SQL QUERY for student and trainer table Creating and inserting data

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CREATE TABLE STUDENT1 (SID INT(2), SNAME VARCHAR(30), AGE INT(2),
PHONE_NO INT(9) ,ADDRESS VARCHAR(30), TID INT(3));

CREATE TABLE TRAINER1 (TID INT(3), TNAME VARCHAR(30), AGE INT(2),
PHONE_NO INT(9) ,SUBJECT VARCHAR(30), ADDRESS VARCHAR(30));

INSERT INTO STUDENT1 VALUES(1,'Raj',12,741852963,'Nerul',101);
INSERT INTO STUDENT1 VALUES(2,'Pravin',14,123456789,'Vashi',101);
INSERT INTO STUDENT1 VALUES(3,'Mahesh',12,159263478,'Panvel',102);
INSERT INTO STUDENT1 VALUES(4,'Supriya',15,987456321,'Nerul',103);
INSERT INTO STUDENT1 VALUES(5,'Manika',13,974158263,'Belapur',104);
INSERT INTO STUDENT1 VALUES(6,'Neelam',14,874596321,'Vashi',107);

INSERT INTO TRAINER1
VALUES(101,'Bhagyashree',29,741852963,'SQL','Nerul');
INSERT INTO TRAINER1 VALUES(102,'Devyani',30,741852963,'Java','Vashi');
INSERT INTO TRAINER1
VALUES(103,'Arati',28,741852963,'Manual','Panvel');
INSERT INTO TRAINER1 VALUES(104,'Pooja',29,741852963,'SQL','Nerul');
INSERT INTO TRAINER1 VALUES(105,'Mayur',27,741852963,'Java','Belapur');
INSERT INTO TRAINER1
VALUES(106,'Gautam',30,741852963,'Automation','Vashi');
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QUERIES:-

1. OPERATORS:-

1. Display the per day salary of each Employee.
2. Display the total monthly salary of each Employee.
3. Display the Annual salary of each Employee,
4. Display the details of employee who has salary more than 3000.
5. Display the details of employee who is working in department 10
6. Display the details of employee who is not working in department 20
7. Display the details of employee whose name is 'BLAKE'
8. Display the details of employee who is working as 'SALESMAN' and have salary more than 1000
9. Display the details of employee who is working either as a 'SALESMAN' or 'CLERK'.
10. Display the details of employee whose salary is less than equal to 1000.
11. Display the details of employee whose salary is Between 2000 to 5000
12. Display the details of employee whose name starts with S.
13. Display the details of employee whose name is "BLAKE", "KING", "CLARK", "SMITH".
14. Display the details of employee whose are hired in year 1981
15. Display the details of employee who joined in the month of 'DEC'.
16. Display the details of employee whose has 'A' and 'E' in their name anywhere.
17. Display the Empno, Ename, Sal, of all employee working for Mgr 7698.
18. Display the details of employee those are having four characters and third character must be 'R' in their name.
19. Display the details of employee those all the Clerks of Deptno 20.
20. Display the details of employee those who joined before or after 1981.

2. AGGREGATE FUNCTION:-

1. Display the Maximum salary of each Employee.
2. Display the Minimum salary of each Employee.
3. Display the Total Salary in Employee table
4. Display the Average salary in employee table
5. Display the Total count of working employee in employee table
6. Display the Total count of commission in employee table.
7. Display the Maximum salary of each Employee for department no. 10
8. Display the Maximum salary of each Employee for department no. 20
9. Display the Maximum salary of each Employee for department no. 30

3. GROUP BY CLAUSE:-

1. Display the Maximum salary of Employee for each department
2. Display the Total count of employee working in each department
3. Display the Total count of Employee working as salesman in each department
4. Display the total count of employee in each designation.

3. HAVING CLAUSE:-

1. Display the Maximum salary of Employee for each department where the maximum salary should be more than equal to 3000
2. Display the Total count of employee working in each department where there should be at least more than 3 employees working in each department
3.
4.

4. ORDER BY CLAUSE:-

1. Display the Maximum salary of Employee for each department where the maximum salary should be more than equal to 3000 in Ascending order
2. Display the Total count of employee working in each department in the Descending order
3. Display the employee table in Descending order according to salary
4. Display the employee table in Ascending order according to salary
5. Display the Maximum salary of Employee for each department in descending order
6. Display the details of employees who are working in deptno 10 according in descending order

5. SUBQUERY:-

1. Display the details of Employee who has salary more than BLAKE.
2. Display the details of Employee who is working in CHICAGO.
3. Display the details of Employee who has 2nd highest salary.
4. Display the details of Employee who is working under or reporting to KING.
5. Display the details of Employee who has the minimum salary in each department.
6. Display the details of all the Employee in the same department as BLAKE. Exclude BLAKE in the result.
7. Display the details of all the Employee who work in a department with any employee whose name contains a T.
8. Display the details of all the Employee who is working in this all departments - “ACCOUNTING”, “OPERATION”, “SALES”.
9. Display the details of all the Employee who earn more than the average salary and who work in a department with any employee with a T in their name.
10. Display the details of all the Employee who earns salary LESS than the 4th highest salary.

6. JOINS:-

1. Display the details of Employee AND Department table using inner join
2. Display the details of Employee AND Department table using Right outer join
3. Display the details of Employee AND Department table using Left outer join
4. Display the details of Employee AND Department table using Full outer join
5. Display the details of STUDENT AND TRAINER table using inner join
6. Display the details of STUDENT AND TRAINER table using Right outer join
7. Display the details of STUDENT AND TRAINER table using Left outer join
8. Display the details of STUDENT AND TRAINER table using Full outer join

ANSWERS:-

1. OPERATORS:-

1. SELECT EMPNO, ENAME, SAL/30 AS 'PER DAY SAL' FROM EMP;
2. SELECT EMPNO, ENAME, SAL+COMM AS 'TOTAL SAL' FROM EMP;
3. SELECT EMPNO, ENAME, SAL*12 AS 'ANNUAL SAL' FROM EMP;
4. SELECT * FROM EMP WHERE SAL>3000;
5. SELECT * FROM EMP WHERE deptno=10
6. SELECT * FROM EMP WHERE deptno=10
7. SELECT * FROM EMP WHERE Ename ='BLAKE';
8. SELECT * FROM EMP WHERE job='SALESMAN' AND sal>1000;
9. SELECT * FROM EMP WHERE job='SALESMAN' OR job='CLERK';
10. SELECT * FROM EMP WHERE sal<=1000
11. SELECT * FROM EMP WHERE sal BETWEEN 2000 AND 5000;
12. SELECT * FROM EMP WHERE ename LIKE 'S%';
13. SELECT * FROM EMP WHERE ename in ('BLAKE','KING','CLARK','SMITH');
14. SELECT * FROM EMP WHERE hiredate BETWEEN '1981-01-01' AND '1981-12-31'; SELECT * FROM EMP WHERE hiredate like '%81';
15. SELECT * FROM EMP WHERE hiredate LIKE '%12%';
16. SELECT * FROM EMP WHERE ename LIKE '%A%E%' OR ename LIKE '%E%A%';
17. SELECT empno,ename,sal FROM EMP WHERE Mgr=7698;
18. SELECT * FROM EMP WHERE ename like '__R_';
19. SELECT * FROM EMP WHERE JOB='CLERK' AND DEPTNO=20;
20. SELECT * FROM EMP WHERE hiredate NOT LIKE '%1981%';

2. AGGREGATE FUNCTION:-

21. SELECT MAX(sal) FROM EMP;
22. SELECT MIN(sal) FROM EMP;
23. SELECT SUM(sal) FROM EMP;
24. SELECT AVG(sal) FROM EMP
25. SELECT COUNT(*) FROM EMP
26. SELECT COUNT(comm) FROM EMP
27. SELECT MAX(sal) FROM EMP WHERE deptno=10
28. SELECT MAX(sal) FROM EMP WHERE deptno=20
29. SELECT MAX(sal) FROM EMP WHERE deptno=30

3. GROUP BY CLAUSE:-

30. SELECT MAX(sal),deptno FROM EMP GROUP BY deptno;
31. SELECT COUNT(*) , deptno FROM EMP GROUP BY deptno;
32. SELECT COUNT(*),job, deptno FROM EMP WHERE job='SALESMAN' GROUP BY deptno;
33. SELECT COUNT(*), job FROM EMP GROUP BY job;

4. HAVING CLAUSE:-

34. SELECT MAX(sal),deptno FROM EMP GROUP BY deptno HAVING MAX(sal)>=3000;
35. SELECT COUNT(*) , deptno FROM EMP GROUP BY deptno HAVING COUNT(*)>3;

5. ORDER BY CLAUSE:-

36. SELECT MAX(sal),deptno FROM EMP GROUP BY deptno HAVING MAX(sal)>=3000 ORDER BY MAX(sal)ASC;
37. SELECT COUNT(*) , deptno FROM EMP GROUP BY deptno ORDER BY COUNT(*)DESC;
38. SELECT * FROM EMP ORDER BY sal DESC;

39. SELECT * FROM EMP ORDER BY sal;
40. SELECT EMPNO,ENAME,SAL,JOB FROM EMP ORDER BY sal;
41. SELECT MAX(sal),deptno FROM EMP GROUP BY deptno ORDER BY MAX(sal)DESC;
42. SELECT * FROM EMP WHERE DEPTNO=10 ORDER BY SAL DESC;

5. SUBQUERY:-

43. SELECT * FROM EMP WHERE SAL >(SELECT SAL FROM EMP WHERE ENAME='BLAKE');
44. SELECT * FROM EMP WHERE DEPTNO = (SELECT DEPTNO FROM DEPT WHERE LOC='CHICAGO');
45. SELECT * FROM EMP WHERE SAL=(SELECT MAX(SAL) FROM EMP WHERE SAL<(SELECT MAX(SAL) FROM EMP));
46. SELECT * FROM EMP WHERE MGR=(SELECT EMPNO FROM EMP WHERE ENAME='KING');
47. SELECT * FROM EMP WHERE SAL IN(SELECT MIN(SAL) FROM EMP GROUP BY DEPTNO);
48. SELECT * FROM EMP WHERE DEPTNO=(SELECT DEPTNO FROM EMP WHERE ENAME='BLAKE') AND ENAME != 'BLAKE';
49. SELECT * FROM EMP WHERE DEPTNO IN(SELECT DEPTNO FROM EMP WHERE ENAME LIKE '%T%');
50. SELECT * FROM EMP WHERE DEPTNO IN (SELECT DEPTNO FROM DEPT WHERE DNAME IN('ACCOUNTING','OPERATIONS','SALES'));
51. SELECT * FROM EMP WHERE SAL >(SELECT AVG(SAL) FROM EMP) AND DEPTNO IN(SELECT DEPTNO FROM EMP WHERE ENAME LIKE '%T%');
52. SELECT * FROM EMP WHERE SAL <(SELECT MAX(SAL) FROM EMP WHERE SAL<(SELECT MAX(SAL) FROM EMP WHERE SAL<(SELECT MAX(SAL) FROM EMP WHERE SAL <(SELECT MAX(SAL) FROM EMP))));

6. JOINS:-

53. SELECT * FROM Student1 s INNER JOIN Trainer1 t ON s.Tid=t.Tid;
54. SELECT * FROM Student1 s RIGHT OUTER JOIN Trainer1 t ON s.Tid=t.Tid;
55. SELECT * FROM Student1 s LEFT OUTER JOIN Trainer1 t ON s.Tid=t.Tid;

56. SELECT * FROM Student1 s LEFT OUTER JOIN Trainer1 t ON s.Tid=t.Tid UNION SELECT * FROM Student1 s RIGHT OUTER JOIN Trainer1 t ON s.Tid=t.Tid;