SQL Assignment:

Table Schema:

emp(id: integer, name: string, age: integer, salary: double)
dept(id: integer, name: string, budget: double, manager_id: integer)
works(emp_id: integer, dept_id: integer, pct_time: integer)

Q.1) Create all above tables with same fields.

EMP table:

```
create table emp
(
    emp_id int primary key,
    e_name varchar2(15),
    age int,
    salary float
 );
```

Dept Table:

```
create table department
(
    dept_id int primary key,
    dept_name varchar2(15),
    budget float,
    manager_id int
 );
```

Work Table:

```
create table works
 (
    e_id int,
    d_id int,
    pct_time int,
    CONSTRAINTS FK_EMP_ID Foreign key(e_id) references emp(emp_id),
    CONSTRAINTS fk_dept_id Foreign key (d_id) references department(dept_id)
 );
```

Q.2) Seed Data into all tables

SQL> insert into emp values(101, 'Vipul', 21, 30000);

1 row created.

SQL> insert into emp values(102, 'Rohit', 22, 28000);

1 row created.

SQL> insert into emp values(103, 'Pranjal', 20, 30000);

1 row created.

SQL> insert into emp values(104, 'Komal', 21, 29000);

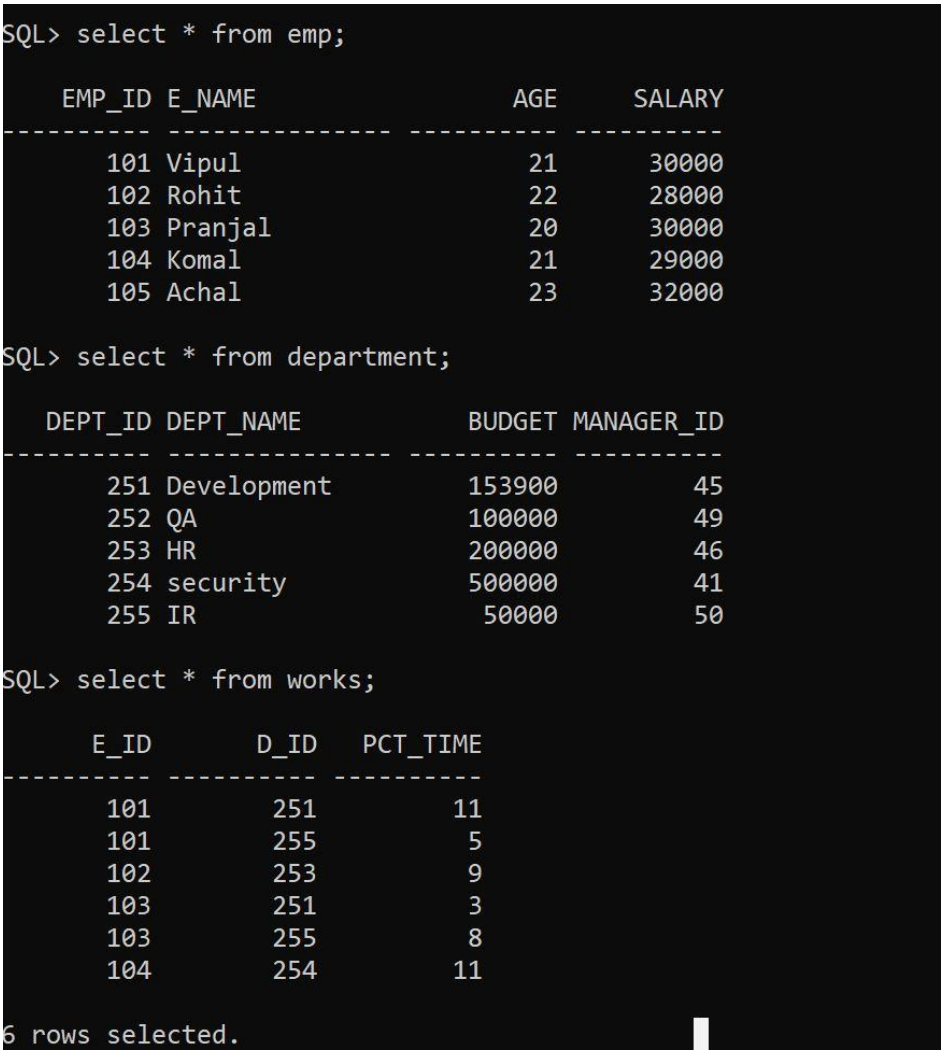
1 row created.

```
SQL> insert into emp values(105, 'Achal', 23, 32000);
1 row created.

SQL> insert into department values(251, 'Development', 153900, 45);
1 row created.

SQL> insert into department values(252, 'QA', 100000, 49);
1 row created.

SQL> insert into department values(253, 'HR', 200000, 46);
1 row created.

SQL> insert into department values(254, 'security', 500000, 41);
1 row created.

SQL> insert into department values(255, 'IR', 50000, 50);
1 row created.

SQL> insert into works values(101, 251, 11);
1 row created.

SQL> insert into works values(101, 255, 5);
1 row created.

SQL> insert into works values(102, 253, 9);
1 row created.

SQL> insert into works values(103, 251, 3);
1 row created.

SQL> insert into works values(103, 255, 8);
1 row created.
```

SQL> insert into works values(104, 254, 11);

1 row created.

Output:



```
SQL> select * from emp;

    EMP_ID E_NAME                AGE     SALARY
---------- -------------- ---------- ----------
       101 Vipul                  21      30000
       102 Rohit                  22      28000
       103 Pranjal                20      30000
       104 Komal                  21      29000
       105 Achal                  23      32000

SQL> select * from department;

   DEPT_ID DEPT_NAME           BUDGET MANAGER_ID
---------- -------------- ---------- ----------
       251 Development        153900         45
       252 QA                 100000         49
       253 HR                 200000         46
       254 security           500000         41
       255 IR                  50000         50

SQL> select * from works;

      E_ID       D_ID   PCT_TIME
---------- ---------- ----------
       101        251         11
       101        255          5
       102        253          9
       103        251          3
       103        255          8
       104        254         11

6 rows selected.
```

Q.3) Print the names and ages of each employee who works in both the IR department and the Development:

-> SELECT e.e_name, e.age FROM emp e

WHERE EXISTS (SELECT * FROM works w INNER JOIN department d ON d .dept_id = w.d_id WHERE d.dept_name = 'IR')

AND EXISTS (SELECT * FROM works w INNER JOIN department d ON d.dept_id = w.d_id WHERE d.dept_name = 'Development')

Q.4) For each department with more than 10 full-time-equivalent employees. (i.e., where the part-time and full-time employees add up to at least that many full time employees), print the work did together with the number of employees that work in that departm

```
-> SELECT Works.d_id, COUNT(Works.e_id) FROM Works
   GROUP BY Works.d_id
   HAVING 1000 < (SELECT SUM (Works.pct_time)
   FROM Works
   WHERE Works.d_id = Works.d_id)
   /
```

Q.5) Find the manager_ids of managers who manage only departments with budgets greater than $50,000

```
-> select manager_id from department
   where budget > 50000
```

Q.6) Find the names of managers who manage the departments with the largest budgets

```
-> select e.emp_id, e.e_name, d.budget
   from emp e JOIN department d
   on e.emp_id = d.manager_id AND d.budget > 10000
```

Q.7) Print the name of each employee whose salary exceeds the budget of all of the departments that he or she works in

```
-> SELECT emp.e_name  FROM emp WHERE emp.salary > ALL (select D.budget
   FROM Department D, works
   WHERE Emp.emp_id = works.e_id AND D.dept_id = W.d_id)
   /
```