

Refresh

New

Delete

ID	Name
22	
23	
24	Toyota
25	Nissan
	Mitsubishi

ID: 1

Name: Toyota

Save

Close

Colors

4

Mitsubishi

ancer

010

000

Automatic Manual

Green

000000

Available

Save

Close

Manage Car Brands

Customers

Admin

Cars

Customers

Orders

Managers

Report

Log Out

Refresh

ID	Name	Email	Password	Gender	DOB	Address	Mobile
14	Mayesha	mayersha...	1234	Female	6/25/200...	Mirpur, D...	17777777
21	Customer	customer...	999	Male	12/31/20...	Banani, D...	12345657...
22	Test	test@gm...	test	Male	6/25/202...	qddwd	12321534...

Close

View Customers

Managers



Admin

Cars

Customers

Orders

Managers

Report

Log Out

Refresh

New

Delete

ID	Name	Email	Password	Gender	Dob	Address	Mobile	Salary
20	Saad	saad@g...	0	Male	6/8/200...	Kuril	1772494...	100000

Orders



Saad

Cars

Orders

Report

Log Out

Payment

Refresh

Cancel Order

Deliver

OrderID	CustomerI	CarID	DateTime	Status	Price	Paid	Due
15	23	25	6/28/20...	Cancelled	700000	0	700000
14	14	22	6/28/20...	Delivered	1200000	1200000	0
13	21	23	6/28/20...	On Proc...	5000000	3000000	2000000

☒ Car Details

☐ Customer Details



Brand: Nissan
Model: X-Trial
Reg. Year: 2018
Engine CC: 1500
Gear: Automatic
Color: Black
Price: 5000000

Close

Manage Orders with car details view

Orders



Saad

Cars

Orders

Report

Log Out

Payment

Refresh

Cancel Order

Deliver

OrderID	CustomerI	CarID	DateTime	Status	Price	Paid	Due
15	23	25	6/28/20...	Cancelled	700000	0	700000
14	14	22	6/28/20...	Delivered	1200000	1200000	0
13	21	23	6/28/20...	On Proc...	5000000	3000000	2000000

☐ Car Details

☒ Customer Details



Name: Customer
Email: customer@gmail.com
Gender: Male
DOB: 31-12-2001
Mobile: +880 1234565789
Address: Banani, Dhaka

Close

Manage Orders with customer details view

Payment

Saad

Cars

Orders

Log Out

New

Refresh

Clear History

ID	OrderID	PaymentMethod	Date	Amount
23	13	Card	6/28/2025 3:56 ...	2000000
22	14	Cheque	6/28/2025 3:56 ...	1200000

Payment ID

Auto Generated

Order ID

13

Payment Method

Date

Saturday . June 28, 2025

Price

5000000

Due

3000000

Amount

Save

Back

Close

Manage Payment

Cars

Saad

Cars

Orders

Report

Log Out

Search Model

ID

22

23

24

25

Refresh

	Status
0000	Delivered
0000	Sold
0000	Available
000	Available

Edit Profile

Name:

Saad

Email:

saad@gmail.com

Password:

Confirm Pass..:

Gender:

Male

Female

Date of Birth:

Saturday, June 8, 2002

Address:

Kuril

Mobile (+880):

1772494193

Back

Save

Close

Update user's information by himself

Cars



Customer

Cars

My Orders

Log Out

Search

Refresh

ID	Brand	Model	EngineCC	RegYear	Color	Gear	Price
24	Mitsubishi	Lancer	2000	2010	Green	Automatic	8000000
25	Toyota	Probox	1500	2000	White	Automatic	700000

Order

Close

Available car list for customer

My Orders



Customer

Cars

My Orders

Log Out

Cancel Order

Refresh

OrderID	CarID	DateTime	Status	Price	Paid	Due
13	23	6/28/20...	On Proc...	5000000	2000000	3000000



Brand: Nissan

Model: X-Trial

Reg. Year: 2018

Engine CC: 1500

Gear: Automatic

Color: Black

Price: 5000000

Close

Order list of a customer