

Assignments: SQL (Part-1)

Overview:

This assignment has 25 short exercises, each for around 5 minutes. You are expected to complete the course/ reference reading before attempting the exercise. The learning objectives are given below:

S.No	Exercise	Description	Learning Objective
1	Using Select query	This exercise is about writing Select query for extracting particular data of a row.	Use Select query to extract data from the database.
2	Using Where clause	This exercise is about using where clause in a select query.	Use Where clause in select statement.
3	Using BetweenAnd	This exercise is about using Between-And in select query.	Use BetweenAnd in select statement.
4	Using Where clause	This exercise is about using where clause in a select query for string	Use Where clause in select query for string.
5	Using IS NOT NULL	This exercise is about using IS NOT NULL in select query for particular column.	Use IS NOT NULL in select query for a column.
6	Using Where Clause with date	This exercise is about using where clause in a select query to retrieve data based on some date.	Use Where Clause in select query to retrieve data based on date.
7	Using Self Join	This exercise is about using join and retrieve data	Use Join to retrieve data.
8	Using Order By clause	This exercise is about using order by clause for sorting data.	Use Order by for sorting data.

9	Using LIKE query	This exercise is about using LIKE to match patterns and extract data accordingly.	Use Like to match pattern and extract data .
10	Using Date functions	This exercise is about extracting month from date, compare and retrieve data accordingly.	Use Date functions.
11	Using DISTINCT	This exercise is about extracting unique data from set of data	Use DISTINCT to extract unique data.
12	Using SYSDATE	This exercise is about using current system date.	Use SYSDATE to display current system date.
13	Using Aggregate functions	This exercise is about using AVG() aggregate function.	Use Aggregate functions.
14	Using GROUP BY HAVING clause	This exercise is about using aggregate functions along with conditions.	Use GROUP BY function along with HAVING clause.
15	Using GROUP BY HAVING	This exercise is about consolidating data based on certain condition.	Use GROUP BY function along with HAVING clause.
16	Using COUNT, GROUP BY and HAVING	This exercise is about retrieving more number of records for given data.	se COUNT, GROUP BY and HAVING to retrieve data.
17	Using MAX, GROUP BY and HAVING	This exercise is about retrieving certain records consolidating given data.	Use MAX, GROUP BY and HAVING to retrieve data.
18	Using MAX, GROUP BY and HAVING	This exercise is about retrieving certain record consolidating given data.	
19	Using Sub Query	This exercise is about retrieving certain records other set of data.	Participant will be able to use Sub Query .
20	Using JOIN queries.	This exercise is about retrieving certain from two different tables based on certain condition.	Use JOIN to retrieve data.

21	Using JOIN queries.	This exercise is about retrieving certain from two different tables based on certain condition.	Use JOIN to retrieve data from two different tables.
22	Using JOIN queries and GROUP BY.	This exercise is about retrieving certain from two different tables based on certain condition.	Use JOIN and GROUP BY to retrieve data from two different tables.
23	Using JOIN queries and GROUP BY.	This exercise is about retrieving certain from two different tables based on certain condition.	Use JOIN and GROUP BY to retrieve data from two different tables.
24	Using SELF JOIN queries and GROUP BY.	This exercise is about retrieving certain from two different columns of same table based on certain condition.	Use SELF JOIN and GROUP BY to retrieve data from two different tables.
25	Using MAX, GROUP BY and HAVING	This exercise is about retrieving certain record consolidating given data.	Use MAX, GROUP BY and HAVING to retrieve data.

Exercise 1: Using select statement

Displays the First names & Job_id of all the employees who are working in depart number 30.

Recommended duration: 5 minutes

Exercise 2: Using where clause

Display details of jobs where the minimum salary is greater than 10000 from jobs table.

Recommended duration: 5 minutes

Exercise 3: Using between & AND

Display the first name and join date of the employees who joined between 2002 and 2005.

Recommended duration: 5 minutes

Exercise 4: Using where clause

Display first name and join date of the employees who is either IT_PROG or ST_MAN

Recommended duration: 5 minutes

Exercise 5: Using IS NOT NULL

Display the employee number and first name who are earning commission.

Recommended duration: 5 minutes

Exercise 6: Using where clause

Display employees who joined after 1st January 2008.

Recommended duration: 5 minutes

Exercise 7 Using self-join

Display the first names of the employee who are not working as MANAGERS.

Recommended duration: 10 minutes

Exercise 8: Using Order By clause

Display details of jobs in the descending order of the title from jobs table.

Recommended duration: 5 minutes

Exercise 9: Using like statement

Display employees where the first name or last name starts with S.

Recommended duration: 2 minutes

Exercise 10: Using date functions

Display employees who joined in the month of May.

Recommended duration: 3 minutes

Exercise 11: Using distinct function

Display the jobs found in department 10 and 20 Eliminate duplicate jobs.

Recommended duration: 5 minutes

Exercise 12: Using SYSDATE function

Display employees who joined in the current year.

Recommended duration: 5 minutes

Exercise 13: Using aggregate function.

Display average salary of employees in each department.

Recommended duration: 5 minutes

Exercise 14: Using GROUP BY HAVING clause

Display job ID for jobs with average salary more than 10000.

Recommended duration: 5 minutes

Exercise 15: Using GROUP BY HAVING

Display department ID, year, and Number of employees joined.

Recommended duration: 10 minutes

Exercise 16: Using COUNT, GROUP BY and HAVING

Display departments where any manager is managing more than 5 employees.

Recommended duration: 5 minutes

Exercise 17: Using MAX, GROUP BY and HAVING

Display the employee's salary who earns highest salaries in their respective job groups.

Recommended duration: 5 minutes

Exercise 18: Using MAX, GROUP BY and HAVING

Display the name of the employee who earns highest salary.

Recommended duration: 5 minutes

Exercise 19: Using Sub Query

Display the names of clerks who earn a salary more than the lowest salary of any salesman.

Recommended duration: 10 minutes

Exercise 20: Using JOIN queries.

Display department name and number of employees in the department.

Recommended duration: 10 minutes

Exercise 21: Using JOIN queries.

Display department name and manager first name.

Recommended duration: 10 minutes

Exercise 22: Using JOIN queries and GROUP BY

Display the Job groups having total salary greater than the maximum salary for managers.

Recommended duration: 10 minutes

Exercise 23: Using JOIN queries and GROUP BY

Display the Job groups having total salary greater than the maximum salary for managers.

Recommended duration: 10 minutes

Exercise 25: Using SELF JOIN queries and GROUP BY

Find out the number of employees whose salary is greater than their manager salary?

Recommended duration: 10 minutes

Exercise 25: Using MAX, GROUP BY and HAVING

Display the employee's salary who earns highest salary in their respective departments.

Recommended duration: 15 minutes