Complete SQL Exercises with Questions and Answers

1. Find employees with last names that contain the letter 'o'

Question: Write a query to find all employees whose LastName contains the letter 'o'.

Answer:

SELECT * FROM Employees

WHERE LastName LIKE '%o%';

2. Select employees from the IT department, sorted by JobTitle

Question: Write a query to find all employees in the IT department, sorted by JobTitle in ascending order.

Answer:

SELECT * FROM Employees

WHERE Department = 'IT'

ORDER BY JobTitle ASC;

3. Select specific columns and filter by EmployeeID greater than 5

Question: Write a query to retrieve only the FirstName, LastName, and JobTitle of employees whose EmployeeID is greater than 5.

Answer:

SELECT FirstName, LastName, JobTitle

FROM Employees

WHERE EmployeeID > 5;

4. Count how many developers are in the company

Question: Write a query to count how many employees have the JobTitle of 'Developer'.

Answer:

SELECT COUNT(*) AS 'Number of Developers'

FROM Employees

WHERE JobTitle = 'Developer';

5. Filter by department and count employees

Question: Write a query to find how many employees are in the Sales department.

Answer:

SELECT COUNT(*) AS 'Number of Sales Employees'

FROM Employees

WHERE Department = 'Sales';

6. Find employees with JobTitle ending with 'r'

Question: Write a query to find all employees whose JobTitle ends with the letter 'r'.

Answer:

SELECT * FROM Employees

WHERE JobTitle LIKE '%r';

7. Find employees with last names longer than 5 characters

Question: Write a query to find all employees whose LastName is longer than 5 characters.

Answer:

SELECT * FROM Employees

WHERE LEN(LastName) > 5;

8. Select employees whose first and last names start with the same letter

Question: Write a query to find all employees whose FirstName and LastName start with the same

letter.

Answer:

SELECT * FROM Employees

WHERE LEFT(FirstName, 1) = LEFT(LastName, 1);

9. Find employees with EmployeeID divisible by 3

Question: Write a query to find all employees whose EmployeeID is divisible by 3.

Answer:

SELECT * FROM Employees

WHERE EmployeeID % 3 = 0;

10. Count how many employees have the letter 'a' in both first and last names

Question: Write a query to count how many employees have the letter 'a' in both their FirstName and LastName.

Answer:

SELECT COUNT(*) AS 'Employees with A in First and Last Names'

FROM Employees

WHERE FirstName LIKE '%a%' AND LastName LIKE '%a%';

11. Display the first name and job title, concatenated as one column

Question: Write a query to display the FirstName and JobTitle concatenated into a single column, separated by a dash (-).

Answer:

SELECT FirstName + ' - ' + JobTitle AS 'Name and Job'

FROM Employees;

12. Update all employees in the Marketing department to have the JobTitle of 'Senior Designer'

Question: Write a query to update the JobTitle of all employees in the Marketing department to 'Senior Designer'.

Answer:

UPDATE Employees

SET JobTitle = 'Senior Designer'

WHERE Department = 'Marketing';

13. Delete employees whose LastName starts with 'W'

Question: Write a query to delete all employees whose LastName starts with the letter 'W'.

Answer:

DELETE FROM Employees

WHERE LastName LIKE 'W%';

14. Select employees from the IT department and filter by first names starting with 'A'

Question: Write a query to find all employees in the IT department whose FirstName starts with the letter 'A'.

Answer:

SELECT * FROM Employees

WHERE Department = 'IT' AND FirstName LIKE 'A%';

15. Filter by specific JobTitle and count them

Question: Write a query to count how many employees have the JobTitle of 'Manager'.

Answer:

SELECT COUNT(*) AS 'Number of Managers'

FROM Employees

WHERE JobTitle = 'Manager';

16. Sort employees by EmployeeID in descending order

Question: Write a query to display all employees ordered by EmployeeID in descending order.

Answer:

SELECT * FROM Employees

ORDER BY EmployeeID DESC;

17. Select employees where both the first and last name contain the letter 'i'

Question: Write a query to find all employees whose FirstName and LastName both contain the letter 'i'.

Answer:

SELECT * FROM Employees

WHERE FirstName LIKE '%i%' AND LastName LIKE '%i%';

18. Find employees where EmployeeID is an odd number

Question: Write a query to find all employees with an odd EmployeeID.

Answer:

SELECT * FROM Employees

WHERE EmployeeID % 2 <> 0;

19. Select employees whose first names end with the letter 'e'

Question: Write a query to find all employees whose FirstName ends with the letter 'e'.

Answer:

SELECT * FROM Employees

WHERE FirstName LIKE '%e';

20. Count how many employees are in the IT department

Question: Write a query to count how many employees are in the IT department.

Answer:

SELECT COUNT(*) AS 'Number of IT Employees'

FROM Employees

WHERE Department = 'IT';

21. Filter employees with last names starting with 'C' or ending with 'n'

Question: Write a query to find all employees whose LastName starts with 'C' or ends with 'n'.

Answer:

SELECT * FROM Employees

WHERE LastName LIKE 'C%' OR LastName LIKE '%n';

22. Update employees with EmployeeID divisible by 2 to have JobTitle 'Junior'

Question: Write a query to update the JobTitle to 'Junior' for all employees whose EmployeeID is divisible by 2.

Answer:

UPDATE Employees

SET JobTitle = 'Junior'

WHERE EmployeeID % 2 = 0;

23. Find employees with last names containing exactly 6 characters

Question: Write a query to find all employees whose LastName contains exactly 6 characters.

Answer:

SELECT * FROM Employees

WHERE LEN(LastName) = 6;

24. Filter employees whose first name starts with a vowel

Question: Write a query to find all employees whose FirstName starts with a vowel.

Answer:

SELECT * FROM Employees

WHERE FirstName LIKE 'A%' OR FirstName LIKE 'E%' OR FirstName LIKE 'I%' OR FirstName LIKE 'O%' OR FirstName LIKE 'U%';

25. Find employees whose JobTitle starts with 'D' and count them

Question: Write a query to count all employees whose JobTitle starts with 'D'.

Answer:

SELECT COUNT(*) AS 'Employees with JobTitle D'

FROM Employees

WHERE JobTitle LIKE 'D%';