Case Study 1: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 2: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 3: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 4: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 5: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 6: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 7: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 8: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 9: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 10: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 11: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 12: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 13: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 14: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 15: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 16: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 17: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 18: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 19: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 20: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 21: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 22: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 23: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 24: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 25: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 26: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 27: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 28: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 29: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.

Case Study 30: Sample System

Problem Description

This is a placeholder description for the DBMS case study.

Entities & Relationships

- Customers(CustomerID, Name, Phone, Email, City)
- Cars(CarID, Model, Brand, Year, DailyRate, Status)
- Rentals(RentalID, CustomerID, CarID, StartDate, EndDate, TotalCost)
- Payments(PaymentID, RentalID, Amount, PaymentDate, Method)

Sample Data (Dummy Values)

Customers

CustomerID	Name	City
101	Rajesh	Delhi
102	Priya	Mumbai
103	Arjun	Chennai

Cars

CarID	Model	Brand	DailyRate	Status
C1	Swift	Maruti	1200	Available
C2	City	Honda	2000	Rented
C3	Innova	Toyota	2500	Available

Sample Queries

```
SELECT * FROM Cars WHERE Status = 'Available';
SELECT r.RentalID, c.Model, r.TotalCost FROM Rentals r JOIN Customers cu ON
r.CustomerID = cu.CustomerID JOIN Cars c ON r.CarID = c.CarID WHERE cu.Name =
'Priya';
SELECT cu.Name, SUM(p.Amount) AS TotalSpent FROM Payments p JOIN Rentals r ON
p.RentalID = r.RentalID JOIN Customers cu ON r.CustomerID = cu.CustomerID GROUP BY
cu.Name ORDER BY TotalSpent DESC LIMIT 2;
```

Practice Questions

1. List all customers and the number of rentals they made.
2. Find the total revenue generated by the company.
3. Get details of cars that were rented in September 2025.
4. Show customers who have not made any rental yet.
5. Find the most rented car model.