**DAY-2(SQL)**

1. Write an SQL query to retrieve the names and email addresses of all employees from a table named "Employees".

Ans: **SELECT name, email FROM Employees;**

2. Write an SQL query to filter records from a table named "Customers" where the "City" column is 'New York'.

Ans: **SELECT \* FROM Customers WHERE City = 'New York';**

3. Write an SQL query to sort records in descending order based on the "DateOfBirth" column in a table named "Users".

Ans: **SELECT \* FROM Users ORDER BY DateOfBirth DESC;**

4. Write an SQL query to sort records in ascending order based on the "RegistrationDate" column in a table named "Users".

Ans: **SELECT \* FROM Users ORDER BY RegistrationDate ASC;**

5. Write an SQL query to find the employee with the highest salary from a table named "Employees" and display their name, position, and salary.

Ans: **SELECT name, position, salary**

**FROM Employees WHERE salary = (SELECT MAX(salary) FROM Employees);**

6. Write an SQL query to retrieve records from a table named "Customers" where the "Phone" column matches the pattern '+1-XXX-XXX-XXXX'.

Ans: **SELECT \* FROM Customers WHERE Phone LIKE '+1-XXX-XXX-XXXX';**

7. Write an SQL query to retrieve the top 5 customers with the highest total purchase amount from a table named "Orders" and display their names and total purchase amounts.

Ans: **SELECT customer\_name, SUM(purchase\_amount) AS total\_purchase\_amount**

**FROM Orders**

**GROUP BY customer\_name**

**ORDER BY total\_purchase\_amount DESC**

**LIMIT 5;**

8. Write an SQL query to calculate the percentage of sales for each product category in a table named "Sales" and display the category name, total sales amount, and the percentage of total sales.

Ans: **SELECT ProductCategory,**

**SUM(SalesAmount) AS TotalSalesAmount,**

**(SUM(SalesAmount) / (SELECT SUM(SalesAmount) FROM Sales)) \* 100 AS PercentageOfTotalSales**

**FROM**

**Sales**

**GROUP BY**

**ProductCategory;**

9. Write an SQL query to find the customers who have made the highest total purchases across all years from a table named "Orders" and display their names, email addresses, and the total purchase amount.

Ans: **SELECT CustomerName, EmailAddress, SUM(PurchaseAmount) AS TotalPurchaseAmount FROM Orders GROUP BY CustomerName, EmailAddress HAVING SUM(PurchaseAmount) = (SELECT MAX(TotalPurchaseAmount) FROM**

**(SELECT CustomerName, EmailAddress, SUM(PurchaseAmount) AS TotalPurchaseAmount FROM Orders GROUP BY CustomerName,**

**EmailAddress) AS SubQuery);**

**Submission Guidelines:**

1. Answer all the questions in a single Jupyter Notebook file (.ipynb).

2. Include necessary code, comments, and explanations to support your answers and implementation.

3. Ensure the notebook runs without errors and is well-organized.

4. Create a GitHub repository to host your assignment files.

5. Rename the Jupyter Notebook file using the format "date\_month\_topic.ipynb" (e.g., "12\_July\_SQL.ipynb").

6. Place the Jupyter Notebook file in the repository.

7. Commit and push any additional files or resources required to run your code (if applicable) to the repository.

8. Ensure the repository is publicly accessible.

9. Submit the link to your GitHub repository as the assignment submission.

**Grading Criteria:**

1. Understanding and completeness of answers: 40%

2. Clarity and depth of explanations: 25%

3. Correct implementation and evaluation of matrix operations: 15%

4. Proper code implementation and organization: 10%

5. Overall presentation and adherence to guidelines: 10%

**Note:- Create your assignment in Jupyter notebook and upload it to GitHub & share that uploaded assignment file link through your dashboard. Make sure the repository is public.**