

CENG 315

PROJECT DESIGN REPORT

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Project Description

- **Introduction:**

In this Project we are aiming to create a Database of a Car Rental System. It keeps track of everything from customer info and their rental history to securely storing payment details.

It's got a handle on the company's fleet of cars, making sure they're maintained and ready to be rented by customers. When someone rents a car, this system creates agreements, notes when the car's due back, and handles all the paperwork.

It's also great at managing the staff, keeping tabs on their schedules and hours worked. Customers can easily reserve a car, and the system ensures the car they want is set aside just for them.

The Car Rental System handles different payment methods and calculates rental charges based on the rental agreement.

- **All entity sets and their attributes:**

Rent a Car Branch

Attributes: (branch_id (Primary Key), branch_name, branch_address[city, post_code, street], contact_number, branch_mail, operating_hours, operating_days)

Rental Agreement

Attributes: (rent_id (Primary Key), pickup_date, return_date, late_return_date, pickup_location, return_location, rental_status)

Customer

Attributes: (customer_id (Primary Key), customer_name[first_name, middle_name, last_name], customer_gender, customer_age, customer_address[city, post_code, street], customer_number, customer_email, customer_social_security_number)

Bill

Attributes: (bill_id (Primary Key), amount, late_fee, payment_date, payment_status, payment_information, payment_type)

Vehicle

Attributes: (vehicle_id (Primary Key), vehicle_type, model, year, color, license_plate, mileage, fuel_type, availability, daily_rate, registration_date, insurance_expiration_date, capacity)

Maintenance

Attributes: (maintenance_id (Primary Key), start_date, finish_date, maintenance_status, maintenance_cost, maintenance_description)

Employee

Attributes: (employee_id (Primary Key), employee_name[first_name, middle_name, last_name], employee_gender, employee_number, employee_mail, work_hours, work_days, salary)

Employee Role

Attributes: (role_id (Primary Key), role_name, role_description)

- **All relationship set and their attributes:**

Works for:

Employee – Rent a Car Branch

An employee can work on one Rent a Car branch and a Rent a Car branch can have many employees working in it. (One to Many)

Attributes: (employee_id, branch_id)

Pays:

Customer – Bill

A customer can pay for many bills and a bill can be paid by one Customer. (Many to One)

Attributes: (customer_id, bill_id)

Goes through:

Vehicle – Maintenance

A vehicle can go through many maintenance and a maintenance can go through for one vehicle. (Many to One)

Attributes: (vehicle_id, maintenance_id)

Owns:

Rent a Car Branch– Vehicle

A Rent a Car branch can own many vehicles and a vehicle can be owned by one Rent a Car branch. (Many to One)

Attributes: (branch_id, vehicle_id)

Has:

Employee – Employee Role

An employee can have one employee role and an employee role could be had by many employees. (One to Many)

Attributes: (employee_id, role_id)

Rent a Car Branch – Rental Agreement

A Rent a Car branch can have many rental agreements and a rental agreement could be had by one Rent a Car branch. (Many to One)

Attributes: (branch_id, RentID)

Rental Agreement – Vehicle

A rental agreement can have one vehicle and a vehicle could be had by many rental agreements. (One to Many)

Attributes: (RentID, VehicleID)

Rental Agreement – Bill (Weak Relation)

A rental agreement can have one bill and a bill could be had by one rental agreement. (One to One)

Attributes: (RentID, BillID)

Rental Agreement – Customer

A rental agreement can have one customer and a customer can have many rental agreements. (One to Many)

Attributes: (RentID, CustomerID)

● Users of the system:

Admin

Administrators have full access to the system, including user management, system configuration, and reporting. They have access to all of the data in the database and can insert, update, delete any record, table from the database.

Manager

Managers oversee specific rental branches, managing employees, vehicle availability, customer service.

Access to specific tables:

- Read/write access to Employees (To manage Employees)
- Read/write access to Rent a Car Branch (To manage their branch)
- Read/write access to Vehicle (For managing availability, status and more to the vehicles within their branch)
- Read access to Rental Agreement (To oversee agreements made by employees)
- Read access to Customer (For referencing Rental Agreement)
- Limited access to Bill (Can read every attribute except Payment Information for referencing Rental Agreement)

Employee

Employees are responsible for booking processes, assisting customers.

Access to specific tables:

- Read/write access to Rental Agreements (To manage rentals)
- Read access to Customers and Vehicles (For reference)
- Limited access to Maintenance (Read,insert access to maintenance records relevant to their tasks)
- Limited access to Bill (Only viewing the amount)

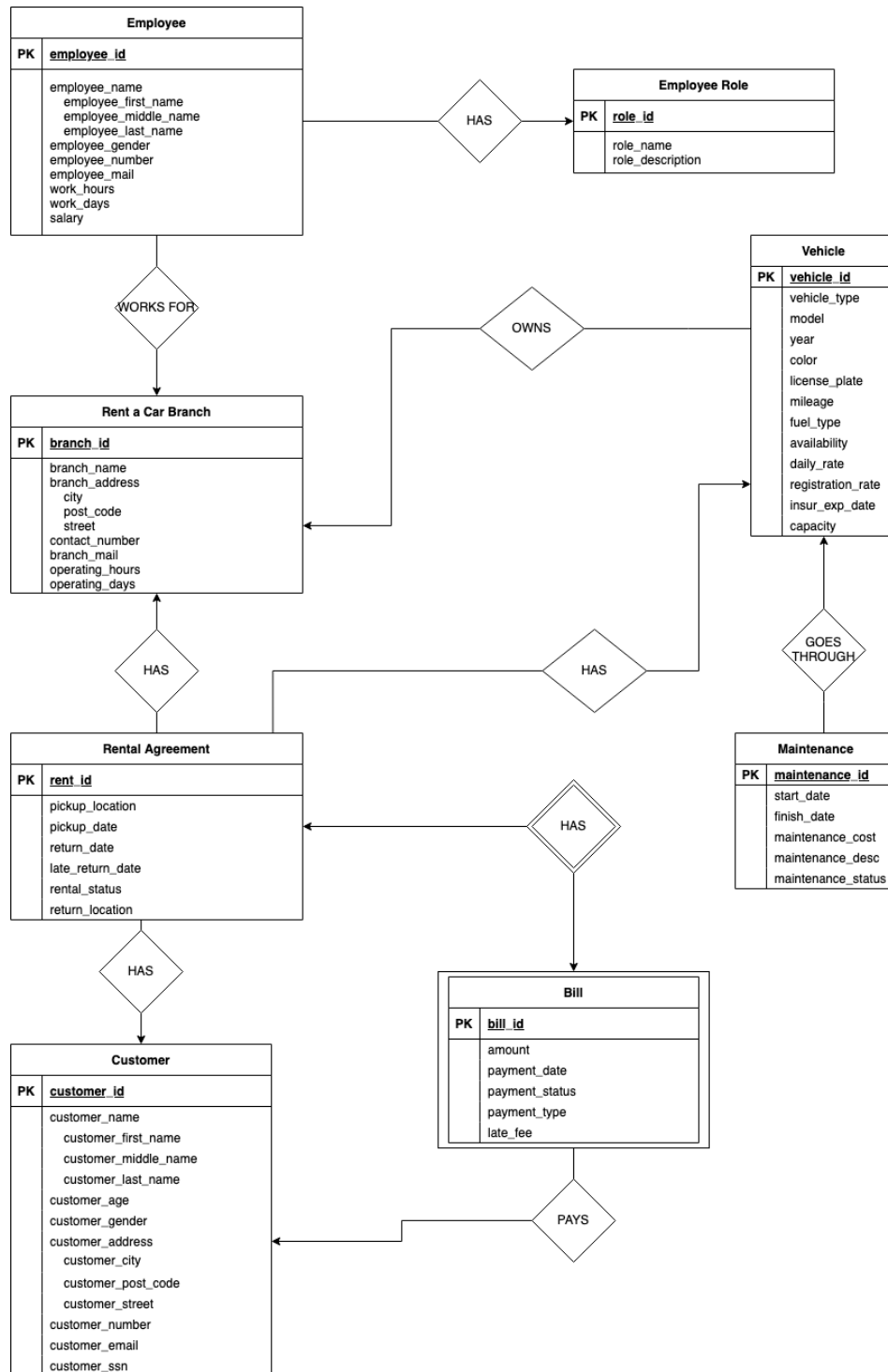
Customer

Customers can make bookings, rent cars, access their booking history and select payment types.

Access to specific tables:

- Read access to Vehicles (to view available cars)
- Limited access to Rental Agreement (to make, view, and manage their agreements)
- No access to sensitive information like payment details or staff-related data

ER Diagram



Business rules:

1-Customer Registration

- Each customer must provide valid identification and contact information when registering.
- Customers must be at least 18 years old to rent a car and must have a driver's licence.

2- Car Inventory

- Each car in the inventory must have a unique identification number.
- Cars must undergo regular maintenance and safety inspections.

3- Rental Reservations

- Customers can make reservations in advance, specifying the pickup and return dates and times.
- Reservations can only be made for available cars.
- Updating the status of vehicles is the responsibility of the employee. Employees should update the status when the reserved rental vehicle's start date has come and should update when it finishes.

4- Rental Rates

- Rental rates are determined based on factors such as car type, rental duration.
- Rental rates should be clear and transparent to customers.

5- Payment and Billing

- Customers are required to provide a valid payment type (credit card, debit card, etc.).
- Billing is based on the actual duration of the rental, including any additional charges.
- Employees are responsible for changing the status of payment manually.

6- Late Returns and Extensions

- Customers must return rented cars on time. Late returns may incur additional charges.
- Customers can request extensions for their rentals, subject to availability.

- If any late returns occur, the customer will pay the double daily_rate for the extra days. For example, if customer returns the vehicle 5 days later than the supposed return date, and the vehicle has a daily rate of 100 dollars, the customer will pay $5 \times 100 \times 2 = 1000$ dollars extra.

7- Maintenance and Repairs

- Cars must be regularly maintained and cleaned.
- Any damage or mechanical issues should be promptly repaired.
- If the car is out of maintenance, the employee should update the availability of the vehicle by hand.

8- Feedback and Reviews

- Collect customer feedback and reviews to improve the quality of service.
- Use feedback to identify areas for improvement and to recognize outstanding service.

9- Data Privacy and Security

- Protect customer and financial data in compliance with data protection regulations.
- Secure sensitive information to prevent unauthorised access. This authorization can be satisfied with right grant operations given to authoritative people. For example, payment information can be seen only by the admin of the system.
- Define employee roles and access levels in the database to ensure that only authorised personnel can perform specific actions (e.g., rental processing, maintenance, and financial transactions).

10- Compliance with Legal Requirements

- Ensure compliance with local, state, and federal regulations related to car rental, including licensing, insurance, and environmental standards.

11- Car Return Condition

- Establish guidelines for inspecting and documenting the condition of the car before and after each rental, including notating any pre-existing damage.

Relational Schema

1) **Rent a Car Branch**(branch_id (Primary Key), branch_name, branch_city, branch_post_code, branch_street, contact_number, branch_mail, operating_hours, operating_days)

2) **Rental Agreement**(rent_id, branch_id, bill_id, customer_id, vehicle_id, pickup_date, return_date, late_return_date, pickup_location, return_location, rental_status)

-branch_id referencing the Rent a Car Branch relation.

-bill_id referencing the Bill relation.

-customer_id referencing the Customer relation.

-vehicle_id referencing the Vehicle relation.

3) **Customer**(customer_id, customer_first_name, customer_middle_name, customer_last_name, customer_gender, customer_age, customer_city, customer_post_code, customer_street, customer_number, customer_email, customer_social_security_number)

4) **Bill**(bill_id, customer_id, rent_id, amount, late_fee, payment_date, payment_status, payment_type)

-customer_id referencing the Customer relation.

-rent_id is redundant data to make queries easier. It is not implemented as a foreign key constraint.

5) **Vehicle**(vehicle_id, branch_id, vehicle_type, model, year, color, license_plate, mileage, fuel_type, availability, daily_rate, registration_date, insurance_expiration_date, capacity)

-branch_id referencing the Rent a Car Branch relation.

6) **Maintenance**(maintenance_id, vehicle_id, start_date, finish_date, maintenance_status, maintenance_cost, maintenance_description)

-vehicle_id referencing the Vehicle relation.

7)**Employee**(employee_id, branch_id, role_id, employee_first_name, employee_middle_name, employee_last_name, employee_gender, employee_number, employee_mail, work_hours, work_days, salary)

-branch_id is referencing the Rent a Car Branch relation.



-role_id is referencing the Employee Role relation.

8)**Employee Role**(role_id, role_name, role_description)

OUTPUT SCREENSHOTS

TABLES:

1)Rent A Car Branch:

	BRANCH_ID	BRANCH_NAME	BRANCH_CITY	BRANCH_STREET	BRANCH_POST_CODE	CONTACT_NUMBER	BRANCH_MAIL	OPERATING_HOURS	OPERATING_DAYS
	1	Downtown Branch	New York	Broadway St	10001	1234567890	downtown@example.com	09:00-00:00	MONDAY,TUESDAY,WEDNES...
	2	Uptown Branch	New York	Madison Ave	10002	2345678901	uptown@example.com	7:00-00:00	MONDAY,TUESDAY,WEDNES...

2)Rental Agreement:

BILL

Columns

Data

Indexes

Constraints

Grants

Statistics


Triggers


Dependencies


DDL


Sample Queries


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
 Filter...

 Count Rows

 Load Data

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 Refresh

	BILL_ID	CUSTOMER_ID	RENT_ID	AMOUNT	LATE_FEE	PAYMENT_DATE	PAYMENT_STATUS	PAYMENT_TYPE
	1	1	1	540	240		Unpaid	
	2	2	2	560			Unpaid	
	3	3	3	250		12/29/2023	Paid	Debit Card
	4	4	4	325		12/23/2023	Paid	Cash
	5	5	5	300			Unpaid	
	6	6	6	440	330		Unpaid	
	7	7	7	350		12/22/2023	Paid	Credit Card
	8	8	8	390		12/27/2023	Paid	Credit Card
	9	9	9	250		12/24/2023	Paid	Credit Card
	10	10	10	320			Unpaid	
	11	11	11	900	600	12/26/2023	Paid	Bank Transfer
	12	12	12	350		12/25/2023	Paid	Check
	13	13	13	375			Unpaid	
	14	14	14	220		12/29/2023	Paid	Online Payment
	15	15	15	325		12/28/2023	Paid	Bank Transfer
	16	16	16	550	300		Unpaid	
	17	17	17	350			Unpaid	
	18	18	18	360		12/30/2023	Paid	Cash
	19	19	19	325		12/30/2023	Paid	Debit Card
	20	20	20	950	500	12/31/2023	Paid	Online Payment

1 cells selected

1 - 20

3)Customer:

CUSTOMER

ColumnsDataIndexesConstraintsGrantsStatisticsTriggersDependenciesDDLSample Queries

+ Insert Row

Columns...

Filter...

Count Rows

Load Data

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	CUSTOMER_ID	CUSTOMER_FIRST_I	CUSTOMER_MIDDLE	CUSTOMER_LAST_N	CUSTOMER_AGE	CUSTOMER_GENDE	CUSTOMER_CITY	CUSTOMER_POST_C	CUSTOMER_STREE1	CUSTOMER_NUMBE	CUSTOMER_EMAIL	CUSTOMER_SOCIAL
<div><div></div><div></div></div>	1	John		Doe	35	Male	New York	10001	123 Main St	1234567890	john@example....	123456789
<div><div></div><div></div></div>	2	Jane	Elizabeth	Smith	28	Female	Los Angeles	90001	456 Elm St	1987654321	jane@example.c...	987654321
<div><div></div><div></div></div>	3	Michael	Charles	Johnson	42	Male	Chicago	60601	789 Oak St	1022334455	michael@exam...	102233445
<div><div></div><div></div></div>	4	Emily		Brown	30	Female	Houston	77001	987 Cedar St	1445566778	emily@example...	144556677
<div><div></div><div></div></div>	5	William	Henry	Taylor	39	Male	Phoenix	85001	654 Pine St	1765432987	william@exampl...	176543298
<div><div></div><div></div></div>	6	Olivia	Grace	Anderson	25	Female	Philadelphia	19101	321 Birch St	5532568714	olivia@example...	521487632
<div><div></div><div></div></div>	7	James		Martinez	45	Male	San Antonio	78201	852 Maple St	1654321987	james@exampl...	165432198
<div><div></div><div></div></div>	8	Sophia	Rose	Garcia	33	Female	San Diego	92101	741 Walnut St	1908765432	sophia@exampl...	190876543
<div><div></div><div></div></div>	9	Alexander		Lopez	29	Male	Dallas	75201	369 Cedar St	1555666777	alexander@exa...	155566677
<div><div></div><div></div></div>	10	Mia	Isabella	Hernandez	57	Female	San Jose	95101	159 Pine St	1789456123	mia@example.c...	178945612
<div><div></div><div></div></div>	11	Liam	Michael	Gonzalez	31	Male	Austin	73301	258 Oak St	1777222333	liam@example.c...	177722233
<div><div></div><div></div></div>	12	Charlotte		Wilson	26	Female	Jacksonville	32099	753 Maple St	1324364758	charlotte@exam...	132436475
<div><div></div><div></div></div>	13	Ethan	Christopher	Perez	40	Male	San Francisco	94101	123 Cedar St	1918171615	ethan@example...	191817161
<div><div></div><div></div></div>	14	Ava	Sophie	Torres	27	Female	Indianapolis	46201	456 Birch St	1661728394	ava@example.c...	166172839
<div><div></div><div></div></div>	15	Noah	Samuel	Rivera	34	Male	Columbus	43085	789 Pine St	1800854321	noah@example....	180085432
<div><div></div><div></div></div>	16	Amelia		Long	32	Female	Charlotte	28201	963 Maple St	3261248896	amelia@exampl...	198765432
<div><div></div><div></div></div>	17	Logan	David	Scott	38	Male	Seattle	98101	741 Oak St	1209876543	logan@example...	120987654
<div><div></div><div></div></div>	18	Avery	Grace	Nguyen	24	Female	Denver	80201	852 Elm St	1309854321	avery@example...	130985432
<div><div></div><div></div></div>	19	Lucas		Kim	36	Male	Washington	20001	963 Cedar St	1256789432	lucas@example...	125678943
<div><div></div><div></div></div>	20	Harper	Lillian	Collins	41	Female	Boston	2101	159 Pine St	1405678932	harper@exampl...	140567893

1 cells selected

1 - 20

4)Bill:

BILL_ID	CUSTOMER_ID	RENT_ID	AMOUNT	LATE_FEE	PAYMENT_DATE	PAYMENT_STATUS	PAYMENT_TYPE
1	1	1	540	240		Unpaid	
2	2	2	560			Unpaid	
3	3	3	250		12/29/2023	Paid	Debit Card
4	4	4	325		12/23/2023	Paid	Cash
5	5	5	300			Unpaid	
6	6	6	440	330		Unpaid	
7	7	7	350		12/22/2023	Paid	Credit Card
8	8	8	390		12/17/2023	Paid	Credit Card
9	9	9	250		12/24/2023	Paid	Credit Card
10	10	10	320			Unpaid	
11	11	11	900	600	12/26/2023	Paid	Bank Transfer
12	12	12	350		12/25/2023	Paid	Check
13	13	13	375			Unpaid	
14	14	14	220		12/29/2023	Paid	Online Payment
15	15	15	325		12/28/2023	Paid	Bank Transfer
16	16	16	550	300		Unpaid	
17	17	17	350			Unpaid	
18	18	18	360		12/30/2023	Paid	Cash
19	19	19	325		12/30/2023	Paid	Debit Card
20	20	20	550	330	12/31/2023	Paid	Online Payment

5)Vehicle:

VEHICLE

ColumnsDataIndexesConstraintsGrantsStatisticsTriggersDependenciesDDLSample Queries

+ Insert Row

Columns...

Filter...

Count Rows

Load Data

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	VEHICLE_ID	BRANCH_ID	VEHICLE_TYPE	MODEL	YEAR	COLOR	LICENSE_PLATE	MILEAGE	FUEL_TYPE	AVAILABILITY	DAILY_RATE	REGISTRATION_DA	INSUR_EXP_DATE...	CAPACITY
	1	1	Sedan	Toyota Camry	2022	Red	ABC123	15000	Gasoline	Not Available	60	12/01/2023	01/01/2024	5
	2	1	SUV	Honda CR-V	2021	Black	DEF456	18000	Gasoline	Not Available	80	11/01/2023	02/01/2024	3
	3	2	Compact	Ford Focus	2020	Blue	GH789	20000	Gasoline	Not Available	50	10/01/2023	03/01/2024	4
	4	2	Sedan	Nissan Altima	2022	White	JKL012	12000	Gasoline	Not Available	65	09/01/2023	04/01/2024	5
	5	1	SUV	Toyota RAV4	2021	Silver	MNO345	22000	Gasoline	Not Available	75	08/01/2023	05/01/2024	6
	6	1	Compact	Honda Civic	2022	Gray	PQR678	14000	Gasoline	Not Available	55	07/01/2023	06/01/2024	5
	7	2	SUV	Ford Escape	2020	Green	STU901	19000	Gasoline	Not Available	70	06/01/2023	07/01/2024	5
	8	2	Sedan	Chevrolet Malibu	2021	Black	VWX234	16000	Gasoline	Not Available	65	05/01/2023	08/01/2024	5
	9	1	Compact	Hyundai Elantra	2022	Red	YZA567	13000	Gasoline	Not Available	50	04/01/2023	09/01/2024	5
	10	1	SUV	Kia Sportage	2020	White	BCD890	20000	Gasoline	Not Available	80	03/01/2023	10/01/2024	5
	11	2	Compact	Mazda 3	2021	Blue	EFG123	18000	Gasoline	Not Available	60	02/01/2023	11/01/2024	5
	12	2	Sedan	Volkswagen Pass...	2022	Silver	HIJ456	15000	Gasoline	Not Available	70	01/01/2023	12/01/2024	5
	13	1	SUV	Subaru Outback	2020	Black	KLM789	16000	Gasoline	Not Available	75	12/01/2022	01/01/2025	5
	14	1	Compact	Nissan Versa	2021	Red	NOP012	13000	Gasoline	Not Available	55	11/01/2022	02/01/2025	5
	15	2	Sedan	Toyota Avalon	2022	White	QRS345	17000	Gasoline	Not Available	65	10/01/2022	03/01/2025	5
	16	2	Compact	Ford Fiesta	2020	Blue	TUV678	14000	Gasoline	Not Available	50	09/01/2022	04/01/2025	5
	17	1	SUV	Jeep Cherokee	2021	Green	VWX901	18000	Gasoline	Not Available	70	08/01/2022	05/01/2025	5
	18	1	Compact	Chevrolet Sonic	2022	Red	YZA234	15000	Gasoline	Not Available	60	07/01/2022	06/01/2025	5
	19	2	Sedan	Honda Accord	2020	Silver	BCD567	16000	Gasoline	Not Available	65	06/01/2022	07/01/2025	5
	20	2	Compact	Volkswagen Golf	2021	Blue	EFG890	14000	Gasoline	Not Available	55	05/01/2022	08/01/2025	5

6)Maintenance:

MAINTENANCE

ColumnsDataIndexesConstraintsGrantsStatisticsTriggersDependenciesDDLSample Queries

+ Insert Row

Columns...

Filter...

Count Rows

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	MAINTENANCE_ID	VEHICLE_ID	START_DATE	FINISH_DATE	MAINTENANCE_STATUS	MAINTENANCE_COST	MAINTENANCE_DESCRIPTION
	1	1	01/01/2023	01/03/2023	Active	100	Oil change, brake inspection, and tire r...
	2	2	01/02/2023	01/04/2023	Inactive	150	Transmission fluid change and engine ...
	3	3	01/03/2023	01/05/2023	Active	200	Coolant system flush and spark plug re...
	4	4	01/04/2023	01/06/2023	Inactive	250	Air filter replacement and suspension c...
	5	5	01/05/2023	01/07/2023	Active	300	Brake pad replacement and wheel align...
	6	6	01/06/2023	01/08/2023	Inactive	350	Engine tune-up and battery inspection
	7	7	01/07/2023	01/09/2023	Active	400	Tire change and steering system check
	8	8	01/08/2023	01/10/2023	Inactive	450	Headlight alignment and exhaust syste...
	9	9	01/09/2023	01/11/2023	Active	500	Fuel system cleaning and windshield w...
	10	10	01/10/2023	01/12/2023	Inactive	550	Radiator flush and power steering fluid...
	11	11	01/11/2023	01/13/2023	Active	600	Suspension overhaul and brake system ...
	12	12	01/12/2023	01/14/2023	Inactive	650	Engine diagnostics and oil pressure ch...
	13	13	01/13/2023	01/15/2023	Active	700	Transmission inspection and fluid chan...
	14	14	01/14/2023	01/16/2023	Inactive	750	Coolant system check and thermostat r...
	15	15	01/15/2023	01/17/2023	Active	800	Brake system flush and rotor replacem...
	16	16	01/16/2023	01/18/2023	Inactive	850	Battery load test and electrical system ...
	17	17	01/17/2023	01/19/2023	Active	900	Wheel bearing replacement and align...
	18	18	01/18/2023	01/20/2023	Inactive	950	Power steering inspection and fluid top...
	19	19	01/19/2023	01/21/2023	Active	1000	Fuel injector cleaning and air intake ch...

1 cells selected

7)Employee:

EMPLOYEE

Columns

Data

Indexes

Constraints

Grants

Statistics

Triggers

Dependencies

DDL

Sample Queries

+ Insert Row

Columns...

Filter...

Count Rows

Load Data

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Refresh

	EMPLOYEE_ID	BRANCH_ID	ROLE_ID	EMPLOYEE_FIRST_N	EMPLOYEE_MIDDLE	EMPLOYEE_LAST_N	EMPLOYEE_GENDER	EMPLOYEE_NUMBE	EMPLOYEE_MAIL	WORK_HOURS	WORK_DAYS	SALARY
	1	1	1	John		Doe	Male	2125551234	john@example.c...	09:00-00:00	MONDAY,TUES...	60000
	2	1	2	Jane	Elizabeth	Smith	Female	3102555678	jane@example.c...	09:00-00:00	MONDAY,TUES...	50000
	3	1	3	Michael		Johnson	Male	7135559012	michael@exam...	09:00-00:00	MONDAY,TUES...	55000
	4	1	4	Emily		Brown	Female	7865553456	emily@example...	09:00-00:00	MONDAY,TUES...	58000
	5	1	5	Daniel		Garcia	Male	4155557890	daniel@exampl...	09:00-00:00	MONDAY,TUES...	52000
	6	1	6	Olivia		Martinez	Female	9175552345	olivia@example...	09:00-00:00	MONDAY,TUES...	56000
	7	1	7	William	Charles	Lopez	Male	5125556789	william@examp...	09:00-00:00	MONDAY,TUES...	60000
	8	1	8	Sophia		Gonzalez	Female	6155551234	sophia@examp...	09:00-00:00	MONDAY,TUES...	54000
	9	1	2	James		Rodriguez	Male	2025555678	james@examp...	09:00-00:00	MONDAY,TUES...	57000
	10	1	8	Amelia		Miller	Female	6025559012	amelia@examp...	09:00-00:00	MONDAY,TUES...	59000
	11	2	1	Benjamin	Samuel	Taylor	Male	2145553456	benjamin@exa...	7:00-00:00	MONDAY,TUES...	53000
	12	2	2	Evelyn		Clark	Female	3125557890	evelyn@examp...	7:00-00:00	MONDAY,TUES...	56000
	13	2	3	Alexander	Joseph	Hernandez	Male	4075552345	alexander@exa...	7:00-00:00	MONDAY,TUES...	61000
	14	2	4	Mia		Young	Female	5035556789	mia@example.c...	7:00-00:00	MONDAY,TUES...	54000
	15	2	5	Charlotte	Grace	Flores	Female	8125551234	charlotte@exam...	7:00-00:00	MONDAY,TUES...	59000
	16	2	6	Henry		King	Male	7045555678	henry@example...	7:00-00:00	MONDAY,TUES...	57000
	17	2	7	Scarlett		Baker	Female	7025559012	scarlett@examp...	7:00-00:00	MONDAY,TUES...	54000
	18	2	8	Liam		Gomez	Male	8185553456	liam@example.c...	7:00-00:00	MONDAY,TUES...	58000
	19	2	8	Chloe		Perez	Female	2065557890	chloe@example...	7:00-00:00	MONDAY,TUES...	55000
	20	2	2	Aiden		Turner	Male	3035552345	aiden@example...	7:00-00:00	MONDAY,TUES...	56000

1 cells selected

1 - 20

8)Employee Role

EMPLOYEE_ROLE

Columns

Data

Indexes

Constraints

Grants

Statistics

Triggers

Dependencies

DDL

Sample Queries

+ Insert Row

Columns...

Filter...

Count Rows

Load Data

Download

Refresh

	ROLE_ID	ROLE_NAME	ROLE_DESCRIPTION
	1	Manager	Responsible for branch operations
	2	Salesperson	Deals with customers and sales
	3	Technician	Handles vehicle maintenance
	4	Accountant	Manages financial transactions
	5	HR	Handles human resource matters
	6	Marketing	Responsible for marketing activities
	7	IT	Manages IT systems and support
	8	Customer Service	Deals with customer inquiries and support

SCRIPT:

Number Tn	Elapsed	Statement	Feedback	Rows
1	0.07	ALTER TABLE rental_agreement DROP CONSTRAINT rental_agreement	Table altered.	0
2	0.02	ALTER TABLE rental_agreement DROP CONSTRAINT rental_agreement	Table altered.	0
3	0.01	ALTER TABLE rental_agreement DROP CONSTRAINT rental_agreement	Table altered.	0
4	0.01	ALTER TABLE rental_agreement DROP CONSTRAINT rental_agreement	Table altered.	0
5	0.01	ALTER TABLE bill DROP CONSTRAINT bill_customer_fk	Table altered.	0
6	0.02	ALTER TABLE vehicle DROP CONSTRAINT vehicle_rent_a_car_branch	Table altered.	0
7	0.02	ALTER TABLE maintenance DROP CONSTRAINT maintenance_vehicle_	Table altered.	0
8	0.01	ALTER TABLE employee DROP CONSTRAINT employee_rent_a_car_bra	Table altered.	0
9	0.01	ALTER TABLE employee DROP CONSTRAINT employee_employee_role_	Table altered.	0
10	0.85	DROP TABLE employee	Table dropped.	0
11	0.80	DROP TABLE employee_role	Table dropped.	0
12	0.86	DROP TABLE vehicle	Table dropped.	0
13	0.82	DROP TABLE maintenance	Table dropped.	0
14	0.85	DROP TABLE rental_agreement	Table dropped.	0
15	0.77	DROP TABLE bill	Table dropped.	0
16	0.84	DROP TABLE customer	Table dropped.	0
17	0.85	DROP TABLE rent_a_car_branch	Table dropped.	0
18	0.03	alter session set nls_language='ENGLISH'	Statement processed.	0
19	0.01	alter session set nls_date_format='DD-MON-YYYY'	Statement processed.	0
20	0.09	CREATE TABLE rent_a_car_branch (BRANCH_ID NUMBER)	Table created.	0
21	0.04	CREATE TABLE employee (EMPLOYEE_ID NUMBER(10) PRIMA	Table created.	0
22	0.03	CREATE TABLE employee_role (ROLE_ID NUMBER(10)	Table created.	0
23	0.03	CREATE TABLE rental_agreement (RENT_ID NUMBER)	Table created.	0
24	0.03	CREATE TABLE vehicle (VEHICLE_ID NUMBER(10) PRIMAR	Table created.	0
25	0.03	CREATE TABLE maintenance (MAINTENANCE_ID NUMBER(10)	Table created.	0
26	0.05	CREATE TABLE customer (CUSTOMER_ID NUMBER)	Table created.	0
27	0.02	CREATE TABLE bill (BILL_ID NUMBER(10) P	Table created.	0
28	0.02	ALTER TABLE rental_agreement ADD CONSTRAINT rental_agreement	Table altered.	0
29	0.02	ALTER TABLE rental_agreement ADD CONSTRAINT rental_agreement	Table altered.	0
30	0.02	ALTER TABLE rental_agreement ADD CONSTRAINT rental_agreement	Table altered.	0
31	0.02	ALTER TABLE rental_agreement ADD CONSTRAINT rental_agreement	Table altered.	0
32	0.02	ALTER TABLE bill ADD CONSTRAINT bill_customer_fk FOREIGN KEY	Table altered.	0
33	0.02	ALTER TABLE vehicle ADD CONSTRAINT vehicle_rent_a_car_branch	Table altered.	0
34	0.02	ALTER TABLE maintenance ADD CONSTRAINT maintenance_vehicle_f	Table altered.	0
35	0.02	ALTER TABLE employee ADD CONSTRAINT employee_rent_a_car_bran	Table altered.	0
36	0.02	ALTER TABLE employee ADD CONSTRAINT employee_employee_role_f	Table altered.	0
37	0.04	CREATE OR REPLACE TRIGGER redundant_rent_m_of_bill_check BE	Trigger created.	0
38	0.02	CREATE OR REPLACE TRIGGER rental_agreement_status_to_vehicle	Trigger created.	0
39	0.05	CREATE OR REPLACE TRIGGER maintenance_status_to_vehicle BEFO	Trigger created.	0
40	0.03	CREATE OR REPLACE TRIGGER create_bill_according_to_rental_ag	Trigger created.	0
41	0.02	CREATE OR REPLACE TRIGGER late_return_compute AFTER INSERT O	Trigger created.	0
42	0.01	CREATE OR REPLACE TRIGGER maintenance_to_vehicle BEFORE INS	Trigger created.	0
43	0.02	CREATE OR REPLACE TRIGGER branch_added_trigger AFTER INSERT	Trigger created.	0
44	0.03	CREATE OR REPLACE TRIGGER vehicle_availability_check_before_	Trigger created.	0
45	0.01	CREATE OR REPLACE TRIGGER vehicle_availability_check_before_	Trigger created.	0
46	0.06	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
47	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
48	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
49	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
50	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
51	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
52	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
53	0.00	INSERT INTO employee_role (ROLE_ID, ROLE_NAME, ROLE_DESCRIP	1 row(s) inserted.	1
54	0.02	INSERT INTO rent_a_car_branch (BRANCH_ID, BRANCH_NAME, BRANC	1 row(s) inserted.	1
55	0.00	INSERT INTO rent_a_car_branch (BRANCH_ID, BRANCH_NAME, BRANC	1 row(s) inserted.	1
56	0.02	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
57	0.00	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
58	0.00	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
59	0.01	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
60	0.00	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
61	0.00	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
62	0.01	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1
63	0.00	INSERT INTO employee (EMPLOYEE_ID, BRANCH_ID, ROLE_ID, EMPLO	1 row(s) inserted.	1

[illegible]

128	0.01	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
129	0.00	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
130	0.00	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
131	0.01	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
132	0.00	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
133	0.00	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
134	0.01	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
135	0.00	INSERT INTO Customer (customer_id,customer_first_name,custom	1 row(s) inserted	1
136	0.05	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
137	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
138	0.01	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
139	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
140	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
141	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
142	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
143	0.01	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
144	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
145	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
146	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
147	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
148	0.01	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
149	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
150	0.01	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
151	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
152	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
153	0.01	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
154	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
155	0.00	INSERT INTO rental_agreement (rent_id,branch_id,bill_id,c	1 row(s) inserted	1
156	0.01	UPDATE bill SET payment_date = TO_DATE('31-DEC-2023','	1 row(s) updated	1
157	0.00	UPDATE bill SET payment_date = TO_DATE('22-DEC-2023','	1 row(s) updated	1
158	0.01	UPDATE bill SET payment_date = TO_DATE('28-DEC-2023','	1 row(s) updated	1
159	0.00	UPDATE bill SET payment_date = TO_DATE('30-DEC-2023','	1 row(s) updated	1

160	0.00	UPDATE bill SET payment_date = TO_DATE('31-DEC-2023','	1 row(s) updated	1
161	0.00	UPDATE bill SET payment_date = TO_DATE('29-DEC-2023','	1 row(s) updated	1
162	0.00	UPDATE bill SET payment_date = TO_DATE('27-DEC-2023','	1 row(s) updated	1
163	0.01	UPDATE bill SET payment_date = TO_DATE('26-DEC-2023','	1 row(s) updated	1
164	0.00	UPDATE bill SET payment_date = TO_DATE('25-DEC-2023','	1 row(s) updated	1
165	0.00	UPDATE bill SET payment_date = TO_DATE('24-DEC-2023','	1 row(s) updated	1
166	0.00	UPDATE bill SET payment_date = TO_DATE('29-DEC-2023','	1 row(s) updated	1
167	0.00	UPDATE bill SET payment_date = TO_DATE('30-DEC-2023','	1 row(s) updated	1