SQL TRAINING ASSIGNMENT

DML- CRUD Operations in SQL

QUESTIONS

1. **Create above Tables in SQL and Insert Data in them as shown.**
   →

   CREATE TABLE STUDENT (
   ID varchar(10) primary key not null,
   NAME varchar(63) not null,
   DEPARTMENT varchar(63),
   CGPA decimal(4,2)
)

   CREATE TABLE COMPANY (
   ID varchar(10) primary key not null,
   NAME varchar(63) not null,
   LOCATION varchar (63),
   INTERVIEW_DATE date,
)

   CREATE TABLE PLACEMENT (
   S_ID varchar(10) not null,
   C_ID varchar(10) not null,
   PACKAGE int,
   foreign key (S_ID) references student(ID),
   foreign key (C_ID) references company(ID),
)

   insert into student(ID,NAME,DEPARTMENT,CGPA)
   values
   ('S001' ,'ARUN','CS',8),
   ('S002' ,'GITA','CS',7),
   ('S003' ,'KUMAR','IT',6),
   ('S004','ROHIT','IT',8),
   ('S005' ,'KUMAR','ECE',9),
   ('S006' ,'YOGESH','ECE ',7),

('S007','MOHIT','IT ',8)

insert into COMPANY(ID,NAME,LOCATION,INTERVIEW_DATE)
values
('C001','MICROSOFT','BANGALORE','2020-08-01'),
('C002' ,'AMAZON','CHENNAI','2020-09-10'),
('C003' ,'FLIPKART','BANGALORE','2020-09-15'),
('C004','HONEYWELL','HYDERABAD','2020-10-30'),
('C005' ,'ACCENTURE','CHENNAI','2020-11-30'),
('C006' ,'WIPRO','NOIDA','2020-12-31')

insert into PLACEMENT(S_ID,C_ID,PACKAGE)
values
('S001','C001',2000000),
('S002','C001' , 2000000),
('S003','C002' ,1200000),
('S004','C004',700000),
('S004','C006' ,400000),
('S006','C004' ,700000),
('S007','C001' ,900000)

2. Show Student Details who got placed in more than 1 company.
→
SELECT * FROM STUDENT S
WHERE S.ID IN (SELECT P.S_ID FROM PLACEMENT P GROUP BY P.S_ID HAVING COUNT(*)>1)

3. Show Details of students who got maximum package.
→
Using Join
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
JOIN COMPANY C ON P.C_ID=C.ID
WHERE P.PACKAGE =(SELECT MAX(PACKAGE) FROM PLACEMENT P)

Using Subquery
SELECT * FROM STUDENT S ,PLACEMENT P

WHERE S.ID =P.S_ID AND P.PACKAGE = (SELECT MAX(PACKAGE) FROM PLACEMENT P)

4. **Show student details who got placed in company and His/hers First Alphabet of name matches with the First alphabet of the company in which he/she is placed.**
(Ex: Mohit: Microsoft)

→

```
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
JOIN COMPANY C ON P.C_ID = C.ID
WHERE  SUBSTRING(S.NAME,1,1)=SUBSTRING(C.NAME,1,1)
```


5. **Show records of Students whose interview scheduled Between '2020-09-01' to '2020-11-01'**
→
```
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
JOIN COMPANY C ON P.C_ID = C.ID
WHERE  C.INTERVIEW_DATE BETWEEN '2020-09-01'AND '2020-11-01'
```


6. **Show records of Students whose interview scheduled in 2020 September.**
→
```
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
JOIN COMPANY C ON P.C_ID = C.ID
WHERE  C.INTERVIEW_DATE BETWEEN '2020-09-01'AND '2020-09-30'
```


7. **Show records of students and company where Non-Zero Digits of package column matches with CGPA.**
(EX: Package = 700000, Non-Zero Digit of Package=7, CGPA =7, Then Show record.)

→

```
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
JOIN COMPANY C ON P.C_ID = C.ID
WHERE S.CGPA = REPLACE(P.PACKAGE,'0','')
```

8) Insert These Records in Above Table Respectively:

→

```
insert into student(ID,NAME,DEPARTMENT,CGPA)
values
('S008','SHEENA','ECE ',8),
('S009','LOKESH','CS ',7.5)

insert into COMPANY(ID,NAME,LOCATION,INTERVIEW_DATE)
values
('C007' ,'NAGARRO','GURUGRAM','2020-10-01'),
('C008' ,'INFOSYS','NOIDA','2020-11-10')


insert into PLACEMENT(S_ID,C_ID,PACKAGE)
values
('S008','C007' ,450000 ),
('S009','C008' ,300000 )
```

9) Insert These Records in Above Table Respectively:

→

```
insert into student(ID,NAME,DEPARTMENT,CGPA)
values
('S010','PUNIT','ECE ',9),
('S011','MUKESH','CS ',7.5),
('S012','KUMAR','CS ',9)

insert into COMPANY(ID,NAME,LOCATION,INTERVIEW_DATE)
values
('C009' ,'TATA','GURUGRAM','2020-10-25'),
```

```
('C010' ,'MAHINDRA','NOIDA','2020-11-10')


insert into PLACEMENT(S_ID,C_ID,PACKAGE)
values
('S010','C009' ,1600000 ),
('S011','C010' ,1200000 )
```

10). Update Student Table Change Name = 'SAPNA, where Name='GITA'

→

```
UPDATE STUDENT
SET  NAME ='SAPNA'
WHERE NAME ='GITA'
```


11). Update Placements Table and SET C_ID =NULL where Name of Student ='ROHIT'

→

```
UPDATE PLACEMENT
SET C_ID=null
WHERE  S_ID = (SELECT ID FROM STUDENT WHERE NAME ='ROHIT')
```

12). Change Departments of Students to 'IT' whose package is in between 400000 and 1200000.

→

```
UPDATE STUDENT
SET DEPARTMENT='IT'
WHERE EXISTS(SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
WHERE P.PACKAGE BETWEEN 400000 AND 1200000)
```

13) Delete records from Students who got placement in 'WIPRO'

→

    DELETE FROM STUDENT
    WHERE ID IN (SELECT S.ID FROM STUDENT S
    JOIN PLACEMENT P ON P.S_ID=S.ID
    JOIN COMPANY C ON P.C_ID=C.ID
    WHERE C.NAME='WIPRO')

14) Delete Records from Placements where Company is 'HONEYWELL'.

-→

    DELETE FROM COMPANY
    WHERE ID IN (
    SELECT C_ID FROM PLACEMENT P
    JOIN COMPANY C ON C.ID=P.C_ID
    WHERE C.NAME='HONEYWELL'
)

15. Delete Records from Company Table offering package below 700000.
 →

    DELETE FROM COMPANY
    WHERE ID IN (
    SELECT C_ID FROM PLACEMENT P
    JOIN COMPANY C ON C.ID=P.C_ID
    WHERE P.PACKAGE<1200000
)

16.   Delete Records From Students Where Name is Same or Duplicate names.(Ex: KUMAR).
 →

    DELETE FROM STUDENT
    WHERE ID IN (SELECT S1.ID FROM STUDENT S1, STUDENT S2
    WHERE S1.NAME =S2.NAME AND S1.ID >S2.ID)

17. Change CGPA to 9 in Students Table where name starts with Letter 'G'.

→

```
UPDATE STUDENT
SET CGPA=9
WHERE NAME LIKE 'G%'
```

18. Change Interview Date To NULL where Location is 'Bangalore'

- →

```
UPDATE COMPANY
SET INTERVIEW_DATE =NULL
WHERE LOCATION ='BANGALORE'
```

19. Delete Records from Students Whose Got Placed But Interview date is NULL.

→

```
DELETE FROM STUDENT
WHERE ID IN (SELECT S.ID FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
JOIN COMPANY C ON C.ID=P.C_ID
WHERE C.INTERVIEW_DATE IS NULL
)
```

20. Select all Records FROM all tables where Length of Location String is Greater than or Equals to 8. (Ex: Bangalore : Length: 9)

→

```
SELECT * FROM COMPANY WHERE LEN(LOCATION)>8
```

21. Show Details of students who got second maximum package.

→

```
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON P.S_ID=S.ID
WHERE PACKAGE=(
```

```
SELECT MAX(PACKAGE) FROM PLACEMENT
WHERE PACKAGE < (
    SELECT MAX(PACKAGE) FROM PLACEMENT
                          )
  )
```

22.   Show Department Wise maximum Package and show details of Students Who got it.

→

```
SELECT * FROM STUDENT S
JOIN PLACEMENT P ON S.ID=P.S_ID
JOIN COMPANY C ON P.C_ID=C.ID
JOIN (SELECT S.DEPARTMENT, MAX(P.PACKAGE) AS MAXPACKAGE
   FROM STUDENT S
   JOIN PLACEMENT P ON P.S_ID = S.ID
   GROUP BY S.DEPARTMENT) AS MAXPACKAGES ON
    MAXPACKAGES.DEPARTMENT=S.DEPARTMENT AND
    P.PACKAGE=MAXPACKAGES.MAXPACKAGE
```

23.   Delete Records From Company where Location is Duplicate.

→

```
DELETE FROM COMPANY
WHERE ID IN (SELECT C1.ID FROM COMPANY C1,COMPANY C2
WHERE C1.LOCATION = C2.LOCATION AND C1.ID>C2.ID)
```