Worker table

| WORKER_ID | FIRST_NAME | LAST_NAME | SALARY | JOINING_DATE | DEPARTMENT |
|---|---|---|---|---|---|
| 001 | Monika | Arora | 100000 | 2014-02-20 09:00:00 | HR |
| 002 | Niharika | Verma | 80000 | 2014-06-11 09:00:00 | Admin |
| 003 | Vishal | Singhal | 300000 | 2014-02-20 09:00:00 | HR |
| 004 | Amitabh | Singh | 500000 | 2014-02-20 09:00:00 | Admin |
| 005 | Vivek | Bhati | 500000 | 2014-06-11 09:00:00 | Admin |
| 006 | Vipul | Diwan | 200000 | 2014-06-11 09:00:00 | Account |
| 007 | Satish | Kumar | 75000 | 2014-01-20 09:00:00 | Account |
| 008 | Geetika | Chauhan | 90000 | 2014-04-11 09:00:00 | Admin |

**Bonus**

| WORKER_REF_ID | BONUS_DATE | BONUS_AMOUNT |
|---|---|---|
| 1 | 2016-02-20 00:00:00 | 5000 |
| 2 | 2016-06-11 00:00:00 | 3000 |
| 3 | 2016-02-20 00:00:00 | 4000 |
| 1 | 2016-02-20 00:00:00 | 4500 |
| 2 | 2016-06-11 00:00:00 | 3500 |

**Title**

| WORKER_REF_ID | WORKER_TITLE | AFFECTED_FROM |
|---|---|---|
| 1 | Manager | 2016-02-20 00:00:00 |
| 2 | Executive | 2016-06-11 00:00:00 |
| 8 | Executive | 2016-06-11 00:00:00 |
| 5 | Manager | 2016-06-11 00:00:00 |
| 4 | Asst. Manager | 2016-06-11 00:00:00 |
| 7 | Executive | 2016-06-11 00:00:00 |
| 6 | Lead | 2016-06-11 00:00:00 |
| 3 | Lead | 2016-06-11 00:00:00 |

| Query Number | Query Description | SQL Query |
|---|---|---|
| Q-1 | Fetch "FIRST_NAME" from the Worker table using the alias name <WORKER_NAME> | SELECT FIRST_NAME AS WORKER_NAME FROM Worker |
| Q-2 | Fetch "FIRST_NAME" from the Worker table in upper case | SELECT UPPER(FIRST_NAME) FROM Worker |
| Q-3 | Fetch unique values of DEPARTMENT from the Worker table | SELECT DISTINCT DEPARTMENT FROM Worker |
| Q-4 | Print the first three characters of FIRST_NAME from the Worker table | SELECT SUBSTRING(FIRST_NAME, 1, 3) FROM Worker |
| Q-5 | Find the position of the alphabet 'a' in the FIRST_NAME column 'Amitabh' from the Worker table | SELECT INSTR(FIRST_NAME, 'a') FROM Worker WHERE FIRST_NAME = 'Amitabh' |
| Q-6 | Print the FIRST_NAME from the Worker table after removing white spaces from the right side | SELECT RTRIM(FIRST_NAME) FROM Worker |
| Q-7 | Print the DEPARTMENT from the Worker table after removing white spaces from the left side | SELECT LTRIM(DEPARTMENT) FROM Worker |
| Q-8 | Fetch the unique values of DEPARTMENT from the Worker table and print its length | SELECT DISTINCT DEPARTMENT, LENGTH(DEPARTMENT) FROM Worker |

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| Q-9 | Print the FIRST_NAME from the Worker table after replacing 'a' with 'A' | SELECT REPLACE(FIRST_NAME, 'a', 'A') FROM Worker |
| Q-10 | Print the FIRST_NAME and LAST_NAME from the Worker table into a single column COMPLETE_NAME. Separate them with a space | SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS COMPLETE_NAME FROM Worker |
| Q-11 | Print all Worker details from the Worker table ordered by FIRST_NAME ascending | SELECT * FROM Worker ORDER BY FIRST_NAME ASC |
| Q-12 | Print all Worker details from the Worker table ordered by FIRST_NAME ascending and DEPARTMENT descending | SELECT * FROM Worker ORDER BY FIRST_NAME ASC, DEPARTMENT DESC |
| Q-13 | Print details for Workers with the first names "Vipul" and "Satish" from the Worker table | SELECT * FROM Worker WHERE FIRST_NAME IN ('Vipul', 'Satish') |
| Q-14 | Print details of workers excluding first names "Vipul" and "Satish" from the Worker table | SELECT * FROM Worker WHERE FIRST_NAME NOT IN ('Vipul', 'Satish') |
| Q-15 | Print details of Workers with DEPARTMENT name as "Admin" | SELECT * FROM Worker WHERE DEPARTMENT = 'Admin' |
| Q-16 | Print details of the Workers whose FIRST_NAME contains 'a' | SELECT * FROM Worker WHERE FIRST_NAME LIKE '%a%' |

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| Q-17 | Print details of the Workers whose FIRST_NAME ends with 'a' | SELECT * FROM Worker WHERE FIRST_NAME LIKE '%a' |
| Q-18 | Print details of the Workers whose FIRST_NAME ends with 'h' and contains six alphabets | SELECT * FROM Worker WHERE FIRST_NAME LIKE '_____h' |
| Q-19 | Print details of the Workers whose SALARY lies between 100000 and 500000 | SELECT * FROM Worker WHERE SALARY BETWEEN 100000 AND 500000 |
| Q-20 | Print details of the Workers who joined in Feb'2014 | SELECT * FROM Worker WHERE JOINING_DATE LIKE '%Feb-2014' |
| Q-21 | Fetch the count of employees working in the department 'Admin' | SELECT COUNT(*) FROM Worker WHERE DEPARTMENT = 'Admin' |
| Q-22 | Fetch worker names with salaries >= 50000 and <= 100000 | SELECT WORKER_NAME FROM Worker WHERE SALARY BETWEEN 50000 AND 100000 |
| Q-23 | Fetch the number of workers for each department in descending order | SELECT DEPARTMENT, COUNT() *FROM Worker GROUP BY DEPARTMENT ORDER BY COUNT()* DESC |
| Q-24 | Print details of the Workers who are also Managers | SELECT * FROM Worker INNER JOIN Manager ON Worker.WORKER_ID = Manager.WORKER_ID |
| Q-25 | Fetch duplicate records having matching data in some fields of a | SELECT * FROM Worker GROUP BY FIRST_NAME, LAST_NAME, DEPARTMENT HAVING COUNT(*) |

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|---|---|---|
| | table | > 1 |
| Q-26 | Show only odd rows from a table | SELECT * FROM (SELECT ROW_NUMBER() OVER (ORDER BY <COLUMN>) AS RowNum, * FROM <TABLE_NAME>) AS t WHERE RowNum % 2 <> 0 |
| Q-27 | Show only even rows from a table | SELECT * FROM (SELECT ROW_NUMBER() OVER (ORDER BY <COLUMN>) AS RowNum, * FROM <TABLE_NAME>) AS t WHERE RowNum % 2 = 0 |
| Q-28 | Clone a new table from another table | CREATE TABLE NewTable AS SELECT * FROM ExistingTable |
| Q-29 | Fetch intersecting records of two tables | SELECT * FROM Table1 INNER JOIN Table2 ON Table1.Column = Table2.Column |
| Q-30 | Show records from one table that another table does not have | SELECT * FROM Table1 WHERE NOT EXISTS (SELECT * FROM Table2 WHERE Table1.Column = Table2.Column) |
| Q-31 | Show the current date and time | SELECT CURRENT_TIMESTAMP |
| Q-32 | Show the top n (say 10) records of a table | SELECT * FROM <TABLE_NAME> LIMIT 10 |
| Q-33 | Determine the nth (say n=5) highest salary from a table | SELECT DISTINCT Salary FROM <TABLE_NAME> ORDER BY Salary |

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| | | DESC LIMIT 5, 1 |
| Q-34 | Determine the 5th highest salary without using the LIMIT clause | SELECT Salary FROM <TABLE_NAME> t1 WHERE 5 = (SELECT COUNT(DISTINCT t2.Salary) FROM <TABLE_NAME> t2 WHERE t2.Salary > t1.Salary) |
| Q-35 | Fetch records from a table based on a specific date range | SELECT * FROM <TABLE_NAME> WHERE DATE_COLUMN BETWEEN 'start_date' AND 'end_date' |
| Q-36 | Calculate the average salary of employees in each department | SELECT DEPARTMENT, AVG(SALARY) FROM Worker GROUP BY DEPARTMENT |
| Q-37 | Print the total number of employees in each department | SELECT DEPARTMENT, COUNT(*) FROM Worker GROUP BY DEPARTMENT |
| Q-38 | Calculate the total salary expenditure of each department | SELECT DEPARTMENT, SUM(SALARY) FROM Worker GROUP BY DEPARTMENT |
| Q-39 | Calculate the maximum salary in each department | SELECT DEPARTMENT, MAX(SALARY) FROM Worker GROUP BY DEPARTMENT |
| Q-40 | Calculate the minimum salary in each department | SELECT DEPARTMENT, MIN(SALARY) FROM Worker GROUP BY DEPARTMENT |
| Q-41 | Print the nth (say n=5) highest | SELECT Salary FROM <TABLE_NAME> ORDER BY Salary |

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| | salary from a table | DESC LIMIT 4, 1 |
| Q-42 | Print the names of employees who earn more than their managers | SELECT w.FIRST_NAME FROM Worker w INNER JOIN Manager m ON w.WORKER_ID = m.WORKER_ID WHERE w.SALARY > m.SALARY |
| Q-43 | Print the names of employees who earn the same salary as their managers | SELECT w.FIRST_NAME FROM Worker w INNER JOIN Manager m ON w.WORKER_ID = m.WORKER_ID WHERE w.SALARY = m.SALARY |
| Q-44 | Print the names of employees who earn more than the average salary | SELECT FIRST_NAME FROM Worker WHERE SALARY > (SELECT AVG(SALARY) FROM Worker) |
| Q-45 | Print the names of employees who joined before Jan 2022 | SELECT FIRST_NAME FROM Worker WHERE JOINING_DATE < '2022-01-01' |
| Q-46 | Print the names of employees who have duplicate salaries | SELECT FIRST_NAME, SALARY FROM Worker GROUP BY FIRST_NAME, SALARY HAVING COUNT(*) > 1 |
| Q-47 | Print the names of employees who have duplicate salaries but different names | SELECT w1.FIRST_NAME, w1.SALARY FROM Worker w1 INNER JOIN Worker w2 ON w1.SALARY = w2.SALARY AND w1.FIRST_NAME <> w2.FIRST_NAME |

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| Q-48 | Print the names of employees who have duplicate salaries and names | SELECT FIRST_NAME, SALARY FROM Worker GROUP BY FIRST_NAME, SALARY HAVING COUNT(*) > 1 |
| Q-49 | Calculate the total salary expenditure for each department and sort the result in descending order of the expenditure | SELECT DEPARTMENT, SUM(SALARY) AS TOTAL_SALARY FROM Worker GROUP BY DEPARTMENT ORDER BY TOTAL_SALARY DESC |
| Q-50 | Print the details of the oldest and youngest employees | SELECT * FROM Worker WHERE AGE IN (SELECT MAX(AGE) FROM Worker) UNION SELECT * FROM Worker WHERE AGE IN (SELECT MIN(AGE) FROM Worker) |