

Practical

create table Department_Source

```
SQL> create table Department_Source
  2   (Deptid number(3) primary key,
  3   Deptname varchar(20));
```

Table created.

```
SQL> desc Department_Source;
```

Name	Null?	Type
DEPTID	NOT NULL	NUMBER(3)
DEPTNAME		VARCHAR2(20)

```
SQL> Select * from Department_Source;
```

DEPTID	DEPTNAME
101	Accounts
102	Sales
103	Production
104	HR
105	IT

```
SQL> insert into Department_Source values (&Deptid , '&Deptname');
Enter value for deptid: 101
Enter value for deptname: Accounts
old 1: insert into Department_Source values (&Deptid , '&Deptname')
new 1: insert into Department_Source values (101 , 'Accounts')

1 row created.

SQL> /
Enter value for deptid: 102
Enter value for deptname: Sales
old 1: insert into Department_Source values (&Deptid , '&Deptname')
new 1: insert into Department_Source values (102 , 'Sales')

1 row created.

SQL> /
Enter value for deptid: 103
Enter value for deptname: Production
old 1: insert into Department_Source values (&Deptid , '&Deptname')
new 1: insert into Department_Source values (103 , 'Production')

1 row created.

SQL> /
Enter value for deptid: 104
Enter value for deptname: HR
old 1: insert into Department_Source values (&Deptid , '&Deptname')
new 1: insert into Department_Source values (104 , 'HR')

1 row created.

SQL> /
Enter value for deptid: 105
Enter value for deptname: IT
old 1: insert into Department_Source values (&Deptid , '&Deptname')
new 1: insert into Department_Source values (105 , 'IT')

1 row created.
```

create table Manager_Source

```
SQL> create table Manager_Source
  2  (Mangid number(3) primary key,
  3  Mangname varchar(20),Deptid references Department_Source(Deptid));
```

Table created.

```
SQL>
```

```
SQL> desc table Manager_Source;
```

Usage: DESCRIBE [schema.]object[@db_link]

```
SQL> desc Manager_Source;
```

Name	Null?	Type
MANGID	NOT NULL	NUMBER(3)
MANGNAME		VARCHAR2(20)
DEPTID		NUMBER(3)

```
SQL> insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid );
Enter value for mangid: 101
Enter value for mangname: Ramesh Sharma
Enter value for deptid: 101
old 1: insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid )
new 1: insert into Manager_Source values (101, 'Ramesh Sharma' , 101 )

1 row created.

SQL> /
Enter value for mangid: 102
Enter value for mangname: Satish Patel
Enter value for deptid: 101
old 1: insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid )
new 1: insert into Manager_Source values (102, 'Satish Patel' , 101 )

1 row created.

SQL> /
Enter value for mangid: 103
Enter value for mangname: Kaushik Kumar
Enter value for deptid: 102
old 1: insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid )
new 1: insert into Manager_Source values (103, 'Kaushik Kumar' , 102 )

1 row created.

SQL> /
Enter value for mangid: 104
Enter value for mangname: Ritu Khanna
Enter value for deptid: 103
old 1: insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid )
new 1: insert into Manager_Source values (104, 'Ritu Khanna' , 103 )

1 row created.

SQL> /
Enter value for mangid: 105
Enter value for mangname: Vishal Gupta
Enter value for deptid: 104
old 1: insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid )
new 1: insert into Manager_Source values (105, 'Vishal Gupta' , 104 )

1 row created.
```

```

SQL> /
Enter value for mangid: 106
Enter value for mangname: Swati Goel
Enter value for deptid: 105
old 1: insert into Manager_Source values (&Mangid, '&Mangname' , &Deptid )
new 1: insert into Manager_Source values (106, 'Swati Goel' , 105 )

1 row created.

SQL> select * from Manager_Source;

   MANGID MANGNAME          DEPTID
-----
    101 Ramesh Sharma      101
    102 Satish Patel       101
    103 Kaushik Kumar      102
    104 Ritu Khanna        103
    105 Vishal Gupta       104
    106 Swati Goel        105

6 rows selected.

```

create table Employee_Source

```

SQL> create table Employee_Source
  2  (Empid number(3) primary key, Fname varchar(20), Lname varchar(20), Bdate date, Djoin date,
  3  City varchar(20), Gender char(1), Salary number(8), Deptid number(3) references
  4  Department_Source(Deptid), Mangid number(3) references Manager_Source(Mangid));

```

Table created.

```
SQL> desc Employee_Source;
```

Name	Null?	Type
EMPID	NOT NULL	NUMBER(3)
FNAME		VARCHAR2(20)
LNAME		VARCHAR2(20)
BDATE		DATE
DJOIN		DATE
CITY		VARCHAR2(20)
GENDER		CHAR(1)
SALARY		NUMBER(8)
DEPTID		NUMBER(3)
MANGID		NUMBER(3)


```

SQL> insert into Employee_Source values
  2 (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
  3 ;
Enter value for empid: 101
Enter value for fname: Gopal
Enter value for lname: Sharma
Enter value for bdate: 12 jun 80
Enter value for djoin: 21 jul 00
Enter value for city: Surat
Enter value for gender: M
Enter value for salary: 45000
Enter value for deptit: 101
Enter value for mangid: 101
old 2: (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
new 2: (101, 'Gopal', 'Sharma', '12 jun 80', '21 jul 00', 'Surat', 'M', 45000, 101, 101)

1 row created.

SQL> /
Enter value for empid: 102
Enter value for fname: Rekha
Enter value for lname: Gupta
Enter value for bdate: 21 may 81
Enter value for djoin: 21 jan 01
Enter value for city: Bharuch
Enter value for gender: F
Enter value for salary: 42000
Enter value for deptit: 101
Enter value for mangid: 101
old 2: (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
new 2: (102, 'Rekha', 'Gupta', '21 may 81', '21 jan 01', 'Bharuch', 'F', 42000, 101, 101)

1 row created.

SQL> /
Enter value for empid: 103
Enter value for fname: Teena
Enter value for lname: Patel
Enter value for bdate: 18 feb 78
Enter value for djoin: 28 dec 00
Enter value for city: Navsari
Enter value for gender: F
Enter value for salary: 50000
Enter value for deptit: 102
Enter value for mangid: 102
old 2: (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
new 2: (103, 'Teena', 'Patel', '18 feb 78', '28 dec 00', 'Navsari', 'F', 50000, 102, 102)

1 row created.

SQL> /
Enter value for empid: 104
Enter value for fname: Hitesh
Enter value for lname: Velvi
Enter value for bdate: 23 mar 83
Enter value for djoin: 25 mar 04
Enter value for city: Bardoli
Enter value for gender: M
Enter value for salary: 41000
Enter value for deptit: 103
Enter value for mangid: 103
old 2: (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
new 2: (104, 'Hitesh', 'Velvi', '23 mar 83', '25 mar 04', 'Bardoli', 'M', 41000, 103, 103)

1 row created.

SQL> /
Enter value for empid: 105
Enter value for fname: Naman
Enter value for lname: Shukla
Enter value for bdate: 21 dec 82
Enter value for djoin: 22 dec 06
Enter value for city: Bhavnagar
Enter value for gender: M
Enter value for salary: 39000
Enter value for deptit: 104
Enter value for mangid: 104
old 2: (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
new 2: (105, 'Naman', 'Shukla', '21 dec 82', '22 dec 06', 'Bhavnagar', 'M', 39000, 104, 104)

1 row created.

```

```

SQL> /
Enter value for empid: 106
Enter value for fname: Aman
Enter value for lname: Mehra
Enter value for bdate: 18 jul 01
Enter value for djoin: 28 dec 07
Enter value for city: Baroda
Enter value for gender: M
Enter value for salary: 38000
Enter value for deptit: 105
Enter value for mangid: 105
old 2: (&Empid, '&Fname', '&Lname', '&Bdate', '&Djoin', '&City', '&Gender', &Salary, &Deptit, &Mangid)
new 2: (106, 'Aman', 'Mehra', '18 jul 01', '28 dec 07', 'Baroda', 'M', 38000, 105, 105)

1 row created.

SQL> select * from Employee_Source;

      EMPID FNAME          LNAME          BDATE      DJOIN
-----
CITY          G      SALARY      DEPTID      MANGID
-----
      101 Gopal          Sharma          12-JUN-80 21-JUL-00
Surat          M      45000          101          101
      102 Rekha          Gupta           21-MAY-81 21-JAN-01
Bharuch        F      42000          101          101
      103 Teena          Patel           18-FEB-78 28-DEC-00
Navsari        F      50000          102          102

      EMPID FNAME          LNAME          BDATE      DJOIN
-----
CITY          G      SALARY      DEPTID      MANGID
-----
      104 Hitesh          Velvi           23-MAR-83 25-MAR-04
Bardoli        M      41000          103          103
      105 Naman          Shukla          21-DEC-82 22-DEC-06
Bhavnagar      M      39000          104          104
      106 Aman          Mehra           18-JUL-01 28-DEC-07
Baroda         M      38000          105          105

6 rows selected.

```

Solve the following queries:

1. Retrieve average salary of all employee.

```
SQL> select avg(Salary) from Employee_Source;

AVG(SALARY)
-----
      42500
```

2. Retrieve number of employee.

```
SQL> Select count(*) from Employee_Source;

COUNT(*)
-----
        6
```

3. Retrieve distinct number of employee.

```
SQL> select count(distinct FName) from Employee_Source;

COUNT(DISTINCTFNAME)
-----
                    6
```

4. Retrieve total number of employees working in each department using group by department_id.

```
SQL> select Deptid,count(*) from Employee_Source group by(Deptid);

  DEPTID    COUNT(*)
-----
    102         1
    101         2
    104         1
    105         1
    103         1
```

5. Display name of employee in descending order.


```
SQL> select Fname,Lname from EMPLOYEE_Source
2 order by Fname desc;
```

FNAME	LNAME
Teena	Patel
Rekha	Gupta
Naman	Shukla
Hitesh	Velvi
Gopal	Sharma
Aman	Mehra

6 rows selected.

6. Retrieve Empid, First and Last name of Employees and Department name.

```
SQL> select Empid,Fname,Lname,Deptname
2 from Employee_Source E, Department_Source D
3 where D.Deptid=E.Deptid;
```

EMPID	FNAME	LNAME	DEPTNAME
101	Gopal	Sharma	Accounts
102	Rekha	Gupta	Accounts
103	Teena	Patel	Sales
104	Hitesh	Velvi	Production
105	Naman	Shukla	HR
106	Aman	Mehra	IT

6 rows selected.

7. Retrieve manager names and employees (Empid, Firstname, Lastname) working under manager.

```
SQL> select Empid , Fname, Lname, Mangname from Employee_Source E,
2 Manager_Source M
3 where M.Mangid=E.Mangid;
```

EMPID	FNAME	LNAME	MANGNAME
102	Rekha	Gupta	Ramesh Sharma
101	Gopal	Sharma	Ramesh Sharma
103	Teena	Patel	Satish Patel
104	Hitesh	Velvi	Kaushik Kumar
105	Naman	Shukla	Ritu Khanna
106	Aman	Mehra	Vishal Gupta

6 rows selected.

8. Retrieve details of employees working in 'Accounts' Department.

```
SQL> Select Empid,Fname,Lname,Deptname
2 from Employee_Source E, Department_Source D
3 where D.Deptid = E.Deptid
4 and Deptname='Accounts';
```

EMPID	FNAME	LNAME	DEPTNAME
101	Gopal	Sharma	Accounts
102	Rekha	Gupta	Accounts

9. How the resulting salaries if every employee working on the 'IT' Departments is given a 10 percent raise.

```
SQL> Select E.Empid,E.Fname,E.Lname,1.1*E.Salary as Inc_Salary
2 from Employee_Source E, Department_Source D
3 where D.Deptid=E.Deptid
4 and D.Deptname='IT';
```

EMPID	FNAME	LNAME	INC_SALARY
106	Aman	Mehra	41800

10. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department.

```
SQL> Select sum(E.Salary),Max(E.Salary),Min(E.Salary),Avg(E.Salary)
2 from Employee_Source E, Department_Source D
3 where D.Deptid=E.Deptid
4 and D.Deptname='Accounts';
```

SUM(E.SALARY)	MAX(E.SALARY)	MIN(E.SALARY)	AVG(E.SALARY)
87000	45000	42000	43500

11. Retrieve details of employees who join after 2005.

```
SQL> select E.fname,E.Lname,E.Djoin from Employee_Source E
2 where E.Djoin > '01 jan 2005'
3 ;
```

FNAME	LNAME	DJOIN
Naman	Shukla	22-DEC-06
Aman	Mehra	28-DEC-07

12. Retrieve First name, Last name of employees and name of department and manager under which employees are working.

```
SQL> Select E.Fname, E.Lname, D.Deptname, M.Mangname
  2  from Employee_Source E, Department_Source D, Manager_Source M
  3  where D.Deptid = E.Deptid
  4  and M.Mangid =E.Mangid;
```

FNAME	LNAME	DEPTNAME
-----	-----	-----
MANGNAME		

Rekha	Gupta	Accounts
Ramesh Sharma		
Gopal	Sharma	Accounts
Ramesh Sharma		
Teena	Patel	Sales
Satish Patel		

FNAME	LNAME	DEPTNAME
-----	-----	-----
MANGNAME		

Hitesh	Velvi	Production
Kaushik Kumar		
Naman	Shukla	HR
Ritu Khanna		
Aman	Mehra	IT
Vishal Gupta		

6 rows selected.

13. Retrieve the name of each employee of department number 105 (use EXISTS operator).

```
SQL> select e.fname, e.lname
  2  from employee_source e
  3  where exists (select deptid from employee_source where e.deptid=105);
```

FNAME	LNAME
-----	-----
Aman	Mehra

Extra queries without

```

SQL> select concat (fname,lname)as EMP_Name from employee_source;

EMP_NAME
-----
GopalSharma
RekhaGupta
TeenaPatel
HiteshVelvi
NamanShukla
AmanMehra

6 rows selected.

SQL> select fname' ||' lname as EMP
2
SQL>
SQL> select fname '||' lname as EMP_Name from employee_source;
select fname '||' lname as EMP_Name from employee_source
*
ERROR at line 1:
ORA-00923: FROM keyword not found where expected

SQL> select fname || lname as EMP_Name from employee_source;

EMP_NAME
-----
GopalSharma
RekhaGupta
TeenaPatel
HiteshVelvi
NamanShukla
AmanMehra

6 rows selected.

```

question :