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AASHISH



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Experiment 1

SQL Queries

1. Aim: SQL Query to create a Database

Syntax: Create database database\_Name ;

Example: Create database std\_details ;

Output: Database is created

(NO visible output)

Explanation: To store data in SQL database, we need to  
create a database

2. Aim: SQL Query to show the database.

Syntax: show databases ;

Example: show databases

Output:

Databases
std - details
:
:
:

Explanation: As after creating the database, we need to  
show the databases.

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3. Aim: SQL Query to create a table

Syntax: Create table my\_table (col1 datatype(size), col2 datatype(size) ....);

Example: Create table students (ID int(5), Name varchar(20), Enroll\_no varchar(30));

Output: (No visible output), But a table is created.

Table name : students

ID	Name	Enroll-no
ID	Name	Enroll-no

Explanation: as for storing the database, we need to properly name the databases value.

4. Aim: To insert data into table

Syntax: Insert into table-name value (col1(val1), col2(val2), ...);

Example: Insert into std-details values (1, "wrightson Debbarma", "20UCS070");

Output: Values are inserted into the respective columns as written in the sequence.

Explanation: Using the insert function, we can place values in a certain row with our desire value in that table.



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5. Aim: SQL Query to show the table

Syntax: select \* from table-name;

Example: select \* from std-details;

Output: The value in column Name, ID and Enroll-no is updated to Wrightson Debbarma, 1 and 20UCS070 respectively

ID	Name	Enroll-no
1	Wrightson Debbarma	20UCS070

Explanation: Using Select function we can select upto which value we want to display the data.  
Here the \* represents whole table

5.1 conditions can be

1. Name like "%x" - All names ending with x
2. Name like "x%" - All names starting with x
3. Name like "%x%" - All names having x in it
4. Name like "-----ON" - Name with 7 characters followed by ON
5. Name like "-----" - Name with exactly 6 characters

(here name can be any column name which is already in the table)

ID	Name	Enroll-no	Address
1	Wrightson	20UCS070	



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Explanation: Using update query we can update any value on the table followed by column name as well as row name

6. Aim: SQL Query to add column to the table

Syntax: ALTER TABLE Table-name ADD column\_name datatype;

Example: ALTER TABLE std-details ADD (Address varchar(50));

Output: Column named address with size of 50 is added to table

ID	Name	Enroll-no	Address
ID	Name	Enroll-no	Address
:	:	:	:
.	.	.	.

Explanation: Using Alter table Query we have added an extra column to the table successfully.

7. Aim: SQL Query to add or edit values in selective rows.

Syntax: UPDATE table-name SET column1 = value1 WHERE condition;

Example: UPDATE std-details  
SET Name = "Wrightson"  
WHERE ID = 1;



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8. Aim: SQL Query to show the column from table with conditions.

Syntax: `SELECT col1, col2 FROM  
Table - Name  
WHERE condition;`

Example: `SELECT ID, Name from  
std-details  
WHERE ID = 1;`

Output:

ID	Name
1	Wrightson

Explanation: using select query with condition we can easily modify the data which we want to see.

9. Aim: SQL Query to describe table

Syntax: `Describe Table-name;`

Example: `Describe std-details;`

Output:

Field	Type	NULL	Key	Default	extra
ID	int	yes		NULL	
Name	varchar(20)	yes		NULL	
Enroll-no	varchar(30)	yes		NULL	

Explanation: using describe query we will get to know the information or the details regarding to table



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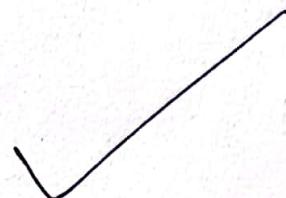
10. Aim: SQL Query to delete the whole table

Syntax: `DROP TABLE Table_name`

Example: `DROP TABLE std-details`

Output: The table has been deleted .

Explanation: Using `DROP` Query the table is deleted .





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11. Aim: Understanding the primary-key constraint in table

Syntax: CREATE TABLE table-name (col1 datatype NOT NULL  
col2 datatype, col3 datatype, ..., PRIMARY KEY  
(col1));

Example: CREATE TABLE std-details (ID int NOT NULL, Name  
varchar(20), ENUM Varchar(10), PRIMARY KEY (ID));

Output: A table named std - details is created when 'ID'  
is the primary key.

Explanation: PRIMARY KEY constraint uniquely identifies each  
record in table.

A table can have only one PRIMARY KEY

A PRIMARY KEY constraint automatically has a unique  
constraint.

11.1 Aim: To create PRIMARY KEY constraint on a column when  
the table already exists

Syntax: ALTER TABLE table-name  
ADD PRIMARY KEY(col-name);

Example: ALTER TABLE std details  
ADD PRIMARY KEY (ID)

Output: Now the ID column of table has PRIMARY KEY  
constraint.



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12. Aim: Understanding the UNIQUE constraint in SQL

Syntax: CREATE TABLE table-name (col1 datatype, col2 datatype  
-----, UNIQUE (col1));

Example: CREATE TABLE table-name (col1 std\_details  
(ID int, Name varchar(20), ENUM varchar(10)  
NOT NULL, UNIQUE (ENUM));

Output: Table named std details is created where ENUM  
is unique

Explanation: Unique constraint ensures that all values in a  
column are different.



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### Experiment - 13

- 1) Create a Table called Emp with the following structure. Then Insert 5 values.

Name	Type
EMPNO	Number (6)
Ename	Varchar (20)
Job	Varchar (10)
Dept NO	Number (3)
SAL	Number (7)

Allow NULL for all columns except ename and Job

#### Solution:

```
CREATE TABLE Emp (EMPNO int(6), Ename varchar(20)
NOT NULL Job varchar(10), DeptNO int(3), sal int(7));
```

#### INSERT 5 values

```
INSERT INTO EMP VALUES (1, "Ronald", "sales", 100,
17000);
INSERT INTO EMP VALUES (2, "Angellish", "sales", 100,
18000);
INSERT INTO Emp VALUES (3, "Rohit", "HR", 107, 88000);
INSERT INTO Emp VALUES (4, "Jhanat", "Market", 105
50000);
INSERT INTO EMP VALUES (5, "samson", "SW", 110,
110000);
```



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Showing the table:

Query: SELECT \* FROM EMP;

Table Name: Emp

EmpNo	EName	Job	Dept No	SAL
1	Ronald	Sales	100	17000
2	Angellish	sales	100	18000
3	Rohit	HR	107	88000
4	Jhanat	Market	105	50000
5	Samson	SW	110	110000
6				



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- 2) Add a column Experience to the Emp table.

Experience numeric null allowed .

solution:

Query : ALTER TABLE Emp ADD Exp int ;

Showing the table :

Query : select \* from emp;

EmpNo	EName	Job	DeptNo	Sal	Exp
1	Ronald	Sales	100	17000	NULL
2	Angelish	sales	100	18000	NULL
3	Rohit	HR	107	88000	NULL
4	Jhanat	Market	105	50000	NULL
5	samson	SW	110	110000	NULL

- 3) Modify the column width of the Job field of Emp table

solution

Query : ALTER TABLE Emp MODIFY Job Varchar(20);



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- 4) Drop a column experience to the Emp table.

Solution:

Query: ALTER TABLE Emp DROP COLUMN Exp;

Showing the Table:

Query: SELECT \* FROM Emp;

EmpNo	EName	Job	DeptNo	Sal
1	Ronald	Sales	100	17000
2	Angelish	Sales	100	18000
3	Rohit	HR	107	88000
4	Jhanat	Market	105	50000
5	Samson	SW	110	110000

- 5) Select command with Order by clause

Solution:

Query: SELECT \* FROM Emp ORDER BY salary;

Output:

EmpNo	EName	Job	DeptNo	Sal
1	Ronald	Sales	100	17000
2	Angelish	Sales	100	18000
4	Jhanat	Market	105	50000
3	Rohit	HR	107	88000
5	Samson	SW	110	110000



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- 6) Insert more than a record into Emp table using a single insert command.

Solution:

Query: `INSERT INTO Emp (EmpNo, EName, Job, DeptNo, sal)`

`VALUES`

`(6, "Ronald", "Sales", 100, 17000),`

`(7, "Angelish", "HR", 107, 80000));`

Two new rows are inserted using one statement

EmpNo	EName	Job	DeptNo	Sal
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
6	Ronald	sales	100	17000
7	Angelish	HR	107	80000

7. Truncate the Emp table

Solution:

Query: `TRUNCATE TABLE Emp.`

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### Experiment 14

Aim: SQL Query to select DISTINCT values

showing the table

Query : SELECT \* FROM stdinfo;

ID	Name	Rollno	Marks
1	Ronald	79	390
2	Titu	15	313
3	Wrightson	70	300
4	Samson	72	100
5	Henry	16	385

Syntax : SELECT DISTINCT column1, column 2, .... FROM table-name

Query : SELECT DISTINCT ID FROM stdinfo;

Output :

ID
1
2
3
4
5

Explanation: The SQL DISTINCT command only selects the unique or different values eliminating the duplicate records





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Aim: SQL Query for MIN() function

Showing the table

Query: `SELECT * FROM stdinfo`

ID	Name	Rollno	Marks
1	Ronald	79	390
2	TITU	45	313
3	Wrightson	70	300
4	samson	72	400
5	Henry	16	385

Syntax: `SELECT MIN(column-name)`  
`FROM table-name`  
`WHERE condition;`

Example: `SELECT MIN(Marks) FROM stdinfo`

Output:

MIN(Marks)
300

Explanation: `MIN()` function return the smallest value  
of the selected column



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3)

Aim: SQL query for MAX() function

Showing the table

Query: `SELECT * FROM stdinfo`

ID	Name	Rollno	Marks
1	Ronald	79	390
2	Titu	45	313
3	Wrightson	70	300
4	samson	72	400
5	Henry	16	385

Syntax: `SELECT MAX(column-name)`

`FROM table-name`

`WHERE Condition`

Example: `SELECT MAX(Marks) FROM stdinfo`

Output:

MAX(Marks)
400

Explanation: `MAX()` function ~~return the~~ largest value of the selected column



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Q)

Aim: SQL Query for COUNT() function  
showing the table

Query: SELECT \* FROM stdinfo

ID	Name	RollNo	Marks
1	Ronald	79	390
2	Titu	45	313
3	Wrightson	70	300
4	samson	72	400
5	Henry	16	385

Syntax: SELECT COUNT(column-name) FROM table-name  
WHERE Condition;

Example: SELECT COUNT(ID) FROM stdinfo;

Output:

COUNT (ID)
5

Explanation: COUNT returns the no. of rows that matches  
the specified criterion. It ignores NULL value.





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Q.5)

Aim: SQL Query for AVG( ) function  
showing the table

Query: SELECT \* FROM stdinfo;

ID	Name	Rollno	Marks
1	Ronald	79	390
2	Titu	45	313
3	Wrightson	70	300
4	Samson	72	400
5	Henry	16	385

Syntax: SELECT AVG (col-name) FROM table\_name  
WHERE condition

Example: SELECT SUM (Marks) FROM stdinfo;

Output :

AVG (Marks)
357.6

Explanation: The AVG( ) function returns the average  
value of a numeric column. NULL values are  
ignored



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6)

Aim: SQL Query for sum() function

Showing the table

Query : `SELECT * FROM stdinfo;`

ID	Name	Rollno	Marks
1	Ronald	79	390
2	Titu	45	313
3	Wrightson	70	300
4	Samson	72	400
5	Henry	16	385

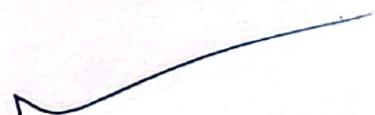
Syntax: `SELECT SUM(col-name) FROM tablename WHERE condition`

Example: `SELECT SUM(Marks) FROM stdinfo;`

Output :

SUM(Marks)
1788

Explanation: The sumfunction returns total sum of a numeric column. NULL values are ignored





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Q.7)

Aim: SQL Query for BETWEEN AND function  
Showing the table

Query: `SELECT * FROM stdinfo;`

ID	Name	Rollno	Marks
1	Ronald	79	390
2	Titu	45	313
3	Wrightson	70	300
4	samson	72	400
5	Henry	16	385

Syntax: `SELECT column-name(s)  
FROM table-name  
WHERE column-name BETWEEN value1 AND value2;`

Query: `SELECT * FROM stdinfo WHERE Marks BETWEEN  
300 AND 390`

Output:

ID	Name	Rollno
1	Ronald	79
2	Titu	45
3	Wrightson	70
5	Henry	16

Explanation: This SQL statement selects all the student with marks BETWEEN value 1 and value 2. It selects the values within a given range. The values can be numbers, text, or dates.



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8)

Aim: SQL Query for Alias name  
showing the table

Query: `SELECT * FROM stdinfo;`

ID	Name	Rollno	Marks
1	Ronald	79	390
2	Titu	45	313
3	Wrightson	70	300
4	Samson	72	400
5	Henry	16	385

Syntax: `SELECT column_name AS alias_name  
FROM Table_name`

Example: `SELECT Rollno AS Enrollno  
FROM stdinfo;`

Output:

Enrollno
79
45
70
72
16

Explanation: This statement creates alias for the particular specified column name. It changes the current column name to the new alias column name. It requires double quotation marks or square brackets if the alias name contains spaces.



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### Experiment 15

1) Aim: SQL Query for RIGHT JOIN

Syntax: `SELECT col-name(s) FROM table1 RIGHT JOIN  
table2 WHENON table1.col = table2.col;`

Example: `SELECT stdDetails.stdID, course.courseID  
FROM stdDetails RIGHT JOIN course ON  
stdDetails.stdID = course.stdID;`

Output:

stdID	courseID
1	113
2	117
3	113
4	114
5	120
null	122

Explanation: The Right JOIN keyword return all records from right table and only matching record from left table.



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Q) Aim: SQL Query for FULL OUTER JOIN / FULL JOIN

Syntax: SELECT col-name(s) FROM table1 FULL JOIN  
table2 ON table1.col = table2.col-name =  
table2.col-name.

Example: SELECT stdDetails.ENUM, course.courseID  
FROM stdDetails FULL JOIN course ON  
stdDetails.stdID = course.stdID;

Output:

ENUM	course.ID
20UCS070	113
20UCS072	117
20UCS044	113
20UCS045	119
20UCS079	120
Null	122

Explanation: The FULL JOIN returns all records then is  
match in the left or right table.

FULL JOIN can return very large result set





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AIM: SQL Query for INNER JOIN

Syntax: SELECT col-name(s) FROM table1 INNER JOIN  
table2 ON table1.col-name = table2.col-name;

Example: SELECT stdDetails.StdID, course.courseID FROM  
stdDetails INNER JOIN course ON stdDetails.StdID  
= course.StdID;

OUTPUT:

StdID	courseID
1	113
2	117
3	113
4	119
5	120

Explanation: The INNER JOIN clause select record that  
have matching values in both tables

course (table):

courseID	stdID	courseName
113	1, 3	OS
117	2	DBMS
119	4	CAO
120	5	AI
122	null	DL



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4)

Aim: SQL query for LEFT JOIN

Syntax: SELECT col-name(s). FROM table1 LEFT JOIN

table 2. col-name ON table1. col-name = table2.col-name

Example: SELECT stdDetails.Name, Course.courseID FROM  
stdDetails LEFT JOIN course ON stdDetails.stdID =  
course.stdID;

Output:

Name	Course ID
Ronald	113
Titu	117
Wrightson	113
Samson	120
Henry	119

Explanation: The LEFT JOIN keyword return all record from left table and matching records from right one. The result is 0 records from right side in case of no match.

Bd  
20/11/22



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### Experiment-16

i) Aim: To select WORKER\_ID, FIRST\_NAME, LAST\_NAME, SALARY  
JOINING\_DATE, DEPARTMENT

Query: SELECT WORKER-ID, FIRST-NAME, LAST-NAME,  
SALARY, JOINING-DATE, DEPARTMENT FROM Worker

### Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1	Monika	Arora	100000	2014-02-20 09:00:00	HR

Extended table (Dataset) for further Queries:  
Worker:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1	Monika	Arora	100000	2014-02-20 09:00:00	HR
2	Amitabh	Arora	200000	2014-01-19 09:00:00	SDE
3	Wrightson	Debbarma	15000	2020-01-01 09:00:00	Sales
4	Satish	Kumar	15000	2021-01-01 09:00:00	Sales
5	Vipul	Das	500000	2020-01-01 09:00:00	PR

### Bonus:

WORKER-REF-ID	BONUS-DATE	BONUS-AMOUNT
1	2016-02-20 00:00:00	5000
3	2021-08-20 00:00:00	1000
5.	2022-10-24 00:00:00	100000

### Title:

WORKER-REF-ID	WORKER-TITLE	AFFECTED-FROM
1.	Manager	2016-02-20 00:00:00
3	Head	2021-08-10 00:00:00
4	Director	2021-01-10 00:00:00
5	BA	2020-01-01 00:00:00



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- 2) Aim: Write an SQL query to fetch unique value of DEPARTMENT from Worker table

Query : SELECT DISTINCT DEPARTMENT from Worker;

Output:

DEPARTMENT
HR
SDE
Sales
PR

- 3) Aim: Write an SQL query to print the first three characters of FIRST\_NAME from Worker table

Query: SELECT LEFT(FIRST\_NAME, 3) FROM Worker;

Output:

LEFT(FIRST_NAME,3)
Mon
Ami
wri
Sat
vip



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- 1) Aim: SQL Query to find the position of the alphabet ('a') in the first name column 'Amitabh' from the worker table

Query: `SELECT POSITION ('A' IN FIRST-NAME) FROM worker  
WHERE FIRST-NAME = "Amitabh"`

Output:

POSITION ('A')
1

- 5) Aim: SQL Query to print the first-name from worker table after removing white space from right side

Query: `SELECT RTRIM (first-name) FROM worker,`

Output:

Trim(first-name)
Monika
Amitabh
Wrightson
Satish
Vipul



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6) Aim: Write an SQL query to print the DEPARTMENT from Worker table after removing white spaces from the left side.

Query : SELECT LTRIM (DEPARTMENT) FROM worker;

Output:

Trim (DEPARTMENT)
HR
SDE
sales
sales
PR



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7) Aim: Write an SQL query that fetches the unique value of DEPARTMENT from Worker table and prints its length

Query: `SELECT DISTINCT DEPARTMENT, LENGTH(DEPARTMENT)  
FROM Worker GROUP BY DEPARTMENT`

Output:

DEPARTMENT	LENGTH(DEPARTMENT)
HR	2
SDE	3
Sales	5
PR	2

8) Aim: SQL Query to print the FIRST-NAME and LAST-NAME of Worker table into a single column COMPLETE-NAME  
A space char should separate them .

Query: `SELECT CONCAT(FIRST-NAME, " ", LAST-NAME) AS  
COMPLETE-NAME FROM Worker;`

Output:

COMPLETE-NAME
Monika Arora
Amitabh Arora
Wrightson Debbarma
Satish Kumar
Vipul Das



# NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

## Department of Computer Science and Engineering

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9) Aim: Write an SQL query to print all worker details from the Worker table order by FIRST\_NAME Ascending and DEPARTMENT Descending

Query: SELECT \* FROM Worker ORDER by First-name ASC, Department DESC;

Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
2	Amitabh	Arora	2,00,000	2014-01-19 09:00:00	SDE
3	Monika	Arora	100000	2014-02-20 09:00:00	HR
4	Satish	Kumar	15000	2021-01-01 09:00:00	Sales
5	Vipul	Das	500000	2010-01-01 09:00:00	PR
3	Wrightson	Debbarma	15000	2020-01-01 09:00:00	sales

10) Aim: Write an SQL Query to print details for workers with the first name as "Vipul" and "Satish" from workertable

Query: SELECT \* FROM Worker WHERE first-name IN ("Vipul", "Satish");

Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
4	Satish	Kumar	15000	2021-01-01 09:00:00	sales
5	Vipul	Das	500000	2010-01-01 09:00:00	PR



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1) Aim: Write an SQL query to print details of the workers whose FIRST-NAME contains 'a'

Query: `SELECT * FROM worker WHERE First-name LIKE "% a %";`

Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1.	Monika	Arora	100000	2014-02-20 09:00:00	HR
2.	Amitabh	Arora	200000	2014-01-19 09:00:00	SDE
4	Satish	Kumar	15000	2021-01-01 09:00:00	Sales

2) Aim: Write an SQL query to print details of the workers whose SALARY lies between 100000 and 500000

Query: `SELECT * FROM worker WHERE salary BETWEEN 100000 AND 500000;`

Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1.	Monika	Arora	100000	2014-02-20 09:00:00	HR
2.	Amitabh	Arora	200000	2014-01-19 09:00:00	SDE
5.	Vipul	Das	500000	2010-01-01 09:00:00	PR



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13) Aim: SQL Query to print details of the workers who have joined in Feb 2014 (Date can be any)

Query: `SELECT * FROM worker WHERE joining_date LIKE "2014-02 %";`

Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1.	Monika	Arora	100000	2014-02-20 09:00:00	HR

14) Aim: Write an SQL query to fetch worker names with salary  $>= 50000$  and  $<= 100000$

Query: `SELECT CONCAT(first-name, " ", last-name) AS worker_name, salary FROM worker WHERE salary BETWEEN 50000 AND 100000`

Output:

Worker-name	salary
Monika Arora	100000



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15) Aim: Write an SQL query to fetch the no of workers for each department in the descending order.

Query: `SELECT Department, COUNT(worker_id) AS no_of_workers  
FROM Workers GROUP BY Department, ORDER BY no_of_workers DESC;`

Output:

DEPARTMENT	NO_OF_WORKERS
SALES	2
SHR	1
SDE	1
SPRCS	1

16) Aim: Write an SQL Query to print details of workers who are also managers

Query: `SELECT * FROM Worker INNER JOIN Title ON Worker  
Worker_id = Title.worker_ref_id AND Title.worker_title  
in ('Manager');`

Output:

WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1.	Monika	Arora	100000	2014-02-20 09:00:00	HR



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17) Aim: SQL query to fetch duplicate records having matching data in some fields of a table

Query: `SELECT Worker_Title, Affected_From, count(*) FROM TITLE GROUP BY Worker_Title, Affected_From Having count(*) > 1;`

Output: Empty set

18) Aim: Write an SQL query to show only odd rows from a table

Query: `SELECT * FROM worker WHERE MOD(worker-ID, 2) <> 0;`

Output:

WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	Monika	Arora	100000	2014-02-20 09:00:00	HR
3	Wrightson	Arora	200000	2014-01-19 09:00:00	SDE
5	Vipul	Das	500000	2010-01-01 09:00:00	PR



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19) Aim: Write an SQL Query to fetch intersecting records of two tables

Query: (SELECT \* FROM worker) INTERSECT (SELECT \* FROM title);

Output: Error

Since, the 2 tables are not intersect compatible

20) Aim: Write an SQL query to show records from a table that another table does not have

Query: (SELECT worker\_id FROM worker) MINUS (SELECT worker\_ref\_id FROM title);

Output:

worker_id
2
4

21) Aim: Write an SQL query to show the top n (say 10) records of a table

Query: SELECT first\_name FROM worker LIMIT 3;

Output:

FIRST_NAME
Monika
Amitabh
Wrightson



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- 22) Aim: Write an SQL query to determine n<sup>th</sup> highest salary from a table (say n = 3)

Query : SELECT salary FROM worker ORDER BY salary LIMIT 3,1;

Output:

Salary
200000

- 23) Aim: Write an SQL query to fetch the list of employee with same salary

Query : SELECT DISTINCT W.first\_name FROM Worker W,  
Worker WI WHERE W.salary = WI.salary AND  
W.Worker\_ID != WI.Worker\_Id;

Output:

FIRST-NAME
Wrightson
Satish

- 24) Aim: Write an SQL query to fetch first 50% records of a table

Query: SELECT TOP 50 PERCENT \* FROM Worker;

Output:

WORKER_ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1.	Monika	Arora	100000	2014-02-20 09:00:00	HR
2.	Amitabh	Arora	200000	2014-01-19 09:00:00	SDE
3.	Wrightson	Debbarma	15000	2020-01-01 09:00:00	Sales



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25) Aim: Write an SQL query to fetch Department that have less than 5 peoples in it

Query: `SELECT department, COUNT(department) AS depart FROM Workers GROUP BY department WHERE depart < 5;`

Output:

DEPARTMENT	DEPART
HR	1
SDE	1
Sales	2
PR	1

26) Aim: Write an SQL query to show the last record from a table

Query: `SELECT * FROM worker WHERE worker_ID = (select max(worker_ID) FROM worker);`

Output:

WORKERID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
5	Vipul	Das	500000	2010-01-01 09:00:00	PR



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27) Aim: Write an SQL query to fetch the last five records from a table

Query: `SELECT * FROM Worker WHERE Worker_ID <= 5  
UNION SELECT * FROM (SELECT * FROM Worker  
ORDER BY W.Worker_ID DESC) AS WI WHERE  
WI.Worker_ID <= 5`

Output:

WORKER_ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
1	Monika	Arora	100000	2014-02-20 09:00:00	HR
2	Amitabh	Arora	200000	2014-01-19 09:00:00	SDE
3	Wrightson	Debbarma	15000	2020-01-01 09:00:00	Sales
4	Satish	Kumar	15000	2021-01-01 09:00:00	Sales
5	Vipul	Das	500000	2010-01-01 09:00:00	PR



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28) Aim: To print the name of worker having highest salary in each department

Query: Select t. Department, t. first\_name, t. salary from  
(select max(salary) as TotalSalary, Department from  
Worker group by Department) as  
TempNew  
Inner Join Worker t on  
TempNew. Department = t. Department  
And TempNew. TotalSalary = t. salary

Output:

DEPARTMENT	FIRST-NAME	SALARY
HR	Morika	100000
SDE	Amitabh	200000
Sales	Wrightson	15000
Sales	Satish	15000
PR	Vipul	500000



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29) Aim: Write an SQL query to fetch n<sup>th</sup> max salaries from a table

Query: select distinct salary from worker order by salary DESC limit 1 offset 3;

Output:

salary
100000

30) Aim: To fetch the names of worker who earn the highest salary.

Query : select \* from worker where salary = (select max (salary) from worker);

Output:

WORKER-ID	FIRST-NAME	LAST-NAME	SALARY	JOINING-DATE	DEPARTMENT
5	VIPUL	DAS	500000	2010-01-01 09:00:00	PR

31) Aim: SQL Query to show the second highest salary from a table

Query : select max (SALARY) FROM worker WHERE SALARY  
NOT IN (SELECT MAX (SALARY) FROM worker);

Output:

Max (SALARY)
200000

20/11/22