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EXP NO:2

DATA MANIPULATION

Create the following tables with the given structure.

EMPLOYEES TABLE

NAME	NULL?	TYPE
Employee_id	Not null	Number(6)
First_Name		Varchar(20)
Last_Name	Not null	Varchar(25)
Email	Not null	Varchar(25)
Phone_Number		Varchar(20)
Hire_date	Not null	Date
Job_id	Not null	Varchar(10)
Salary		Number(8,2)
Commission_pct		Number(2,2)
Manager_id		Number(6)
Department_id		Number(4)

```
create table employees(employee_id number(6),First_Name  varchar(20),Last_Name
varchar(25),Email varchar(25),Phone_number  varchar(20),hire_date date,Job_id varchar(10),Salary
        number(8,2),Commission_pct          number(2,2),Manager_id  number(6),Department_id
number(4));
```

Column Name	Data Type	Nullable	Default	Primary Key
EMPLOYEE_ID	NUMBER(6,0)	Yes	-	-
FIRST_NAME	VARCHAR2(20)	Yes	-	-
LAST_NAME	VARCHAR2(25)	Yes	-	-
EMAIL	VARCHAR2(25)	Yes	-	-
PHONE_NUMBER	VARCHAR2(20)	Yes	-	-
HIRE_DATE	DATE	Yes	-	-
JOB_ID	VARCHAR2(10)	Yes	-	-
SALARY	NUMBER(8,2)	Yes	-	-
COMMISSION_PCT	NUMBER(2,2)	Yes	-	-
MANAGER_ID	NUMBER(6,0)	Yes	-	-
DEPARTMENT_ID	NUMBER(4,0)	Yes	-	-
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Insert into employees
values(3,'Ralph','Patel','rpatel@gmail.com',9768403822,'11-12-2000',13,5000,.25,101,40);

Insert into employees
values(4,'George','Austin','geaustin@gmail.com',9573268191,'09-10-2018',14,6000,.3,103,60);

Insert into employees values
(1,'Ben','Chad','bchad@gmail.com',9493836325,'24-07-2022',11,4500,.15,100,70);

Insert into employees values
(2,'Bety','Dancs','bdancs@gmail.com',9763467298,'19-05-2021',12,4800,.17,100,56);

Insert into employees values
(5,'Audrey','Austin','audaustin@gmail.com',9684357377,'06-05-2017',15,7000,.35,104,80);

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
3	Ralph	Patel	rpatel@gmail.com	768403822	11/12/2000	13	5000	.25	101	40
4	George	Austin	geaustin@gmail.com	9573268191	09/10/2018	14	6000	.3	103	60
1	Ben	Chad	bchad@gmail.com	9493836325	04/07/2022	11	4500	.15	100	70
2	Bety	Dancs	bdancs@gmail.com	9763467298	09/05/2021	12	4800	.17	100	56
5	Audrey	Austin	audaustin@gmail.com	9684357377	06/05/2017	15	7000	.35	104	80

(a) Find out the employee id, names, salaries of all the employees select employee_id,first_name,last_name,salary from employees;

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	SALARY
3	Ralph	Patel	5000
4	George	Austin	6000
1	Ben	Chad	4500
2	Bety	Dancs	4800
5	Audrey	Austin	7000

(a) List out the employees who works under manager 100 select *from employees where manager_id=100;

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	Ben	Chad	bchad@gmail.com	9493836325	04/07/2022	11	4500	.15	100	70
2	Bety	Dancs	bdancs@gmail.com	9763467298	09/05/2021	12	4800	.17	100	56

(b) Find the names of the employees who have a salary greater than or equal to 4800 select first_name,last_name from employees where salary>=4800;

FIRST_NAME	LAST_NAME
Ralph	Patel
George	Austin
Bety	Dancs
Audrey	Austin

(a) List out the employees whose last name is _AUSTIN‘ select *from employees where last_name ='Austin';

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
4	George	Austin	geaustin@gmail.com	9573268191	09/10/2018	14	6000	.3	103	60
5	Audrey	Austin	audaustin@gmail.com	9684357377	06/05/2017	15	7000	.35	104	80

(b) Find the names of the employees who works in departments 60,70 and 80.

select first_name ,last_name from employees where department_id=60 or department_id=70 or department_id=80;

FIRST_NAME	LAST_NAME
George	Austin
Ben	Chad
Audrey	Austin

(c) Display the unique Manager_Id.

select distinct manager_id from employees;

MANAGER_ID
100
101
104
103

Create an Emp table with the following fields: (EmpNo, EmpName, Job,Basic, DA, HRA,PF, GrossPay, NetPay) (Calculate DA as 30% of Basic and HRA as 40% of Basic)
create table emp1(empno number(4),empname varchar(25),job varchar(25),basic number(10),da
number(10),hra number(10),pf number(10),grosspay number(10),netpay number(10));

Object Type **TABLE** Object **EMP1**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP1	EMPNO	NUMBER	-	4	0	-	✓	-	-
	EMPNAME	VARCHAR2	25	-	-	-	✓	-	-
	JOB	VARCHAR2	25	-	-	-	✓	-	-
	BASIC	NUMBER	-	10	0	-	✓	-	-
	DA	NUMBER	-	10	0	-	✓	-	-
	HRA	NUMBER	-	10	0	-	✓	-	-
	PF	NUMBER	-	10	0	-	✓	-	-
	GROSSPAY	NUMBER	-	10	0	-	✓	-	-
	NETPAY	NUMBER	-	10	0	-	✓	-	-

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(a) Insert Five Records and calculate GrossPay and NetPay.

insert into emp1 values(1,'betty','manager',7000,2100,2800,1000,10,20);

insert into emp1
values(2,'annnie','secretary',5000,1500,2000,1500,20,30);

insert into emp1

values(3,'ralph','technician',8000,2400,3200,2000,30,40); insert into emp1
values(4,'linda','assistant',4000,1200,1600,1200,40,50); insert into emp1
values(5,'becky','manager',9000,2700,3600,2500,50,60);

Results Explain Describe Saved SQL History

EMPNO	EMPNAME	JOB	BASIC	DA	HRA	PF	GROSSPAY	NETPAY
1	betty	manager	7000	2100	2800	1000	10	20
2	annnie	secretary	5000	1500	2000	1500	20	30
3	ralph	technician	8000	2400	3200	2000	30	40
4	linda	assistant	4000	1200	1600	1200	40	50
5	becky	manager	9000	2700	3600	2500	50	60

5 rows returned in 0.00 seconds Download

update emp1 set grosspay=basic+da+hra+ pf; set netpay=basic-pf;

Results Explain Describe Saved SQL History

EMPNO	EMPNAME	JOB	BASIC	DA	HRA	PF	GROSSPAY	NETPAY
1	betty	manager	7000	2100	2800	1000	12900	6000
2	annnie	secretary	5000	1500	2000	1500	10000	3500
3	ralph	technician	8000	2400	3200	2000	15600	6000
4	linda	assistant	4000	1200	1600	1200	8000	2800
5	becky	manager	9000	2700	3600	2500	17800	6500

5 rows returned in 0.01 seconds Download

(b) Display the employees whose Basic is lowest in each department. select * from emp1 where basic=(select min(basic) from emp1);

Results Explain Describe Saved SQL History

EMPNO	EMPNAME	JOB	BASIC	DA	HRA	PF	GROSSPAY	NETPAY
4	linda	assistant	4000	1200	1600	1200	8000	2800

1 rows returned in 0.01 seconds Download

(c) If Net Pay is less than select * from

emp1

where netpay=(select min(netpay)from emp1);

EMPNO	EMPNAME	JOB	BASIC	DA	HRA	PF	GROSSPAY	NETPAY
4	linda	assistant	4000	1200	1600	1200	8000	2800

1 rows returned in 0.00 seconds Download

2. Create the EMP table based on the following instance chart. Confirm that the table is created.

Column name	ID	LAST_NAME	FIRST_NAME	DEPT_ID
Key Type				
Nulls/Unique				
FK table				
FK column				
Data Type	Number	Varchar2	Varchar2	Number
Length	7	25	25	7

create table emp3(id number(7) primary key not null,last_name varchar2(25) not null,first_name varchar2(25),dept_id number(7));

Object Type **TABLE** Object **EMP3**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP3	ID	NUMBER	-	7	0	1	-	-	-
	LAST_NAME	VARCHAR2	25	-	-	-	-	-	-
	FIRST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	DEPT_ID	NUMBER	-	7	0	-	✓	-	-

1 - 4

3 Modify the EMP table to allow for longer employee last names. Confirm the modification.(Hint: Increase the size to 50).

```
alter table emp3 modify
last_name varchar2(50);
```

Object Type TABLE Object EMP3

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP3	ID	NUMBER	-	7	0	1	-	-	-
	LAST_NAME	VARCHAR2	50	-	-	-	-	-	-
	FIRST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	DEPT_ID	NUMBER	-	7	0	-	✓	-	-

1 - 4

4 Create the EMPLOYEES2 table based on the structure of EMPLOYEES table. Include Only the Employee_id, First_name, Last_name, Salary and Dept_id coloumns. Name the columns Id, First_name, Last_name, salary and Dept_id respectively.

```
create table employees2(employee_id number(4),first_name varchar(25),last_name
varchar(20),salary number(10),dept_id varchar(5));
```

Object Type TABLE Object EMPLOYEES2

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMPLOYEES2	EMPLOYEE_ID	NUMBER	-	4	0	-	✓	-	-
	FIRST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	20	-	-	-	✓	-	-
	SALARY	NUMBER	-	10	0	-	✓	-	-
	DEPT_ID	VARCHAR2	5	-	-	-	✓	-	-

1 - 5

5 Drop the EMP table. drop table emp3;

```
Table dropped.

0.38 seconds
```

6 Rename the EMPLOYEES2 table as EMP. alter table employees2 rename

to emp3;

Object Type TABLE Object EMP3

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP3	EMPLOYEE_ID	NUMBER	-	4	0	-	✓	-	-
	FIRST_NAME	VARCHAR2	25	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	20	-	-	-	✓	-	-
	SALARY	NUMBER	-	10	0	-	✓	-	-
	DEPT_ID	VARCHAR2	5	-	-	-	✓	-	-

1 - 5

8 Drop the First_name column from the EMP table and confirm it.

alter table emp3 drop column

first_name;

Object Type TABLE Object EMP3

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMP3	EMPLOYEE_ID	NUMBER	-	4	0	-	✓	-	-
	LAST_NAME	VARCHAR2	20	-	-	-	✓	-	-
	SALARY	NUMBER	-	10	0	-	✓	-	-
	DEPT_ID	VARCHAR2	5	-	-	-	✓	-	-

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