CREATE TABLE DEPARTMENT (

Dno INTEGER NOT NULL PRIMARY KEY,

Dname VARCHAR(50),

Location VARCHAR(50) DEFAULT 'New Delhi'

);

CREATE TABLE EMPLOYEE (

Eno CHAR(3) NOT NULL PRIMARY KEY,

Ename VARCHAR(50) NOT NULL,

Job\_type VARCHAR(50) NOT NULL,

SupervisonENO CHAR(3),

Hire\_date DATE NOT NULL,

Dno INTEGER,

Commission DECIMAL(10,2),

Salary DECIMAL(7,2) NOT NULL,

CONSTRAINT fk\_emp\_dept FOREIGN KEY (Dno) REFERENCES

DEPARTMENT(Dno),

CONSTRAINT fk\_emp\_supervision FOREIGN KEY (SupervisonENO)

REFERENCES EMPLOYEE(Eno)

);

INSERT INTO EMPLOYEE VALUES

('778','John Smith','Managing Director',NULL,'1980-06-12', 10, NULL,

5800.23),

('153','Andy Beaford','Manager','778','2000-09-08', 40, NULL, 502.30),

('023','Dhruv Bhardwaj','Manager','778','1981-11-21', 30, NULL, 2465.92),

('025','Anmol Atri','Manager','778','1981-09-11', 40, NULL, 2865.92),

('086','Tania Sharma','Manager','1778','1983-08-14', 90, 235.90, 2921.37),

('089','Alicia Jones','Manager','778','1982-10-26', 95, NULL, 980.35),

('232','Isa Jaques','Manager','778','1996-07-23', 45, NULL, 651.05),

('520','King Hethron','Manager','778','2015-10-13', 90, NULL, 497.18),

('188','Sherline Harbord','Manager','778','1995-08-05', 40, NULL, 926.42),

('146','Donielle Tuite','Intern','520','2016-06-12', 90, NULL, 171.60),

('125','Gurpreet Singh','Intern',NULL,'2008-05-15', NULL, NULL, 521.37),

('243','Marie Brahms','Engineer','023','1983-06-22', 40, NULL, 876.78),

('299','Mahala Burtwhistle','Analyst','089','1990-07-20', 95, NULL, 602.86),

('354','Bryna McKenny','Analyst','153','2001-10-11', 90, NULL, 693.63),

('421','Ulberto Gosz','Assistant',NULL,'2017-02-07', 10, NULL, 381.64),

('442','Netti Dellenbrok','Designer','023','2014-05-14', 30, NULL, 790.82),

('492','Salmon Gough','Assistant','086','2008-12-13', 90, 148.80, 998.32),

('504','Berny Bonas','Accountant','1778','2008-05-24', 40, NULL, 779.34),

('516','Lowell Paule','Systems Administrator','023','2008-03-31', 30, 324.39,

969.66),

('518','Nicholas Comelini','Accountant','1188','1997-03-20', 90, 546.04,

882.53);

INSERT INTO DEPARTMENT VALUES

(10, 'Headquarters', 'Mumbai'),

(45, 'Legal', 'Mumbai'),

(30, 'IT', 'Bengaluru'),

(20, 'Outreach', 'Dallas'),

(95, 'Purchase', ‘Dallas');

INSERT INTO DEPARTMENT (Do, Dame)

VALUES

(90, 'Sales'),

(40, 'Administration'),

(50, 'Research');

Queries

1. Query to display Employee Name, Job, Hire Date, Employee

Number; for each employee with the Employee Number appearing

first.

Code:-

SELECT Eno, Ename, Job\_type,

Hire\_date FROM EMPLOYEE

ORDER BY Eno LIMIT 5

2. Query to display unique Jobs from the Employee Table.

Code:-

SELECT DISTINCT Job\_type

FROM EMPLOYEE;

3. Query to display the Employee Name concatenated by a Job

separated by a comma.

Code:-

SELECT E.Ename, GROUP\_CONCAT(E.Job\_type SEPARATOR ',') AS Job\_list

FROM EMPLOYEE AS E

GROUP BY E.Ename;

4. Query to display all the data from the Employee Table. Separate

each Column by a comma and name the said column as

THE\_OUTPUT.

Code:-

SELECT CONCAT\_WS(',', E.Eno, E.Ename, E.Job\_type, E.SupervisonENO,

E.Hire\_date, E.Dno, E.Commission, E.Salary) AS THE\_OUTPUT

FROM EMPLOYEE AS E;

5. Query to display the Employee Name and Salary of all the

employees earning more than $2850.

Code:-

SELECT E.Ename, E.Salary

FROM EMPLOYEE AS E

WHERE E.Salary > 2850;

6. Query to display Employee Name and Department Number for the

Employee No= 79.

Code:-

SELECT E.Ename, E.Dno

FROM EMPLOYEE AS E

WHERE E.Eno = '079';

7. Query to display Employee Name and Salary for all employees

whose salary is not in the range of $1500 and $2850.

Code:-

SELECT E.Ename, E.Salary

FROM EMPLOYEE AS E

WHERE E.Salary NOT BETWEEN 1500 AND 2850;

8. Query to display Employee Name and Department No. of all the

employees in Dept 10 and Dept 30 in the alphabetical order by name.

Code:-

SELECT Ename, Dno

FROM EMPLOYEE

WHERE Dno IN (10, 30)

ORDER BY Ename;

9. Query to display Name and Hire Date of every Employee who was

hired in 1981.

Code:-

SELECT Ename, Hire\_date

FROM EMPLOYEE

WHERE Hire\_date BETWEEN '1981-01-01' AND '1981-12-31';

10. Query to display Name and Job of all employees who have not

assigned a supervisor.

Code:-

SELECT Ename, Job\_type

FROM EMPLOYEE

WHERE SupervisonENO IS NULL;

11. Query to display the Name, Salary and Commission for all the

employees who earn commission.

Code:-

SELECT Ename, Salary, Commission

FROM EMPLOYEE

WHERE Commission IS NOT NULL;

12. Sort the data in descending order of Salary and Commission.

Code:-

SELECT \*

FROM EMPLOYEE

ORDER BY Salary DESC, Commission DESC;

13. Query to display Name of all the employees where the third letter

of their name is ‘A’.

Code:-

SELECT Ename

FROM EMPLOYEE

WHERE SUBSTRING(Ename, 3, 1) = 'A';

14. Query to display Name of all employees either have two ‘R’s or

have two ‘A’s in their name and are either in Dept No = 30 or their

Manger’s Employee No = 7788.

Code:-

SELECT Ename

FROM EMPLOYEE

WHERE

(Ename LIKE '%R%R%' OR Ename LIKE '%A%A%')

AND (Dno = 30 OR SupervisonENO = '778')

15. Query to display Name, Salary and Commission for all employees

whose Commission amount is greater than their Salary increased by

5%.

Code:-

SELECT Ename, Salary, Commission

FROM EMPLOYEE

WHERE Commission > Salary \* 1.05;

16. Query to display the Current Date along with the day name.

Code:-

SELECT CONCAT(DATE\_FORMAT(NOW(), '%W, %M %e, %Y'), ' (',

DATE\_FORMAT(NOW(), '%a'), ')') AS Current\_Date\_With\_Day\_Name;

17. Query to display Name, Hire Date and Salary Review Date which

is the 1st Monday after six months of employment.

Code:-

SELECT Ename AS Name, Hire\_Date,

DATE\_ADD(DATE\_ADD(LAST\_DAY(DATE\_SUB(Hire\_Date, INTERVAL -

6 MONTH)), INTERVAL 1 DAY), INTERVAL

IF(DATE\_FORMAT(DATE\_ADD(LAST\_DAY(DATE\_SUB(Hire\_Date,

INTERVAL -6 MONTH)), INTERVAL 1 DAY), '%w') = 0, 1, 8 -

DATE\_FORMAT(DATE\_ADD(LAST\_DAY(DATE\_SUB(Hire\_Date, INTERVAL -

6 MONTH)), INTERVAL 1 DAY), '%w')) DAY) AS Salary\_Review\_Date

FROM EMPLOYEE;

18. Query to display Name and calculate the number of months

between today and the date on which employee was hired of

department ‘Purchase’.

Code:-

SELECT Ename,

TIMESTAMPDIFF(MONTH, Hire\_Date, CURDATE()) AS Months\_Employed

FROM EMPLOYEE

WHERE DNo = 30;

19. Query to display the following for each employee <E-Name>

earns < Salary> monthly but wants < 3 \* Current Salary >. Label the

Column as Dream Salary.

Code:-

SELECT Ename as 'Employee Name', Salary as 'Current Salary', Salary\*3 as 'Dream

Salary'

FROM EMPLOYEE;

20. Query to display Name with the 1st letter capitalized and all other

letter lower case and length of their name of all the employees whose

name starts with ‘J’, ’A ’and ‘M’.

Code:-

SELECT CONCAT(UCASE(LEFT(Ename, 1)), LCASE(SUBSTRING(Ename, 2)))

AS Name,

LENGTH(Ename) AS Name\_Length

FROM Employee

WHERE Ename LIKE 'J%' OR Ename LIKE 'A%' OR Ename LIKE 'M%';

21. Query to display Name, Hire Date and Day of the week on which

the employee started.

Code:-

SELECT Ename, Hire\_Date, DAYNAME(Hire\_Date) AS Day\_of\_Week

FROM EMPLOYEE;

22. Query to display Name, Department Name and Department No

for all the employees.

Code:-

SELECT E.Ename as Name, D.Dname as Department, D.Dno as 'Department No'

FROM EMPLOYEE E

JOIN DEPARTMENT D

ON E.Dno = D.Dno;

23. Query to display Unique Listing of all Jobs that are in Department

number 30.

Code:-

SELECT DISTINCT Job\_type

FROM Employee

WHERE DNo = 30;

24. Query to display Name, Dept Name of all employees who have an

‘A ’in their name.

Code:-

SELECT Ename, DEPARTMENT.DName

FROM EMPLOYEE

JOIN DEPARTMENT ON EMPLOYEE.DNo = DEPARTMENT.DNo

WHERE Ename LIKE '%A%';

25. Query to display Name, Job, Department No. And Department

Name for all the employees working at the Dallas location.

Code:-

SELECT E.Ename AS Name, E.Job\_type, E.Dno AS Department\_No, D.Dname AS

Department\_Name

FROM EMPLOYEE E

JOIN DEPARTMENT D ON E.Dno = D.Dno

WHERE D.Location = 'DALLAS';

26. Query to display Name and Employee no. Along with their

supervisor’s Name and the supervisor’s employee no; along with the

Employees ’Name who do not have a supervisor.

Code:-

SELECT e1.Ename AS Employee\_Name, e1.Eno AS Employee\_No,

COALESCE(e2.Ename, 'No Supervisor') AS Supervisor\_Name,

e1.SupervisonENO AS Supervisor\_No

FROM EMPLOYEE e1

LEFT JOIN EMPLOYEE e2 ON e1.SupervisonENO = e2.Eno

ORDER BY e1.Ename;

27. Query to display Name, Dept No. And Salary of any employee

whose department No. and salary matches both the department no.

And the salary of any employee who earns a commission.

Code:-

SELECT E1.Ename, E1.Dno, E1.Salary

FROM EMPLOYEE E1

WHERE E1.Dno IN (

SELECT E2.Dno

FROM EMPLOYEE E2

WHERE E2.Commission IS NOT NULL

) AND E1.Salary IN (

SELECT E3.Salary

FROM EMPLOYEE E3

WHERE E3.Commission IS NOT NULL

)

28. Query to display Name and Salaries represented by asterisks,

where each asterisk (\*) signifies $100.

Code:-

SELECT Ename, CONCAT(REPEAT('\*', FLOOR(Salary/100)), ' $',

FORMAT(Salary, 2)) AS Salary

FROM EMPLOYEE;

29. Query to display the Highest, Lowest, Sum and Average Salaries

of all the employees

Code:-

SELECT MAX(Salary) AS Highest\_Salary,

MIN(Salary) AS Lowest\_Salary,

SUM(Salary) AS Total\_Salary,

AVG(Salary) AS Average\_Salary

FROM EMPLOYEE;

30. Query to display the number of employees performing the same

Job type functions.

Code:-

SELECT Job\_type, COUNT(\*) as Num\_of\_Employees

FROM EMPLOYEE

GROUP BY Job\_type;

31. Query to display the total number of supervisors without listing

their names.

Code:-

SELECT COUNT(DISTINCT SupervisonENO) AS TotalSupervisors

FROM EMPLOYEE;

32. Query to display the Department Name, Location Name, No. of

Employees and the average salary for all employees in that

department.

Code:-

SELECT d.Dname, d.Location, COUNT(e.Eno) AS NumEmployees, AVG(e.Salary)

AS AvgSalary

FROM DEPARTMENT d

LEFT JOIN EMPLOYEE e ON d.Dno = e.Dno

GROUP BY d.Dno

33. Query to display Name and Hire Date for all employees in the

same dept. as Blake.

Code:-

SELECT Ename, Hire\_date

FROM EMPLOYEE

WHERE Dno = (

SELECT Dno

FROM EMPLOYEE

WHERE Ename = 'Blake'

);

34. Query to display the Employee No. And Name for all employees

who earn more than the average salary.

Code:-

SELECT Eno, Ename

FROM EMPLOYEE

WHERE Salary > (SELECT AVG(Salary) FROM EMPLOYEE);

35. Query to display Employee Number and Name for all employees

who work in a department with any employee whose name contains a

‘T’.

Code:-

SELECT e.Eno, e.Ename

FROM EMPLOYEE e

WHERE e.Dno IN (

SELECT DISTINCT d.Dno

FROM DEPARTMENT d

JOIN EMPLOYEE e2 ON d.Dno = e2.Dno

WHERE e2.Ename LIKE '%T%'

);

36. Query to display the names and salaries of all employees who

report to supervisor named ‘King’

Code:-

SELECT Ename, Salary

FROM EMPLOYEE

WHERE SupervisonENO = (SELECT Eno FROM EMPLOYEE WHERE Ename =

'King')

37. Query to display the department no, name and job for all

employees in the Sales department

Code:-

SELECT DEPARTMENT.Dno, DEPARTMENT.Dname, EMPLOYEE.Job\_type

FROM EMPLOYEE

INNER JOIN DEPARTMENT ON EMPLOYEE.Dno = DEPARTMENT.Dno

WHERE DEPARTMENT.Dname = 'Sales';

38. Display names of employees along with their department name

who have more than 20 years experience

Code:-

SELECT E.Ename, D.Dname

FROM EMPLOYEE E

JOIN DEPARTMENT D ON E.Dno = D.Dno

WHERE YEAR(CURDATE()) - YEAR(E.Hire\_date) >= 20;

39. Display total number of departments at each location

Code:-

SELECT Location, COUNT(\*) as Total\_Departments

FROM DEPARTMENT

GROUP BY Location;

40. Find the department name in which at least 20 employees work in.

Code:-

SELECT Dname, COUNT(\*) as num\_employees

FROM EMPLOYEE E

INNER JOIN DEPARTMENT D ON E.Dno = D.Dno

GROUP BY E.Dno

HAVING COUNT(\*) >= 20;

41. Query to find the employee ’name who is not supervisor and name

of supervisor supervising more than 5 employees.

Code:-

SELECT e1.Ename AS EmployeeName, e2.Ename AS SupervisorName

FROM Employee e1

LEFT JOIN Employee e2

ON e1.SupervisonENO = e2.Eno

WHERE e1.SupervisonENO IS NOT NULL

GROUP BY e1.Ename, e2.Ename, e1.Job\_type

HAVING COUNT(\*) > 5;

42. Query to display the job type with maximum and minimum

employees

Code:-

SELECT Job\_type, COUNT(\*) as num\_employees

FROM EMPLOYEE

GROUP BY Job\_type

HAVING num\_employees = (SELECT MAX(cnt) FROM (SELECT COUNT(\*) as

cnt FROM EMPLOYEE GROUP BY Job\_type) AS T)

OR num\_employees = (SELECT MIN(cnt) FROM (SELECT COUNT(\*) as cnt

FROM EMPLOYEE GROUP BY Job\_type) AS T);