

INFOSYS INTERNSHIP 6.0

SQL TASK

1. Create a table

```
CREATE TABLE Employees (  
    EmpID INT PRIMARY KEY,  
    Name VARCHAR(100),  
    Department VARCHAR(50),  
    Salary INT  
);
```

2. Insert data into table

```
INSERT INTO Employees (EmpID, Name, Department, Salary)  
VALUES (1, 'Alice', 'HR', 50000),  
      (2, 'Bob', 'IT', 60000),  
      (3, 'Charlie', 'Finance', 55000);
```

3. Select all records

```
SELECT * FROM Employees;
```

4. Filtering with WHERE

```
SELECT * FROM Employees WHERE Department = 'IT';
```

5. Sorting results

```
SELECT * FROM Employees ORDER BY Salary DESC;
```

6. Count total employees

```
SELECT COUNT(*) AS TotalEmployees FROM Employees;
```

7. Get average salary

```
SELECT AVG(Salary) AS AverageSalary FROM Employees;
```

8. Find employees with salary greater than 55000

```
SELECT Name FROM Employees WHERE Salary > 55000;
```

9. Update salary

```
UPDATE Employees SET Salary = Salary + 5000 WHERE Department = 'IT';
```

10. Delete an employee

```
DELETE FROM Employees WHERE EmpID = 3;
```

11. Group by department (aggregation)

```
SELECT Department, COUNT(*) AS CountDept, AVG(Salary) AS AvgSalary  
FROM Employees  
GROUP BY Department;
```

12. Use of HAVING with GROUP BY

```
SELECT Department, AVG(Salary) AS AvgSal  
FROM Employees  
GROUP BY Department  
HAVING AVG(Salary) > 55000;
```

13. Find highest salary employee

```
SELECT Name, Salary FROM Employees  
WHERE Salary = (SELECT MAX(Salary) FROM Employees);
```

14. Use of LIKE operator

```
SELECT * FROM Employees WHERE Name LIKE 'A%';  
-- Names starting with 'A'
```

15. Create a join between two tables

```
CREATE TABLE Departments (  
    DeptID INT PRIMARY KEY,  
    DeptName VARCHAR(50)  
);  
-- Example join  
SELECT e.Name, d.DeptName  
FROM Employees e  
JOIN Departments d ON e.Department = d.DeptName;
```

16. Subquery example

```
SELECT Name FROM Employees  
WHERE Salary > (SELECT AVG(Salary) FROM Employees);
```

17. DISTINCT usage

```
SELECT DISTINCT Department FROM Employees;
```

18. BETWEEN operator

```
SELECT * FROM Employees WHERE Salary BETWEEN 50000 AND 60000;
```

19. IN operator

```
SELECT * FROM Employees WHERE Department IN ('IT', 'HR');
```

20. ALTER TABLE to add a new column

```
ALTER TABLE Employees ADD JoiningDate DATE;
```