Database ManagementSystems

LAB-4:



Submitted To: Prof. Manomita Chakraborty

Name: Ashrith

Reg.no: 20BCE7236

Slot: L1+L2 (G03-AB-1)

Employee Table:

```
CREATE TABLE EMPLOYEE_20BCE7236(

EMP_ID NUMERIC(4),

EMP_NAME VARCHAR(15),

DESIGNATION VARCHAR(15), MANAGER_ID NUMERIC(4),

DOJ DATE,

DEPT_ID VARCHAR(15),

SALARY FLOAT,

GENDER CHAR(1)

);

DESC EMPLOYEE_20BCE7236;
```

	Field	Туре	Null	Key	Default	Extra
•	EMP_ID	decimal(4,0)	YES		NULL	
	EMP_NAME	varchar(15)	YES		NULL	
	DESIGNATION	varchar(15)	YES		NULL	
	MANAGER_ID	decimal(4,0)	YES		NULL	
	DOJ	date	YES		NULL	
	DEPT_ID	varchar(15)	YES		NULL	
	SALARY	float	YES		NULL	
	GENDER	char(1)	YES		NULL	

Department Table:

```
CREATE TABLE DEPARTMENT_20BCE7236(
DEPT_NUM VARCHAR(15),
DEPT_NAME VARCHAR(15),
DEPT_ID VARCHAR(10),
DEPT_LOCATION VARCHAR(15),
PHN_NUM NUMERIC(10)
);
DESC DEPARTMENT_20BCE7236;
```

Field	Туре	Null	Key	Default	Extra
DEPT_NUM	varchar(15)	YES		NULL	
DEPT_NAME	varchar(15)	YES		NULL	
DEPT_ID	varchar(10)	YES		NULL	
DEPT_LOCATION	varchar(15)	YES		NULL	
PHN_NUM	decimal(10,0)	YES		NULL	

Employee Table Insertion:

```
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1008, 'Kiran', 'Principal',1008,'1987-02-01', 'DEPT_1004',99000.00, 'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1001, 'Akash', 'Salesman',1008,'1991-07-15', 'DEPT_1003',35000.00, 'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES (1002, 'Rishabh', 'Manager',1008,'1992-05-23', 'DEPT_1001',65000.00, 'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES (1003, 'Rihan', 'Analyst',1004,'1991-07-15', 'DEPT_1001',55000.00, 'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES (1007, 'Seema', 'Manager',1008,'1991-07-15', 'DEPT_1001',65000.00, 'F');
INSERT INTO EMPLOYEE_20BCE7236 VALUES (1004, 'Ridhi', 'Manager',1008, '1987-11-22', 'DEPT_1001',85000.00, 'F');
INSERT INTO EMPLOYEE_20BCE7236 VALUES (1005, 'Sajal', 'Salesman',1007, '1991-07-15', 'DEPT_1003',35000.00, 'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1006, 'Biki', 'Salesman',1002, '1999-11-26', 'DEPT_1003',25000.00, 'F');
SELECT * FROM EMPLOYEE_20BCE7236;
```

EMP_ID	EMP_NAME	DESIGNATION	MANAGER_ID	DOJ	DEPT_ID	SALARY	GENDER
1008	Kiran	Principal	1008	1987-02-01	DEPT_1004	99000	M
1001	Akash	Salesman	1008	1991-07-15	DEPT_1003	35000	M
1002	Rishabh	Manager	1008	1992-05-23	DEPT_1001	65000	M
1003	Rihan	Analyst	1004	1991-07-15	DEPT_1001	55000	M
1007	Seema	Manager	1008	1991-07-15	DEPT_1001	65000	F
1004	Ridhi	Manager	1008	1987-11-22	DEPT_1001	85000	F
1005	Sajal	Salesman	1007	1991-07-15	DEPT_1003	35000	M
1006	Biki	Salesman	1002	1999-11-26	DEPT_1003	25000	F

Department Table Insertion:

```
INSERT INTO DEPARTMENT_20BCE7236 VALUES ('DEPT_1001', 'Human Resource', 'DEPT_1001', 'Delhi',1111);

INSERT INTO DEPARTMENT_20BCE7236 VALUES ('DEPT_1002', 'Production', 'DEPT_1002', 'Kolkata',2222);

INSERT INTO DEPARTMENT_20BCE7236 VALUES ('DEPT_1003', 'Marketing', 'DEPT_1003', 'Kerala',3333);

INSERT INTO DEPARTMENT_20BCE7236 VALUES ('DEPT_1004', 'Audit', 'DEPT_1004', 'Noida',4444);

INSERT INTO DEPARTMENT_20BCE7236 VALUES ('DEPT_1005', 'Finance', 'DEPT_1005', 'Andhra Pradesh',5555);

SELECT * FROM DEPARTMENT_20BCE7236;
```

DEPT_NUM	DEPT_NAME	DEPT_ID	DEPT_LOCATION	PHN_NUM
DEPT_1001	Human Resource	DEPT_1001	Delhi	1111
DEPT_1002	Production	DEPT_1002	Kolkata	2222
DEPT_1003	Marketing	DEPT_1003	Kerala	3333
DEPT_1004	Audit	DEPT_1004	Noida	4444
DEPT_1005	Finance	DEPT_1005	Andhra Pradesh	5555

Question-1:

Write a SQL query to create Employee and Department tables with the following fields and values.

Constraints:

- i) EMP_ID is the Primary Key of EMPLOYEE Table.
- ii) MANAGER ID is the Foreign Key referring to the Primary key EMP ID.
- iii) DEPT_ID is the Foreign key referring to the Primary key DEPT_NUM of DEPARTMENT table.

Code & Output:

(i):

ALTER TABLE EMPLOYEE_20BCE7236 ADD PRIMARY KEY (EMP_ID);
DESC EMPLOYEE_20BCE7236;

Field	Type	Null	Key	Default	Extra
EMP_ID	decimal(4,0)	NO	PRI	NULL	
EMP_NAME	varchar(15)	YES		NULL	
DESIGNATION	varchar(15)	YES		NULL	
MANAGER_ID	decimal(4,0)	YES		NULL	
DOJ	date	YES		NULL	
DEPT_ID	varchar(15)	YES		NULL	
SALARY	float	YES		NULL	
GENDER	char(1)	YES		NULL	

(ii):

ALTER TABLE EMPLOYEE_20BCE7236 ADD CONSTRAINT fk_EID FOREIGN KEY(MANAGER_ID) REFERENCES EMPLOYEE_20BCE7236(EMP_ID);
DESC EMPLOYEE_20BCE7236;

Field	Туре	Null	Key	Default	Extra
EMP_ID	decimal(4,0)	NO	PRI	NULL	
EMP_NAME	varchar(15)	YES		NULL	
DESIGNATION	varchar(15)	YES		NULL	
MANAGER_ID	decimal(4,0)	YES	MUL	NULL	
DOJ	date	YES		NULL	
DEPT_ID	varchar(15)	YES		NULL	
SALARY	float	YES		NULL	
GENDER	char(1)	YES		NULL	

(iii):

ALTER TABLE DEPARTMENT_20BCE7236 ADD PRIMARY KEY (DEPT_NUM);

ALTER TABLE DEPARTMENT_20BCE7236 ADD CONSTRAINT fk_DEPT FOREIGN KEY(DEPT_ID) REFERENCES DEPARTMENT_20BCE7236(DEPT_NUM);

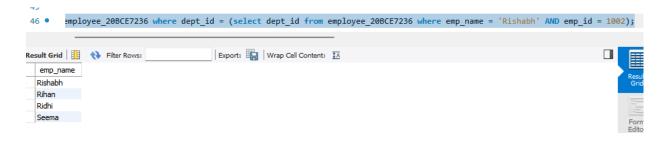
DESC DEPARTMENT_20BCE7236;

Field	Type	Null	Key	Default	Extra
DEPT_NUM	varchar(15)	NO	PRI	NULL	
DEPT_NAME	varchar(15)	YES		NULL	
DEPT_ID	varchar(10)	YES	MUL	NULL	
DEPT_LOCATION	varchar(15)	YES		NULL	
PHN_NUM	decimal(10,0)	YES		NULL	

Question-2:

Write a SQL query to find out the names of all employees who belongs to the same department as the employee 'Rishabh' who has an emp_ID 1002.

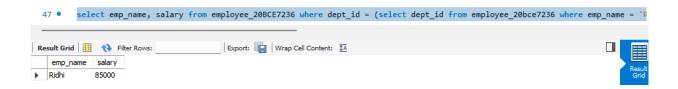
Code & Output:



Question-3:

Write a SQL query to find out the employees who belongs to the department of 'Rishabh' and have salary greater than the salary of 'Rishabh' who has an emp_ID 1002.

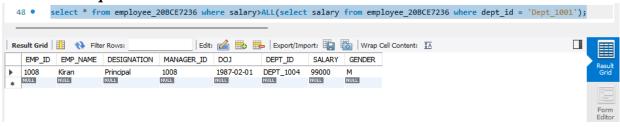
Code & Output:



Question-4:

Write a SQL query to find out all the employees who have salary greater than all the employees in the department Dept 1001.

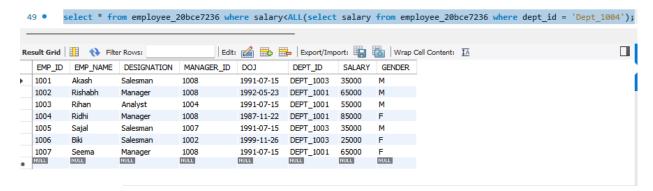
Code & Output:



Question-5:

Write a SQL query to find out all the employees who have salary lesser than the salary of all the employees in the department Dept_1004.

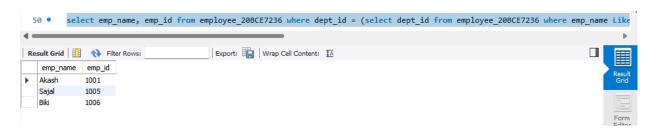
Code & Output:



Question-6:

Write a SQL query to display the employee id and name for all employees who work in a department with any employee whose name contains a letter J.

Code & Output:



Question-7:

Write a SQL query to display 4th max salary of the employee using subquery.

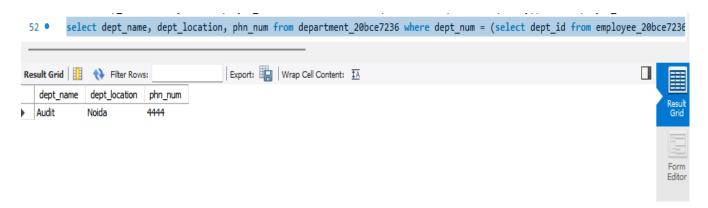
Code & Output:



Question-8:

Find out department details like department name, department location and phone number having the employee who get maximum salary.

Code & Output:



Question-9:

Write a SQL query to list the department names which are having more than 2 employees using subquery.

Code & Output:

