

4. Tasks Performed

Task-1: Create the tables and a user who have some privileges granted making use of DDL and DCL SQL Commands like CREATE, RENAME, ALTER and GRANT.

The screenshot shows the Oracle SQL Developer interface. In the central workspace, a script is being run to create a user and several tables. The script includes:

```
-- User Creation
CREATE USER retail_store
IDENTIFIED BY pass123;

GRANT CONNECT, RESOURCE TO retail_store;

-- Customer Table
CREATE TABLE Customers (
customer_id NUMBER GENERATED BY DEFAULT AS IDENTITY PRIMARY KEY,
first_name VARCHAR2(50),
last_name VARCHAR2(50),
email VARCHAR2(100) UNIQUE,
phone VARCHAR2(15),
city VARCHAR2(50),
registration_date DATE DEFAULT SYSDATE
);

-- Product Table
CREATE TABLE Products (
product_id NUMBER GENERATED BY DEFAULT AS IDENTITY PRIMARY KEY,
product_name VARCHAR2(100) NOT NULL,
category VARCHAR2(50),
price NUMBER(10,2) CHECK (price>0),
stock_quantity NUMBER(5) CHECK (stock_quantity >= 0)
);
```

The script output window shows the results of the table creations:

```
Table ORDERS created.

Table ORDERDETAILS created.
```

The screenshot shows the Oracle SQL Developer interface continuing the creation of tables. The script now includes:

```
-- Orders Table
CREATE TABLE Orders (
order_id NUMBER GENERATED BY DEFAULT AS IDENTITY PRIMARY KEY,
customer_id NUMBER REFERENCES Customers(customer_id),
order_date DATE DEFAULT SYSDATE,
total_amount NUMBER(10,2)
);

-- OrderDetails Table (Many-to-Many Orders & Products)
CREATE TABLE OrderDetails (
order_id NUMBER REFERENCES Orders(order_id),
product_id NUMBER REFERENCES Products(product_id),
quantity NUMBER(5) CHECK (quantity > 0),
PRIMARY KEY (order_id, product_id)
);

-- Payment Table
CREATE TABLE Payments (
payment_id NUMBER GENERATED BY DEFAULT AS IDENTITY PRIMARY KEY,
order_id NUMBER REFERENCES Orders(order_id),
payment_date DATE DEFAULT SYSDATE,
payment_method VARCHAR2(20),
amount NUMBER(10,2)
);
```

The script output window shows the results of the table creations:

```
Table ORDERS created.

Table ORDERDETAILS created.

Table PAYMENTS created.
```

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\DDLsql

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Worksheet Query Builder

```

order_id NUMBER REFERENCES Orders(order_id),
product_id NUMBER REFERENCES Products(product_id),
quantity NUMBER(5) CHECK (quantity > 0),
PRIMARY KEY (order_id, product_id)
);

-- Payment Table
CREATE TABLE Payments (
payment_id NUMBER GENERATED BY DEFAULT AS IDENTITY PRIMARY KEY,
order_id NUMBER REFERENCES Orders(order_id),
payment_date DATE DEFAULT SYSDATE,
payment_method VARCHAR2(20),
amount NUMBER(10,2)
);

-- Add a column to an existing table
ALTER TABLE Customers
ADD date_of_birth DATE;

```

SELECT * FROM Customers;

Script Output | Query Result

All Rows Fetched: 10 in 0.016 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE	DATE_OF_BIRTH
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25	(null)
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25	(null)
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25	(null)
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25	(null)
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25	(null)
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25	(null)
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25	(null)
8	Frank	Garcia	frank.r@example.com	9876543217	Dharmadka	26-07-25	(null)

Compiler - Log

messages Logging page Database schema Compiler

34°C Mostly cloudy

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Worksheet Query Builder

```

CREATE TABLE Payments (
payment_id NUMBER GENERATED BY DEFAULT AS IDENTITY PRIMARY KEY,
order_id NUMBER REFERENCES Orders(order_id),
payment_date DATE DEFAULT SYSDATE,
payment_method VARCHAR2(20),
amount NUMBER(10,2)
);

-- Add a column to an existing table
ALTER TABLE Customers
ADD date_of_birth DATE;

-- Rename a existing column
ALTER TABLE Customers
RENAME COLUMN date_of_birth TO dob;

-- Drop a column if not needed

```

SELECT * FROM Customers;

Script Output | Query Result

All Rows Fetched: 10 in 0.006 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE	DOB
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25	(null)
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25	(null)
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25	(null)
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25	(null)
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25	(null)
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25	(null)
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25	(null)
8	Frank	Garcia	frank.r@example.com	9876543217	Dharmadka	26-07-25	(null)

Compiler - Log

messages Logging page Database schema Compiler

Wi - AUS Game score

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Script Output X Query Result X

SQL All Rows Fetched: 10 in 0.003 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Dharmadhatu	26-07-25

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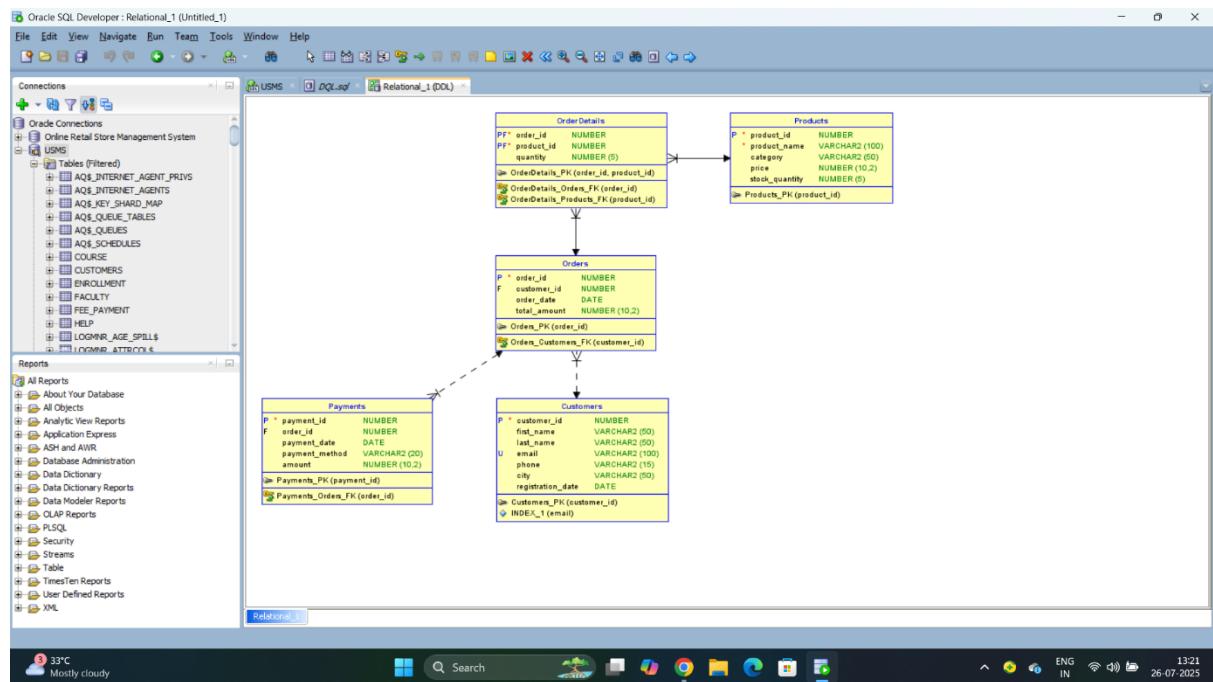
Script Output X Query Result X

SQL All Rows Fetched: 10 in 0.003 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Dharmadhatu	26-07-25

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Line 70 Column 30 Insert Modified Windows 15:36 26-07-2025 ENG IN



Task-2: Insert Sample records into the tables created using DML SQL Commands like Insert statements and understand the working of Update, Delete and Select statements

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DLL.sql Online Retail Store Management System~1 Worksheet Query Builder

```
-- Insert Records in Customers, Products, Orders, OrderDetails, Payments Table
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (1, 'John', 'Doe', 'john.doe@example.com', '9876543210', 'Delhi');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (2, 'Jane', 'Smith', 'jane.smith@example.com', '9876543211', 'Mumbai');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (3, 'Alice', 'Johnson', 'alice.j@example.com', '9876543212', 'Bangalore');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (4, 'Bob', 'Williams', 'bob.w@example.com', '9876543213', 'Chennai');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (5, 'Charlie', 'Brown', 'charlie.b@example.com', '9876543214', 'Kolkata');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (6, 'Diana', 'Miller', 'diana.m@example.com', '9876543215', 'Hyderabad');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (7, 'Eve', 'Davis', 'eve.d@example.com', '9876543216', 'Pune');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (8, 'Frank', 'Garcia', 'frank.g@example.com', '9876543217', 'Ahmedabad');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (9, 'Grace', 'Rodriguez', 'grace.r@example.com', '9876543218', 'Jaipur');
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (10, 'Henry', 'Martinez', 'henry.m@example.com', '9876543219', 'Lucknow');

INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (1, 'Laptop', 'Electronics', 55000, 20);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (2, 'Smartphone', 'Electronics', 32000, 50);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (3, 'Wireless Headphones', 'Audio', 8500, 100);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (4, 'Smartwatch', 'Wearable Tech', 12000, 30);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (5, 'Gaming Console', 'Electronics', 40000, 15);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (6, 'External Hard Drive', 'Storage', 6000, 75);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (7, 'Bluetooth Speaker', 'Audio', 4500, 120);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (8, 'Tablet', 'Electronics', 25000, 40);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (9, 'Monitor', 'Electronics', 18000, 25);
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (10, 'Webcam', 'Accessories', 3000, 200);

Script Output X | Task completed in 0.075 seconds
1 row inserted.
1 row inserted.
1 row inserted.
```

Saved: Online Retail Store Management System

29°C Haze

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DLL.sql Online Retail Store Management System~1 Worksheet Query Builder

```
INSERT INTO Products (product_id, product_name, category, price, stock_quantity) VALUES (1, 'Headphones', 'Accessories', 3000, 200);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (1, 1, 55000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (2, 2, 32000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (3, 3, 8500);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (4, 4, 12000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (5, 5, 40000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (6, 6, 6000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (7, 7, 4500);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (8, 8, 25000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (9, 9, 18000);
INSERT INTO Orders (order_id, customer_id, total_amount) VALUES (10, 10, 3000);

INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (1, 1, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (2, 2, 2);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (3, 3, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (4, 4, 3);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (5, 5, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (6, 6, 2);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (7, 7, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (8, 8, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (9, 9, 2);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (10, 10, 4);

Script Output X | Task completed in 0.061 seconds
1 row inserted.
1 row inserted.
1 row inserted.
```

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NZ - SA In 7 hours

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DLL.sql Online Retail Store Management System~1 Worksheet Query Builder

```
Script Output X | Task completed in 0.061 seconds
1 row inserted.
1 row inserted.
1 row inserted.
```

Line 45 Column 78 | Insert | Modified | Windows

26-07-2025 09:29 ENG IN

Oracle SQL Developer : Online Retail Store Management System~1

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Connections Oracle Connections Online Retail Store Management System

Worksheet Query Builder 0.079 seconds

```
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (1, 1, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (2, 2, 2);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (3, 3, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (4, 4, 3);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (5, 5, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (6, 6, 2);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (7, 7, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (8, 8, 1);
INSERT INTO OrderDetails (order_id, product_id, quantity) VALUES (9, 9, 2);
INSERT INTO OrderDetail (order_id, product_id, quantity) VALUES (10, 10, 4);

INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (1, 1, 'Credit Card', 55000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (2, 2, 'Debit Card', 32000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (3, 3, 'Net Banking', 8500);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (4, 4, 'UPI', 12000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (5, 5, 'Credit Card', 40000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (6, 6, 'Debit Card', 6000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (7, 7, 'Net Banking', 4500);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (8, 8, 'UPI', 25000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (9, 9, 'Credit Card', 18000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (10, 10, 'Debit Card', 3000);
```

Script Output X Task completed in 0.079 seconds

1 row inserted.
1 row inserted.
1 row inserted.

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Hot days ahead 29°C

Oracle SQL Developer : Online Retail Store Management System~2

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Connections Oracle Connections Online Retail Store Management System

Worksheet Query Builder

```
-- Query Records from Customers, Products, Orders, OrderDetails, Payments Table
```

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Script Output X Task completed in 0.079 seconds

1 row inserted.
1 row inserted.
1 row inserted.

Query Result X SQL All Rows Fetched: 10 in 0.005 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Ahmedabad	26-07-25
9	Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25
10	Henry	Martinez	henry.m@example.com	9876543219	Lucknow	26-07-25

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Connections Oracle Connections Online Retail Store Management System

Worksheet Query Builder

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Script Output X Task completed in 0.079 seconds

1 row inserted.
1 row inserted.
1 row inserted.

Query Result X SQL All Rows Fetched: 10 in 0.005 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Ahmedabad	26-07-25
9	Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25
10	Henry	Martinez	henry.m@example.com	9876543219	Lucknow	26-07-25

Line 3 Column 25 | Insert | Modified | Windows | 09:53 | ENG IN | 26-07-2025

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Oracle SQL Developer : Online Retail Store Management System~2

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Connections Oracle Connections Online Retail Store Management System Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_ATTRIBUTES LOGINR_ATTRIBUTES LOGINR_ATTRIBUTES LOGINR_ATTRIBUTES Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports CLAP Reports PLSQL Security Streams Table Timeten Reports User Defined Reports XML

Saved: Online Retail Store Management System~1 Finance headline India reported 6...

```
--> Query Records from Customers, Products, Orders, OrderDetails, Payments Table
SELECT * FROM Customers;
SELECT * FROM Products;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
SELECT * FROM Payments;
```

Query Result X | All Rows Fetched: 10 in 0.002 seconds

	PRODUCT_ID	PRODUCT_NAME	CATEGORY	PRICE	STOCK_QUANTITY
1	1	Laptop	Electronics	55000	20
2	2	Smartphone	Electronics	32000	50
3	3	Wireless Headphones	Audio	8500	100
4	4	Smartwatch	Wearable Tech	12000	30
5	5	Gaming Console	Electronics	40000	15
6	6	External Hard Drive	Storage	6000	75
7	7	Bluetooth Speaker	Audio	4500	120
8	8	Tablet	Electronics	25000	40
9	9	Monitor	Electronics	18000	25
10	10	Webcam	Accessories	3000	200

Line 4 Column 24 Insert Modified Windows 0953 26-07-2025 ENG IN

```
--> Query Records from Customers, Products, Orders, OrderDetails, Payments Table
SELECT * FROM Customers;
SELECT * FROM Products;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
SELECT * FROM Payments;
```

Query Result X | All Rows Fetched: 10 in 0.006 seconds

	ORDER_ID	CUSTOMER_ID	ORDER_DATE	TOTAL_AMOUNT
1	1	1	26-07-25	55000
2	2	2	26-07-25	32000
3	3	3	26-07-25	8500
4	4	4	26-07-25	12000
5	5	5	26-07-25	40000
6	6	6	26-07-25	6000
7	7	7	26-07-25	4500
8	8	8	26-07-25	25000
9	9	9	26-07-25	18000
10	10	10	26-07-25	3000

Line 5 Column 22 Insert Modified Windows 0954 26-07-2025 ENG IN

Oracle SQL Developer : Online Retail Store Management System~2

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Connections Oracle Connections Online Retail Store Management System Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_ATTRIBUTE\$ LOGINR_ATTRIBUTES Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports CLAP Reports PLSQL Security Streams Table TimenTen Reports User Defined Reports XML

Worksheet Query Builder

```
--> Query Records from Customers, Products, Orders, OrderDetails, Payments Table
SELECT * FROM Customers;
SELECT * FROM Products;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
SELECT * FROM Payments;
```

Query Result X

	ORDER_ID	PRODUCT_ID	QUANTITY
1	1	1	1
2	2	2	2
3	3	3	1
4	4	4	3
5	5	5	1
6	6	6	2
7	7	7	1
8	8	8	1
9	9	9	2
10	10	10	4

Line 6 Column 28 | Insert | Modified | Windows | 09:54 | ENG IN | 26-07-2025

Oracle SQL Developer : Online Retail Store Management System~1

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Connections Oracle Connections Online Retail Store Management System Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_ATTRIBUTE\$ LOGINR_ATTRIBUTES Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports CLAP Reports PLSQL Security Streams Table TimenTen Reports User Defined Reports XML

Worksheet Query Builder

```
--> Query Records from Customers, Products, Orders, OrderDetails, Payments Table
SELECT * FROM Customers;
SELECT * FROM Products;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
SELECT * FROM Payments;
```

Query Result X

	PAYMENT_ID	ORDER_ID	PAYMENT_DATE	PAYMENT_METHOD	AMOUNT
1	1	1	12-07-25	Credit Card	55000
2	2	2	22-07-25	Debit Card	32000
3	3	3	32-07-25	Net Banking	8500
4	4	4	42-07-25	UPI	12000
5	5	5	52-07-25	Credit Card	40000
6	6	6	62-07-25	Debit Card	6000
7	7	7	72-07-25	Net Banking	4500
8	8	8	82-07-25	UPI	25000
9	9	9	92-07-25	Credit Card	18000
10	10	10	102-07-25	Debit Card	3000

Line 7 Column 24 | Insert | Modified | Windows | 09:55 | ENG IN | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\DMLSql

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Connections Oracle Connections Online Retail Store Management System Tables (Filtered) Views Indexes Packages Procedures Functions Operators Queues Queues Tables Triggers Types Sequences Materialized Views Synonyms Public Synonyms Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimenTen Reports User Defined Reports XML

Script Output SQL | All Rows Fetched: 11 in 0.002 seconds

Customer ID First Name Last Name Email Phone City Registration Date

1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Müller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Ahmedabad	26-07-25
9	Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25
10	Henry	Martinez	henry.m@example.com	9876543219	Lucknow	26-07-25
11	Rifat	Zaidi	rifat.zaidi@example.com	7081536945	Lucknow	26-07-25

Compiler - Log messages Logging mode: statements Compiled | Line 60 Column 25 | Insert | Modified | Windows Q

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\DMLSql

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System Tables (Filtered) Views Indexes Packages Procedures Functions Operators Queues Queues Tables Triggers Types Sequences Materialized Views Synonyms Public Synonyms Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimenTen Reports User Defined Reports XML

Script Output SQL | All Rows Fetched: 11 in 0.002 seconds

Customer ID First Name Last Name Email Phone City Registration Date

1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Müller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Ahmedabad	26-07-25
9	Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25
10	Henry	Martinez	henry.m@example.com	9876543219	Lucknow	26-07-25
11	Rifat	Zaidi	rifat.zaidi@example.com	7081536945	Lucknow	26-07-25

Compiler - Log messages Logging mode: statements Compiled | Line 63 Column 75 | Insert | Modified | Windows Q

System status: 33°C Mostly cloudy

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\DMLSql

File Edit View Navigate Run Source Team Tools Window Help

Connections

Online Retail Store Management System

DML.sql

SQL Worksheet History

Worksheet Query Builder

```

INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (8, 8, 'UPI', 25000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (9, 9, 'Credit Card', 18000);
INSERT INTO Payments (payment_id, order_id, payment_method, amount) VALUES (10, 10, 'Debit Card', 3000);

-- Use of Insert, Update and Delete on an existing record
INSERT INTO Customers (customer_id, first_name, last_name, email, phone, city) VALUES (11, 'Rifat', 'Zaidi', 'rifat.zaidi@example.com', '7081536945', 'Lucknow');
SELECT * FROM Customers;

-- Update the email address of existing record
UPDATE Customers SET email='rifat.zaidi@gmail.com' WHERE customer_id = 11;
SELECT * FROM Customers;

-- Delete an existing record
DELETE FROM Customers WHERE customer_id = 11;
SELECT * FROM Customers;

```

All Reports

Customer Object

Analytic View Reports

Application Express

ASH and AWR

Database Administration

Data Dictionary

Data Dictionary Reports

Data Modeler Reports

OLAP Reports

PLSQL

Security

Streams

Table

TimesTen Reports

User Defined Reports

XML

Script Output | QueryResult | All Rows Fetched: 10 in 0.003 seconds

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25
3	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
4	Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25
5	Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25
6	Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25
7	Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25
8	Frank	Garcia	frank.g@example.com	9876543217	Ahmedabad	26-07-25
9	Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25
10	Henry	Martinez	henry.m@example.com	9876543219	Lucknow	26-07-25

Compiler - Log | Messages | Logging Page | Submissions | Compiled |

Saved: C:\Users\ASUS\OneDrive\Documents\DDL.sql

33°C Mostly cloudy

Search

Line 68 Column 25 | Insert | Modified | Windows: 1551 | ENG IN | 26-07-2025

Task-3: Answer the following key questions using DQL commands like SELECT statement combining with WHERE, AND, OR, NOT, LIKE, IS IN, JOINS, GROUP BY, HAVING and AGGREGATION FUNCTIONS (SUM, COUNT, AVG, MIN and MAX):

- Find all products priced above 20000
- Get customers from the city Delhi
- Find products in Electronics category priced above 10,000
- List customers who live in Delhi or Mumbai
- Get all customers not from Mumbai
- Find customers whose first name starts with 'J'
- Find customers whose last name ends with 'z'
- Find the products that contain the word 'on'
- Find customers whose second letter in first_name is 'o'
- Find customers whose second last letter in first_name is 'o'
- Find total number of orders placed by each customer
- Find the count, maximum, minimum, and average price of each category of product
- Find categories with total inventory value greater than 100,000
- Find the top 5 customers (by total order amount) from Delhi or Mumbai

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the 'Connections' tree, which includes 'Oracle Connections' and 'USMS' (selected). Under 'USMS', there are several schema nodes, including 'AOL_TABLES (Filtered)' which contains tables like AOL_INTERNET_AGENT_PRIVS, AOL_INTERNET_AGENTS, AOL_XEY_SHARD_MAP, AOL_XEYQUEUE_TABLES, AOL_QUEUES, AOL_SCHEDULES, COURSE, CUSTOMERS, ENROLLEMENT, FACULTY, FEE_PAYMENT, HELP, LOGMR_AGE_SPILL\$, and LOGMR_ATTRIBUTE\$. Below this is the 'Reports' section with various report types.

The main area has a 'Query Builder' tab selected. The code pane contains the following SQL queries:

```

-- Query Records from Customers, Products, Orders, OrderDetails, Payments Table
SELECT * FROM Customers;
SELECT * FROM Products;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
SELECT * FROM Payments;

-- Find all products priced above 20000
SELECT product_id, product_name, price
FROM Products
WHERE price>20000;

```

The 'Query Result' pane shows the output of the second query:

PRODUCT_ID	PRODUCT_NAME	PRICE
1	1 Laptop	55000
2	2 Smartphone	32000
3	5 Gaming Console	40000
4	6 Tablet	25000

The status bar at the bottom right indicates: Live 12 Columns 19 | Insert | Modified | Windows: C | ENG IN | 13:30 | 26-07-2025.

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS

Tables (Filtered)

- + AQ\$_INTERNET_AGENT_PRIVS
- + AQ\$_INTERNET_AGENTS
- + AQ\$_KEY_SHARD_MAP
- + AQ\$_QUEUE_TABLES
- + AQ\$_QUEUES
- + AQ\$_SCHEDULES
- + COURSE
- + CUSTOMERS
- + ENROLLMENT
- + FACULTY
- + FEE_PAYMENT
- + HELP
- + LOGONNR_AGE_SPILL\$
- + LOGONPR_ATTRIBUTES

Reports All Reports

- + About Your Database
- + All Objects
- + Analytic View Reports
- + Application Express
- + ASH and AWR
- + Database Administration
- + Data Dictionary
- + Data Dictionary Reports
- + Data Modeler Reports
- + OLAP Reports
- + PLSQL
- + Security
- + Stream
- + Table
- + TimesTen Reports
- + User Defined Reports
- + XML

Rain coming In about 2 hours

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS

Tables (Filtered)

- + AQ\$_INTERNET_AGENT_PRIVS
- + AQ\$_INTERNET_AGENTS
- + AQ\$_KEY_SHARD_MAP
- + AQ\$_QUEUE_TABLES
- + AQ\$_QUEUES
- + AQ\$_SCHEDULES
- + COURSE
- + CUSTOMERS
- + ENROLLMENT
- + FACULTY
- + FEE_PAYMENT
- + HELP
- + LOGONNR_AGE_SPILL\$
- + LOGONPR_ATTRIBUTES

Reports All Reports

- + About Your Database
- + All Objects
- + Analytic View Reports
- + Application Express
- + ASH and AWR
- + Database Administration
- + Data Dictionary
- + Data Dictionary Reports
- + Data Modeler Reports
- + OLAP Reports
- + PLSQL
- + Security
- + Stream
- + Table
- + TimesTen Reports
- + User Defined Reports
- + XML

33°C Mostly cloudy

```
-- Query Records from Customers, Products, Orders, OrderDetails, Payments Table
SELECT * FROM Customers;
SELECT * FROM Products;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
SELECT * FROM Payments;

-- Find all products priced above 20000
SELECT product_id, product_name, price
FROM Products
WHERE price>20000;

-- Get customers from the city 'Delhi'
SELECT customer_id, first_name, last_name FROM Customers
WHERE City = 'Delhi';

-- Find all products priced above 20000
SELECT product_id, product_name, price
FROM Products
WHERE price>20000;

-- Get customers from the city 'Delhi'
SELECT customer_id, first_name, last_name FROM Customers
WHERE City = 'Delhi';

-- Find products in Electronics category priced above 10,000
SELECT * FROM Products
WHERE price>10000 AND Category='Electronics';
```

Query Result

CUSTOMER_ID	FIRST_NAME	LAST_NAME
1	John	Doe

All Rows Fetched: 1 in 0.003 seconds

Line 16 Column 22 | Insert | Modified | Windows | 13:33 | ENG IN | 26-07-2025

Query Result

PRODUCT_ID	PRODUCT_NAME	CATEGORY	PRICE	STOCK_QUANTITY
1	1 Laptop	Electronics	55000	20
2	2 Smartphone	Electronics	32000	50
3	5 Gaming Console	Electronics	40000	15
4	8 Tablet	Electronics	25000	40
5	9 Monitor	Electronics	18000	25

All Rows Fetched: 5 in 0.031 seconds

Line 20 Column 46 | Insert | Modified | Windows | 13:35 | ENG IN | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGMNR_AGE_SPILL\$ LOGMNR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

SQL Worksheet History

Worksheet Query Builder

```

SELECT * FROM Payments;
-- Find all products priced above 20000
SELECT product_id, product_name, price
FROM Products
WHERE price>20000;

-- Get customers from the city 'Delhi'
SELECT customer_id, first_name, last_name FROM Customers
WHERE City = 'Delhi';

-- Find products in Electronics category priced above 10,000
SELECT * FROM Products
WHERE price>10000 AND Category='Electronics';

-- List customers who live in Delhi OR Mumbai
SELECT * FROM Customers
WHERE City='Delhi' OR City='Mumbai';

```

Query Result

	CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	1 John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25	
2	2 Jane	Smith	jane.smith@example.com	9876543211	Mumbai	26-07-25	

Line 24 Column 37 | Insert | Modified | Windows | 13:37 | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGMNR_AGE_SPILL\$ LOGMNR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

SQL Worksheet History

Worksheet Query Builder

```

FROM Products
WHERE price>20000;

-- Get customers from the city 'Delhi'
SELECT customer_id, first_name, last_name FROM Customers
WHERE City = 'Delhi';

-- Find products in Electronics category priced above 10,000
SELECT * FROM Products
WHERE price>10000 AND Category='Electronics';

-- List customers who live in Delhi OR Mumbai
SELECT * FROM Customers
WHERE City='Delhi' OR City='Mumbai';

-- Get all customers not from Mumbai
SELECT * FROM Customers
WHERE NOT City='Mumbai';

```

Query Result

	CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	1 John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25	
2	3 Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25	
3	4 Bob	Williams	bob.w@example.com	9876543213	Chennai	26-07-25	
4	5 Charlie	Brown	charlie.b@example.com	9876543214	Kolkata	26-07-25	
5	6 Diana	Miller	diana.m@example.com	9876543215	Hyderabad	26-07-25	
6	7 Eve	Davis	eve.d@example.com	9876543216	Pune	26-07-25	
7	8 Frank	Garcia	frank.g@example.com	9876543217	Ahmedabad	26-07-25	
8	9 Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25	
9	10 Henry	Martinez	henry.m@example.com	9876543219	Lucknow	26-07-25	

Line 28 Column 25 | Insert | Modified | Windows | 13:41 | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

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Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGMNR_AGE_SPILL\$ LOGMNR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

SQL Worksheet History

Query Builder

```

SELECT customer_id, first_name, last_name FROM Customers
WHERE City = 'Delhi';

-- Find products in Electronics category priced above 10,000
SELECT * FROM Products
WHERE price>10000 AND Category='Electronics';

-- List customers who live in Delhi OR Mumbai
SELECT * FROM Customers
WHERE City='Delhi' OR City='Mumbai';

-- Get all customers not from Mumbai
SELECT * FROM Customers
WHERE NOT City='Mumbai';

-- Find customers whose first name starts with 'J'
SELECT customer_id, first_name, last_name FROM Customers
WHERE first_name LIKE 'J%';

```

Query Result

CUSTOMER_ID	FIRST_NAME	LAST_NAME
1	John	Doe
2	Jane	Smith

Line 32 Column 28 | Insert | Modified | Windows | 13:44 | ENG IN | 26-07-2025

Wi - AUS Game Score

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

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Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGMNR_AGE_SPILL\$ LOGMNR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

SQL Worksheet History

Query Builder

```

SELECT * FROM Products
WHERE price>10000 AND Category='Electronics';

-- List customers who live in Delhi OR Mumbai
SELECT * FROM Customers
WHERE City='Delhi' OR City='Mumbai';

-- Get all customers not from Mumbai
SELECT * FROM Customers
WHERE NOT City='Mumbai';

-- Find customers whose first name starts with 'J'
SELECT customer_id, first_name, last_name FROM Customers
WHERE first_name LIKE 'J%';

-- Find customers whose last name ends with 'z'
SELECT customer_id, first_name, last_name FROM Customers
WHERE last_name LIKE '%z';

```

Query Result

CUSTOMER_ID	FIRST_NAME	LAST_NAME
9	Grace	Rodriguez
10	Henry	Martinez

Line 36 Column 22 | Insert | Modified | Windows | 13:47 | ENG IN | 26-07-2025

Rain coming In about 2 hours

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL.sql

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Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_AGE_SPILL\$ LOGINR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports CLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

SQL Worksheet History

Query Builder

```

SELECT * FROM Customers
WHERE City='Delhi' OR City='Mumbai';

-- Get all customers not from Mumbai
SELECT * FROM Customers
WHERE NOT City='Mumbai';

-- Find customers whose first name starts with 'J'
SELECT customer_id, first_name, last_name FROM Customers
WHERE first_name LIKE 'J%';

-- Find customers whose last name ends with 'z'
SELECT customer_id, first_name, last_name FROM Customers
WHERE last_name LIKE '%z';

-- Find the products that contain the word 'on'
SELECT * FROM Products
WHERE product_name LIKE '%on%';

```

Query Result

PRODUCT_ID	PRODUCT_NAME	CATEGORY	PRICE	STOCK_QUANTITY
1	2 Smartphone	Electronics	32000	50
2	3 Wireless Headphones	Audio	8500	100
3	5 Gaming Console	Electronics	40000	15
4	9 Monitor	Electronics	18000	25

Line 40 Column 32 | Insert | Modified | Windows | 13:51 | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_AGE_SPILL\$ LOGINR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports CLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

SQL Worksheet History

Query Builder

```

SELECT * FROM Customers
WHERE NOT City='Mumbai';

-- Find customers whose first name starts with 'J'
SELECT customer_id, first_name, last_name FROM Customers
WHERE first_name LIKE 'J%';

-- Find customers whose last name ends with 'z'
SELECT customer_id, first_name, last_name FROM Customers
WHERE last_name LIKE '%z';

-- Find the products that contain the word 'on'
SELECT * FROM Products
WHERE product_name LIKE '%on%';

-- Find customers whose second letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '_o%';

```

Query Result

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	john.doe@example.com	9876543210	Delhi	26-07-25
2	Alice	Johnson	alice.j@example.com	9876543212	Bangalore	26-07-25
3	Grace	Rodriguez	grace.r@example.com	9876543218	Jaipur	26-07-25

Line 44 Column 28 | Insert | Modified | Windows | 13:53 | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_AGE_SPILL\$ LOGINR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

33°C Mostly cloudy

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections Online Retail Store Management System USMS Tables (Filtered) AQ\$_INTERNET_AGENT_PRIVS AQ\$_INTERNET_AGENTS AQ\$_KEY_SHARD_MAP AQ\$_QUEUE_TABLES AQ\$_QUEUES AQ\$_SCHEDULES COURSE CUSTOMERS ENROLLMENT FACULTY FEE_PAYMENT HELP LOGINR_AGE_SPILL\$ LOGINR_ATTRIBUTE Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table TimesTen Reports User Defined Reports XML

33°C Mostly cloudy

Worksheet Query Builder

```

SELECT customer_id, first_name, last_name FROM Customers
WHERE first_name LIKE 'J%';

-- Find customers whose last name ends with 'n'
SELECT customer_id, first_name, last_name FROM Customers
WHERE last_name LIKE '%n';

-- Find the products that contain the word 'on'
SELECT * FROM Products
WHERE product_name LIKE '%on%';

-- Find customers whose second letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '_o%';

-- Find customers whose second last letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '%o_';

```

Query Result

CUSTOMER_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE	CITY	REGISTRATION_DATE
1	John	Doe	John.doe@example.com	9876543210	Delhi	26-07-25
2	Alice	Johnson	Alice.j@example.com	9876543212	Bangalore	26-07-25

All Rows Fetched: 2 in 0.004 seconds

Line 48 Column 28 | Insert | Modified | Windows | 13:54 | ENG IN | 26-07-2025

Worksheet Query Builder

```

-- Find the products that contain the word 'on'
SELECT * FROM Products
WHERE product_name LIKE '%on%';

-- Find customers whose second letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '_o%';

-- Find customers whose second last letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '%o_';

-- Find total number of orders placed by each customer
SELECT c.first_name, COUNT(o.order_id) AS total_orders
FROM Customers c
JOIN Orders o ON c.customer_id = o.customer_id
GROUP BY c.first_name;

```

Query Result

FIRST_NAME	TOTAL_ORDERS
John	1
Jane	1
Alice	1
Bob	1
Charlie	1
Diana	1
Eve	1
Frank	1
Grace	1
Henry	1

All Rows Fetched: 10 in 0.01 seconds

Line 54 Column 23 | Insert | Modified | Windows | 13:58 | ENG IN | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

File Edit View Navigate Run Source Team Tools Window Help

Connections USMS DQL.sql

Tables (Filtered)

- + Online Retail Store Management System
- + USMS
 - + Tables (Filtered)
 - + AQ\$_INTERNET_AGENT_PRIVS
 - + AQ\$_INTERNET_AGENTS
 - + AQ\$_KEY_SHARD_MAP
 - + AQ\$_QUEUE_TABLES
 - + AQ\$_QUEUES
 - + AQ\$_SCHEDULES
 - + COURSE
 - + CUSTOMERS
 - + ENROLLMENT
 - + FACULTY
 - + FEE_PAYMENT
 - + HELP
 - + LOGINR_AGE_SPILL\$
 - + LOGINR_ATTROLE\$

All Reports

- + About Your Database
- + All Objects
- + Analytic View Reports
- + Application Express
- + ASH and AWR
- + Database Administration
- + Data Dictionary
- + Data Dictionary Reports
- + Data Modeler Reports
- + OLAP Reports
- + PLSQL
- + Security
- + Stream
- + Table
- + TimesTen Reports
- + User Defined Reports
- + XML

33°C Mostly cloudy

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQL

File Edit View Navigate Run Source Team Tools Window Help

Connections USMS DQL.sql

Tables (Filtered)

- + Online Retail Store Management System
- + USMS
 - + Tables (Filtered)
 - + AQ\$_INTERNET_AGENT_PRIVS
 - + AQ\$_INTERNET_AGENTS
 - + AQ\$_KEY_SHARD_MAP
 - + AQ\$_QUEUE_TABLES
 - + AQ\$_QUEUES
 - + AQ\$_SCHEDULES
 - + COURSE
 - + CUSTOMERS
 - + ENROLLMENT
 - + FACULTY
 - + FEE_PAYMENT
 - + HELP
 - + LOGINR_AGE_SPILL\$
 - + LOGINR_ATTROLE\$

All Reports

- + About Your Database
- + All Objects
- + Analytic View Reports
- + Application Express
- + ASH and AWR
- + Database Administration
- + Data Dictionary
- + Data Dictionary Reports
- + Data Modeler Reports
- + OLAP Reports
- + PLSQL
- + Security
- + Stream
- + Table
- + TimesTen Reports
- + User Defined Reports
- + XML

33°C Mostly cloudy

Worksheet Query Builder

```
-- Find customers whose second letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '_o%';

-- Find customers whose second last letter in first_name is 'o'
SELECT * FROM Customers
WHERE last_name LIKE '%o_';

-- Find total number of orders placed by each customer
SELECT c.first_name, COUNT(o.order_id) AS total_orders
FROM Customers c
JOIN Orders o ON c.customer_id = o.customer_id
GROUP BY c.first_name;

-- Find the count, maximum, minimum, and average price of each category of product
SELECT Category, COUNT(price), MAX(price), MIN(price), AVG(price)
FROM Products
GROUP BY Category;
```

Query Result

Category	COUNT(PRICE)	MAX(PRICE)	MIN(PRICE)	Avg(PRICE)
1 Electronics	5	55000	18000	34000
2 Audio	2	8500	4500	6500
3 Wearable Tech	1	12000	12000	12000
4 Storage	1	6000	6000	6000
5 Accessories	1	3000	3000	3000

Line 59 Column 19 | Insert | Modified | Windows | 14:10 | ENG IN | 26-07-2025

Worksheet Query Builder

```
-- Find total number of orders placed by each customer
SELECT c.first_name, COUNT(o.order_id) AS total_orders
FROM Customers c
JOIN Orders o ON c.customer_id = o.customer_id
GROUP BY c.first_name;

-- Find the count, maximum, minimum, and average price of each category of product
SELECT Category, COUNT(price), MAX(price), MIN(price), AVG(price)
FROM Products
GROUP BY Category;

-- Find categories with total inventory value greater than 100,000
SELECT category, SUM(price * stock_quantity) total_value
FROM Products
GROUP BY Category
HAVING SUM(price * stock_quantity) > 100000;
```

Query Result

Category	TOTAL_VALUE
1 Electronics	4750000
2 Audio	1390000
3 Wearable Tech	360000
4 Storage	450000
5 Accessories	600000

Line 65 Column 45 | Insert | Modified | Windows | 14:14 | ENG IN | 26-07-2025

Oracle SQL Developer : C:\Users\ASUS\OneDrive\Documents\SQLs\

File Edit View Navigate Run Source Team Tools Window Help

Connections USMS DQL.sql

SQL Worksheet History

Worksheet Query Builder

Tables (Filtered)

- AQS_INTERNET_AGENT_PRIVS
- AQS_INTERNET_AGENTS
- AQS_KEY_SHARD_MAP
- AQS_QUEUE_TABLES
- AQS_QUEUES
- AQS_SCHEDULES
- COURSE
- CUSTOMERS
- ENROLLMENT
- FACULTY
- FEES_PAYMENT
- HELP
- LOGONNR_AGE_SPILL\$
- LYNNMR_ATTRIBUTES

Reports All Reports

- About Your Database
- Database Objects
- Analytic View Reports
- Application Express
- ASH and AWR
- Database Administration
- Data Dictionary
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- PLSQL
- Security
- Streams
- Table
- TimesTen Reports
- User Defined Reports
- XML

33°C Mostly cloudy

Search

Line 75 Column 25 | Insert | Modified | Windows: C

14:16 26-07-2025

```
-- Find categories with total inventory value greater than 100,000
SELECT category, SUM(price * stock_quantity) total_value
FROM Products
GROUP BY Category
HAVING SUM(price * stock_quantity) > 100000;

-- Find the top 5 customers (by total order amount) from Delhi or Mumbai
SELECT c.first_name, c.last_name, c.city, SUM(o.total_amount) total_spent
FROM Customers c
JOIN Orders o ON c.customer_id = o.customer_id
WHERE c.city IN ('Delhi', 'Mumbai')
GROUP BY c.first_name, c.last_name, c.city
HAVING SUM(o.total_amount) > 20000
ORDER BY total_spent DESC
FETCH FIRST 5 ROWS ONLY;
```

FIRST_NAME	LAST_NAME	CITY	TOTAL_SPENT
John	Doe	Delhi	55000
Jane	Smith	Mumbai	32000

Task-4: Create Views for top selling products and query using SELECT statement

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the 'Connections' tree, which includes the 'Online Retail Store Management System' connection and various schema objects like AQ\$_INTERNET_AGENT_PRIVS, AQ\$_KEY_SHARD_MAP, AQ\$_QUEUE_TABLES, AQ\$_QUEUES, AQ\$_SCHEDULES, COURSE, CUSTOMERS, ENROLLMENT, FACULTY, FEE_PAYMENT, HELP, LOGMR\$_AGE_SPILLS\$, and LOGMR\$_ATTRCOLS\$. Below this is the 'Reports' section with various report types.

The main workspace is titled 'Worksheet' and contains a 'Query Builder' tab. The code area contains the following SQL:

```
-- Views for top selling products
CREATE VIEW topselling AS
SELECT p.product_name, SUM(od.quantity) AS total_sold
FROM Products p
JOIN OrderDetails od ON p.product_id = od.product_id
GROUP BY p.product_name
ORDER BY total_sold DESC;

SELECT * FROM topselling;
```

Below the code, the 'Script Output' tab shows the results of the query:

PRODUCT_NAME	TOTAL SOLD
1 Webcam	4
2 Smartwatch	3
3 Monitor	2
4 Smartphone	2
5 External Hard Drive	2
6 Tablet	1
7 Bluetooth Speaker	1
8 Wireless Headphones	1
9 Laptop	1
10 Gaming Console	1

The status bar at the bottom indicates the file is saved at 'C:\Users\ASUS\OneDrive\Documents\DQL.sql', the current temperature is 33°C, the weather is mostly cloudy, and the system date and time are 26-07-2025 14:25.

Task-5: Create an index on product name for faster search

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the 'Connections' tree, which includes a connection to 'Online Retail Store Management System' (USMS) containing tables like AQ\$_KEY_SHARD_MAP_PK, AQ\$_QUEUE_TABLES_PRIMARY, and IDX_PRODUCT_NAME. The main workspace is titled 'USMS : IDX_PRODUCT_NAME'. It contains a 'Worksheet' tab with the following SQL code:

```
-- Views for top selling products
CREATE VIEW topselling AS
SELECT p.product_name, SUM(od.quantity) AS total_sold
FROM Products p
JOIN OrderDetails od ON p.product_id = od.product_id
GROUP BY p.product_name
ORDER BY total_sold DESC;

SELECT * FROM topselling;

-- Create index on product name for faster search
CREATE INDEX idx_product_name ON Products(product_name);
```

Below the worksheet is a 'Script Output' tab showing the results of the query:

PRODUCT_NAME	TOTAL SOLD
1 Webcam	4
2 Smartwatch	3
3 Monitor	2
4 Smartphone	2
5 External Hard Drive	2
6 Tablet	1
7 Bluetooth Speaker	1
8 Wireless Headphones	1
9 Laptop	1
10 Gaming Console	1

The status bar at the bottom right indicates the date and time: 26-07-2025, 14:36.

This screenshot shows the Oracle SQL Developer interface again, but this time the 'IDX_PRODUCT_NAME' index is selected in the 'Index' section of the 'Connections' tree. The main workspace shows the index details:

INDEX_OWNER	INDEX_NAME	TABLE_OWNER	TABLE_NAME	COLUMN_NAME	COLUMN_POSITION	DESCEND
SYSTEM	IDX_PRODUCT_NAME	SYSTEM	PRODUCTS	PRODUCT_NAME	1	ASC

The status bar at the bottom right indicates the date and time: 26-07-2025, 14:36.

Task-6: Create a PL/SQL function which returns total number of products based on category and also test the function by passing a sample value using dual

```

-- Create index on product name for faster search
CREATE INDEX idx_product_name ON Products(product_name);

-- Create a function which returns total number of products based on category
CREATE OR REPLACE FUNCTION Gettotalproducts(categ VARCHAR)
RETURN NUMBER IS
number_of_products NUMBER;
BEGIN
SELECT COUNT(*) INTO number_of_products FROM products WHERE Category=categ;
RETURN number_of_products;
END;

```

```

Function GETTOTALPRODUCTS compiled

```

```

-- Create index on product name for faster search
CREATE INDEX idx_product_name ON Products(product_name);

-- Create a function which returns total number of products based on category
CREATE OR REPLACE FUNCTION Gettotalproducts(categ VARCHAR)
RETURN NUMBER IS
number_of_products NUMBER;
BEGIN
SELECT COUNT(*) INTO number_of_products FROM products WHERE Category=categ;
RETURN number_of_products;
END;

SELECT gettotalproducts('Electronics') FROM dual;

```

```

1 GETTOTALPRODUCTS(ELECTRONICS)
1 5

```

Task-7: Create a PL/SQL procedure to update the stock in products table and execute the procedure using EXEC statement

```

-- Oracle SQL Developer : USMS
File Edit View Navigate Run Source Team Tools Window Help
Connections Online Retail Store Management System USMS
Tables (Filtered)
Views
Indexes
AQ$KEY_SHARD_MAP_PK
AQ$QUEUE_TABLES_PRIMARY
AQ$QUEUES_CHECK
AQ$QUEUES_PRIMARY
AQ$SCHEDULES_CHECK
AQ$SCHEDULES_PRIMARY
HELP_TOPIC_SEED
I1_QUEUE_TABLES
LOGMR_AGE_SPILL$_PK
LOGMR_DID$_PK
Idx_PRODUCT_NAME
Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table Timeten Reports User Defined Reports XML
34°C Mostly cloudy
Oracle SQL Developer : USMS
File Edit View Navigate Run Source Team Tools Window Help
Connections Online Retail Store Management System USMS
Tables (Filtered)
Views
Indexes
AQ$KEY_SHARD_MAP_PK
AQ$QUEUE_TABLES_PRIMARY
AQ$QUEUES_CHECK
AQ$QUEUES_PRIMARY
AQ$SCHEDULES_CHECK
AQ$SCHEDULES_PRIMARY
HELP_TOPIC_SEED
I1_QUEUE_TABLES
LOGMR_AGE_SPILL$_PK
LOGMR_DID$_PK
Idx_PRODUCT_NAME
Reports All Reports About Your Database All Objects Analytic View Reports Application Express ASH and AWR Database Administration Data Dictionary Data Dictionary Reports Data Modeler Reports OLAP Reports PLSQL Security Streams Table Timeten Reports User Defined Reports XML
34°C Mostly cloudy

```

Session 1 (Top):

```

CREATE OR REPLACE FUNCTION gettotalproducts(categ VARCHAR2)
RETURN NUMBER IS
number_of_products NUMBER;
BEGIN
SELECT COUNT(*) INTO number_of_products FROM products WHERE Category=categ;
RETURN number_of_products;
END;

SELECT gettotalproducts('Electronics') FROM dual;

-- Create a procedure to update the stock in products table
CREATE OR REPLACE PROCEDURE Updatestock (p_id NUMBER, qty NUMBER) AS
BEGIN
UPDATE Products SET stock_quantity = stock_quantity - qty WHERE product_id = p_id;
END;

```

Session 2 (Bottom):

```

CREATE OR REPLACE FUNCTION gettotalproducts(categ VARCHAR2)
RETURN NUMBER IS
number_of_products NUMBER;
BEGIN
SELECT COUNT(*) INTO number_of_products FROM products WHERE Category=categ;
RETURN number_of_products;
END;

SELECT gettotalproducts('Electronics') FROM dual;

-- Create a procedure to update the stock in products table
CREATE OR REPLACE PROCEDURE Updatestock (p_id NUMBER, qty NUMBER) AS
BEGIN
UPDATE Products SET stock_quantity = stock_quantity - qty WHERE product_id = p_id;
END;

EXEC updatestock(1,10);

```

Query Result:

PRODUCT_ID	PRODUCT_NAME	CATEGORY	PRICE	STOCK_QUANTITY
1	1 Laptop	Electronics	55000	10
2	2 Smartphone	Electronics	32000	50
3	3 Wireless Headphones	Audio	8500	100
4	4 Smartwatch	Wearable Tech	12000	30
5	5 Gaming Console	Electronics	40000	15
6	6 External Hard Drive	Storage	6000	75
7	7 Bluetooth Speaker	Audio	4500	120
8	8 Tablet	Electronics	25000	40
9	9 Monitor	Electronics	18000	25
...