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TASK 1:

1,2. Creating Employee DB

1. create employee(emp_id,employee_name,department_name,location,salary),
   department(dept_id,department_name),
   locations (location_id, location_name) tables with relevant attributes.
2. create primary key on each table and foreign keys (location->department, department->employee)

```
create table department(
   dept_id int PRIMARY KEY,
   department_name varchar(20)
);
```

```
create table locations(
   location_id int PRIMARY KEY,
   location_name varchar(20)
);
```

```
create table employee(
   emp_id int ,
   employee_name varchar(20),
   dept_id int,
   location_id int,
   salary number,
   primary key (emp_id),
   FOREIGN KEY(dept_id) REFERENCES department(dept_id),
```

```
    FOREIGN KEY(location_id) REFERENCES locations(location_id)
);
```

3.insert 20 employees data, 4 departments data, 2 locations data.

```
insert into department Values(22, 'a');
insert into department Values(23, 'b');
insert into department Values(24, 'c');
insert into department Values(25, 'd');


insert into locations Values(32, 'xyz1');
insert into locations Values(33, 'xyz2');


insert into employee Values(1,'Aa',22,32,100);
insert into employee Values(2,'Ab',23,33,100);
insert into employee Values(3,'Ac',24,32,100);
insert into employee Values(4,'Ad',25,33,100);
insert into employee Values(5,'Ae',22,32,100);
insert into employee Values(6,'Af',23,33,100);
insert into employee Values(7,'Ag',24,32,100);
insert into employee Values(8,'Ah',25,33,100);
insert into employee Values(9,'Ai',22,32,100);
insert into employee Values(10,'Aj',23,33,100);
insert into employee Values(11,'Ak',24,32,100);
insert into employee Values(12,'Al',25,33,100);
insert into employee Values(13,'Am',22,32,100);
insert into employee Values(14,'An',23,33,100);
insert into employee Values(15,'Ao',24,32,100);
insert into employee Values(16,'Ap',25,33,100);
```

```
insert into employee Values(17,'Aq',22,32,100);

insert into employee Values(18,'Ar',23,33,100);

insert into employee Values(19,'As',24,32,100);

insert into employee Values(20,'At',25,33,100);
```

4. write below queries:

a) display all employees names and their department names

```
SELECT e.employee_name , d.department_name FROM employee e, department d WHERE
e.dept_id=d.dept_id;
```

EMPLOYEE_NAME	DEPARTMENT_NAME
Ag	c
Ai	a
Aa	a
Ac	c
An	b
Aq	a
Ar	b
Ab	b
Ah	d
As	c
Ad	d
Ae	a
Af	b
Aj	b
Al	d
Ak	c
Am	a
Ao	c

b) display all location_name, department_name, employee_name, salary for all matching rows from 3 tables

```
SELECT l.location_name , d.department_name , e.employee_name , e.salary FROM locations l,
department d , employee e WHERE e.dept_id=d.dept_id and e.location_id=l.location_id;
```

LOCATION_NAME	DEPARTMENT_NAME	EMPLOYEE_NAME	SALARY
xyz1	a	Ai	100
xyz1	a	Aa	100
xyz1	a	Aq	100
xyz1	a	Ae	100
xyz1	a	Am	100
xyz2	b	An	100
xyz2	b	Ar	100
xyz2	b	Ab	100
xyz2	b	Af	100
xyz2	b	Aj	100
xyz2	d	Ah	100
xyz2	d	Ad	100
xyz2	d	Al	100
xyz2	d	Ap	100
xyz2	d	At	100
xyz1	c	Ag	100
xyz1	c	Ac	100
xyz1	c	As	100
xyz1	c	Ak	100
xyz1	c	Ao	100

a) select maximum salary earned from each department

```
select  dept_id, max(salary) from employee group by dept_id;
```

DEPT_ID	MAX(SALARY)
23	100
22	100
24	100
25	100

b) select 2nd highest salary from each department.

```
select  dept_id, max(salary) as salary from employee where salary< (select max(salary) from employee)
group by dept_id;
```

c) select location_name, department_name, average_salary(of each location)

```
select l.location_name , d.department_name, avg(salary) from locations l , department d , employee e
where e.dept_id= d.dept_id and e.location_id=l.location_id group by
l.location_name,d.department_name;
```

LOCATION_NAME	DEPARTMENT_NAME	AVG(SALARY)
xyz1	a	100
xyz2	d	100
xyz2	b	100
xyz1	c	100

additional queries:

>> Show departments with no of employees

select dept_id, count(*) from employee group by dept_id;

DEPT_ID	COUNT(*)
23	5
22	5
24	5
25	5