

Assignment 2

CSC613

Name: Maharshi Basu
Reg. No: 708

DATASETS:

Department Enter a SQL expression to filter results (use Ctrl+Space)					
Grid Text		Dname	Dnumber	Mgr_ssn	Mgr_start_date
	1	HR	1	4,321	2012-01-01
	2	IT	2	1,098	2020-11-15
	3	Finance	3	5,678	2003-02-10
	4	Marketing	4	8,901	2022-10-05
	5	Operations	5	6,789	2005-03-20
	6	Sales	6	1,234	2010-12-12
	7	Research	7	7,654	2015-04-25
	8	Administration	8	2,345	2017-01-15
	9	Customer Service	9	8,765	2016-09-30
	10	Production	10	7,890	2022-03-05
	11	Quality Assurance	11	4,567	2013-11-30
	12	Logistics	12	2,109	2009-02-28
	13	Legal	13	5,432	2022-01-20
	14	Facilities	14	8,901	2023-12-05
	15	Information Security	15	6,789	2015-04-10

Department Dataset

Employee <i>Enter a SQL expression to filter results (use Ctrl+Space)</i>											
	ABC Fname	ABC Minit	ABC Lname	123 Ssn	Bdate	ABC Address	ABC Sex	123 Salary	123 Super_ssn	123 Dno	
1	Arjun	A.	Sharma	1,098	1998-03-08	Patna	M	26,000	7,890	1	
2	Nidhi	T.	Agarwal	1,234	1995-08-25	Delhi	F	35,000	5,678	1	
3	Sahil	K.	Gupta	2,109	1994-09-15	Dehradun	M	29,500	6,789	7	
4	Akash	P.	Yadav	2,345	1994-02-05	Hyderabad	M	27,000	1,234	2	
5	Sameer	R.	Jain	3,456	1996-06-15	Pune	M	38,000	9,876	3	
6	Rohit	S.	Choudhary	4,321	1991-07-27	Jaipur	M	42,000	2,345	4	
7	Riya	S.	Sharma	4,567	1998-05-20	Mumbai	F	30,000	4,321	3	
8	Pooja	A.	Rao	5,432	1996-12-20	Mysuru	F	31,000	8,901	3	
9	Ravi	K.	Singh	5,678	1992-04-30	Bangalore	M	40,000	8,901	1	
10	Anjali	A.	Mishra	6,789	1993-01-22	Lucknow	F	31,000	7,654	7	
11	Kirti	S.	Thakur	7,654	1990-10-03	Chandigarh	F	33,000	8,765	6	
12	Aryan	K.	Verma	7,890	2000-11-18	Chennai	M	28,000	1,098	2	
13	Divya	K.	Kumar	8,765	1997-06-12	Varanasi	F	37,000	4,567	5	
14	Priya	R.	Shah	8,901	1999-09-08	Ahmedabad	F	31,000	4,567	5	
15	Sneha	R.	Patel	9,876	1997-12-10	Kolkata	F	32,000	6,789	4	

Employee Dataset

Project <i>Enter a SQL expression to filter results (use Ctrl+Space)</i>				
	ABC Pname	ABC Pnumber	ABC Plocation	123 Dnum
1	ProjectA	P-01	Mumbai	1
2	ProjectB	P-02	Chennai	2
3	ProjectC	P-03	Delhi	3
4	ProjectD	P-04	Bangalore	4
5	ProjectE	P-05	Kolkata	5
6	ProjectF	P-06	Hyderabad	6
7	ProjectG	P-07	Ahmedabad	7
8	ProjectH	P-08	Pune	8
9	ProjectI	P-09	Lucknow	9
10	ProjectJ	P-10	Jaipur	10
11	ProjectK	P-11	Chandigarh	11
12	ProjectL	P-12	Dehradun	12
13	ProjectM	P-13	Patna	13
14	ProjectN	P-14	Varanasi	14
15	ProjectO	P-15	Mysuru	15

Project Dataset

Works_On			
Enter a SQL expression to filter results			
	123 Essn	ABC Pno	123 Hours
1	1,098	P-12	27
2	1,234	P-03	25
3	2,109	P-01	40
4	2,345	P-06	20
5	3,456	P-08	38
6	4,321	P-10	45
7	4,567	P-14	36
8	5,432	P-15	31
9	5,678	P-04	35
10	6,789	P-09	22
11	7,654	P-11	18
12	7,890	P-02	32
13	8,765	P-13	34
14	8,901	P-07	30
15	9,876	P-05	28

Works_On Dataset

Dependent					
Enter a SQL expression to filter results (use Ctrl+Space)					
	123 Essn	ABC Dependent_name	ABC Sex	Bdate	ABC Relationship
1	1,098	Aryan Sharma	M	2018-12-10	Son
2	1,234	Amit Singh	M	1950-12-01	Father
3	2,109	Sahil Gupta	M	2012-01-08	Son
4	2,345	Kavya Yadav	F	2013-09-05	Daughter
5	3,456	[NULL]	[NULL]	[NULL]	[NULL]
6	4,321	Arjun Choudhary	M	1980-06-30	Father
7	4,567	[NULL]	[NULL]	[NULL]	[NULL]
8	5,432	Pooja Rao	F	2014-04-25	Daughter
9	5,678	Sneha Singh	F	1955-06-20	Mother
10	6,789	Riya Mishra	F	1992-02-15	Sister
11	7,654	Kirti Thakur	F	1983-09-02	Mother
12	7,890	Megha Gupta	F	2012-07-10	Daughter
13	8,765	Divya Kumar	F	1989-08-15	Wife
14	8,901	Priya Shah	F	1985-05-18	Wife
15	9,876	[NULL]	[NULL]	[NULL]	[NULL]

Dependent Dataset

	Dnumber	Dlocation
1	1	Kolkata
2	2	Chennai
3	3	Delhi
4	4	Bangalore
5	5	Kalyani
6	6	Hyderabad
7	7	Ahmedabad
8	8	Pune
9	9	Lucknow
10	10	Jaipur
11	11	Chandigarh
12	12	Dehradun
13	13	Patna
14	14	Varanasi
15	15	Mysuru

Dept_Locations Dataset

Q1. Find the male employees whose first name contains “esh” at the end and work in project either “P-01” or "P-05".

```
> SELECT E.`Fname`, E.`Lname`
FROM Employee E
JOIN
`Department` D ON E.`Dno` = D.`Dnumber`
JOIN
`Project` P ON D.`Dnumber` = P.`Dnum`
WHERE
E.Fname LIKE '%esh' AND
(P.`Pnumber` = 'P-01' OR P.Pnumber = 'P-05') AND E.Sex =
'M';
```

	Fname	Lname
1	Ramesh	Sharma

Q2. Find the youngest ten employees in the organization whose working location is “Delhi”.

```
> SELECT E.Fname, E.Lname
FROM Employee E
JOIN
Department D ON E.Dno = D.Dnumber
JOIN
Dept_Locations DL ON DL.Dnumber = D.Dnumber
WHERE DL.Dlocation = 'Delhi'
ORDER BY DATEDIFF(CURDATE(), E.Bdate)
LIMIT 10;
```

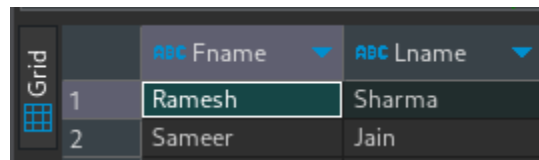
	ABC Fname	ABC Lname
1	Riya	Sharma
2	Pooja	Rao
3	Sameer	Jain

Q3. Find the name of the manager(s) who supervises the maximum number of employees in the organization.

>

```
SELECT E.Fname, E.Lname
FROM Employee E
JOIN
Department D ON E.Dno = D.Dnumber
GROUP BY E.Dno
HAVING COUNT(*) = (
    SELECT COUNT(*)
    FROM Employee E2
    JOIN Department D2 ON E2.Dno = D2.Dnumber
    GROUP BY E2.Dno
    ORDER BY COUNT(*) DESC
    LIMIT 1
```

);

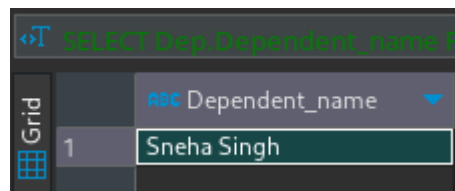


		ABC Fname	ABC Lname
1		Ramesh	Sharma
2		Sameer	Jain

Q4. Find the list of dependents for all employees working at “Delhi”.

>

```
SELECT Dep.Dependent_name
FROM Dependent Dep
JOIN
Employee E ON Dep.Essn = E.Ssn
JOIN
Department d ON d.Mgr_ssn = E.Ssn
JOIN
Dept_Locations dl ON dl.Dnumber = d.Dnumber
WHERE dl.Dlocation = "Delhi";
```



		ABC Dependent_name
1		Sneha Singh

Q5. List the employees ordered by their DoB.

>

```
SELECT Fname, Lname
FROM Employee
ORDER BY Bdate;
```

SELECT Fname, Lname FROM Employee

	ABC Fname	ABC Lname
1	Kirti	Thakur
2	Rohit	Choudhary
3	Ravi	Singh
4	Anjali	Mishra
5	Akash	Yadav
6	Sahil	Gupta
7	Nidhi	Agarwal
8	Sameer	Jain
9	Pooja	Rao
10	Divya	Kumar
11	Sneha	Patel
12	Ramesh	Sharma
13	Riya	Sharma
14	Priya	Shah
15	Aryan	Verma

Q6. List the employees with a salary > 50000 and group them by their department name.

>

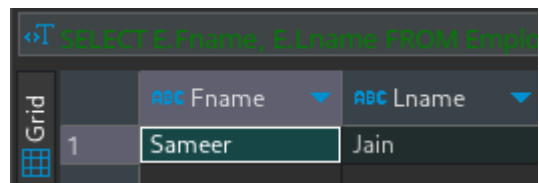
```
SELECT d.Dname, COUNT(*)
FROM
Employee E
JOIN
Department d ON E.Dno = d.Dnumber
WHERE E.Salary > 10000
GROUP BY d.Dname;
```

	ABC Dname	123 COUNT(*)
1	Finance	3
2	HR	3
3	IT	2
4	Marketing	2
5	Operations	2
6	Research	2
7	Sales	1

Q7. Find the employee name with the 3rd highest salary.

>

```
SELECT E.Fname, E.Lname
FROM
Employee E
ORDER BY
E.Salary
DESC LIMIT 1 OFFSET 2;
```

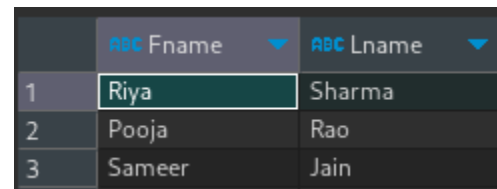


The screenshot shows a SQL query window with the text: `SELECT E.Fname, E.Lname FROM Employee`. Below the query, a table grid displays the results. The first column is labeled 'Grid' with a value of '1'. The second column is 'Fname' with the value 'Sameer'. The third column is 'Lname' with the value 'Jain'.

Grid	Fname	Lname
1	Sameer	Jain

Q8. Find all the employees who are not working on any project.

```
SELECT e.Fname, e.Lname
FROM
Works_On wo
JOIN
Employee e ON wo.Essn = e.Ssn
GROUP BY wo.Pno
HAVING COUNT(wo.Pno) = 0;
```



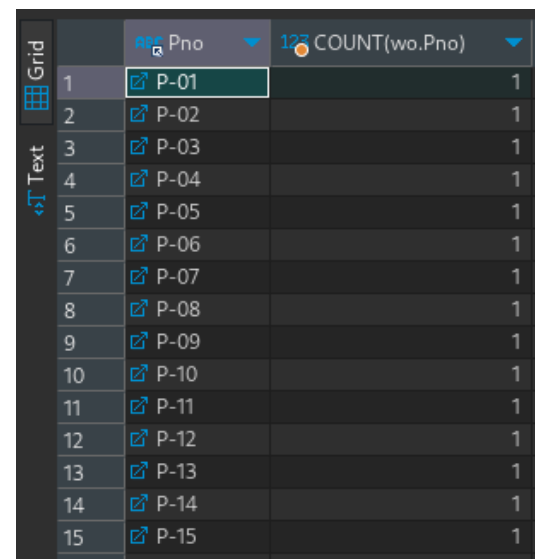
The screenshot shows a table with three rows. The first column is labeled 'Grid' with values 1, 2, and 3. The second column is 'Fname' with values Riya, Pooja, and Sameer. The third column is 'Lname' with values Sharma, Rao, and Jain.

Grid	Fname	Lname
1	Riya	Sharma
2	Pooja	Rao
3	Sameer	Jain

Q9. Report the project-wise count of employees sorted in descending order.

>

```
SELECT wo.Pno, COUNT(wo.Pno)
FROM
Works_On wo
JOIN
Employee e ON wo.Essn = e.Ssn
```



The screenshot shows a table with 15 rows. The first column is labeled 'Grid' with values 1 through 15. The second column is 'Pno' with values P-01 through P-15. The third column is 'COUNT(wo.Pno)' with values 1 through 15. The table is sorted in descending order of project count.

Grid	Pno	COUNT(wo.Pno)
1	P-01	1
2	P-02	1
3	P-03	1
4	P-04	1
5	P-05	1
6	P-06	1
7	P-07	1
8	P-08	1
9	P-09	1
10	P-10	1
11	P-11	1
12	P-12	1
13	P-13	1
14	P-14	1
15	P-15	1


```
GROUP BY wo.Pno;
```

Q10. Find all the employees who are working exactly on one project.

```
>SELECT e.Fname, e.Lname  
  
FROM  
Works_On wo  
JOIN  
Employee e ON wo.Essn = e.Ssn  
GROUP BY wo.Pno  
HAVING COUNT(wo.Pno) = 1;
```

SQL Query: `SELECT e.Fname, e.Lname FROM Works_On wo JOIN Employee e ON wo.Essn = e.Ssn GROUP BY wo.Pno HAVING COUNT(wo.Pno) = 1;`

	ABC Fname	ABC Lname
1	Sahil	Gupta
2	Aryan	Verma
3	Nidhi	Agarwal
4	Ravi	Singh
5	Sneha	Patel
6	Akash	Yadav
7	Priya	Shah
8	Sameer	Jain
9	Anjali	Mishra
10	Rohit	Choudhary
11	Kirti	Thakur
12	Ramesh	Sharma
13	Divya	Kumar
14	Riya	Sharma
15	Pooja	Rao