

## Table of Contents

SQL is needed for every Information Technology job. ....	4
About DBA University, Inc.....	5
Srini Ramineni – Faculty and Founder, DBA University .....	5
Eligibility.....	6
Pricing.....	7
Cloud lab Access (Remote lab access) .....	7
Course Topics .....	8
PART I: How to design a relational database.....	8
Relational database design .....	8
1.1. Computer Database Concepts .....	8
1.2. Relational Database Design – An interactive practical example.....	8
1.3. Optimization of database design by using Normalization. ....	8
1.4 Installation of Oracle 19c Database Client software.....	8
1.5 Setting up Oracle database connections using the netca tool. ....	8
1.6 How to obtain Entity Relationship Diagram of existing database from SQL*Developer.....	8
1.7. Role of SQL in RDBMS. ....	8
PART II: Structured Query Language – SQL.....	8
Simple SQL statements .....	8
2.1. Basic SQL construct .....	9
2.2. Column naming conventions .....	9
2.3. Importance of NULL .....	9
2.4. Concatenation operator.....	9
2.5. Arithmetic operators and expressions.....	9
2.6. Operator precedence and Parenthesis .....	9
2.7. Character strings .....	9

# DBA University®

Oracle SQL Training Course

Tables and Table Joins .....	9
3.1. Need for joins.....	9
3.2. Cartesian products .....	9
3.3. Column aliases .....	9
3.4. Types of joins .....	9
3.5. ANSI Syntax and Oracle Syntax for writing Join statements.....	9
Filtering and Sorting data.....	9
4.1. Limiting rows retrieved .....	9
4.2. Using LIKE for pattern matching .....	9
4.3. Using logical operators AND, OR & NOT.....	9
4.4. Using BETWEEN & IN operators.....	9
4.5. Sorting data using ORDER BY clause .....	9
Oracle SQL Functions part 1.....	9
5.1. SQL Functions overview .....	10
5.2. What are single row functions? .....	10
5.3. Using Character functions.....	10
5.4. Using Number functions .....	10
5.5. Using Date and timestamp functions. Avoid the YY and RR pitfall.....	10
5.6. Using CASE and DECODE functions.....	10
5.7. Nested functions .....	10
5.8. Data type conversion functions .....	10
5.9. Format masks in SQL functions .....	10
Oracle SQL Functions part 2.....	10
6.1. What are multi row functions? .....	10
6.2. Various multi row functions.....	10
6.3. Grouping data with GROUP BY clause .....	10
6.4. Using the HAVING clause .....	10
6.5. Sorting GROUP BY data .....	10
Nested SQL queries.....	10
7.1. Need for nested queries .....	10
7.2. Types of nested queries .....	10

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

<https://www.DBAUniversity.com> – email: [info@DBAUniversity.com](mailto:info@DBAUniversity.com) – Ph: 720 934 1260

# DBA University®

Oracle SQL Training Course

7.3. USING EXISTS, ALL & ANY operators .....	10
Database Manipulation Language – DML and Transactions.....	10
8.1. What is data manipulation in a database? .....	11
8.2. Need for data manipulation.....	11
8.3. INSERT statement .....	11
8.4. UPDATE statement.....	11
8.5. DELETE statement.....	11
8.6. Definition of Transaction .....	11
8.7. COMMIT & ROLLBACK statements .....	11
8.8. Using the SAVEPOINT statement .....	11
8.9. Automatic COMMIT behavior in SQL*Developer and SQL*Plus utilities.....	11
8.10. MERGE statement.....	11
Database Definition Language – DDL.....	11
9.1. Creating tables .....	11
9.2. Modifying tables, adding constraints to a table, renaming a table and its columns.....	11
9.3. Dropping columns (set unused command) and dropping tables.....	11
9.4. Creating and replacing views .....	11
10.1. Creating and dropping public synonyms .....	11
10.2. Creating modifying and dropping sequences .....	11
10.3 Grant and Revoke of object privileges between two Oracle database users.....	11
Indexes and Index types.....	11
11.1. What are Indexes and how they work? .....	12
11.2. Need for Indexes.....	12
11.3. Types of Indexes.....	12
11.4. Composite Indexes.....	12
11.5. Function based Indexes .....	12
11.6. Analyzing and rebuilding Indexes .....	12
<i>Last but not the least.....</i>	12
12.1. Set operators in SQL Language (UNION, UNION ALL, INTERSECT, MINUS) .....	12
12.2. RANK() and DENSE_RANK() functions.....	12
12.3. ROWID & ROWNUM .....	12

# DBA University®

Oracle SQL Training Course

12.4. Various other Analytical functions.....	12
12.5. Data dictionary views.....	12
Unique Teaching Methodology.....	12
More Information .....	12

**SQL is needed for every Information Technology job.**

The SQL language skills are a must for any Information Technology job today. Furthermore, because of the standard nature of the SQL language syntax, one can use these skills for working with a variety of database technologies such as Oracle, MS SQL Server as well as Hadoop for Big Data analysis.

Additionally, there is a huge demand for SQL skills in every software development position. One any given day one can find 20,000+ new job vacancies that require SQL language skills.

These skills are also mandatory for varied IT positions such as QA Engineer, Business Analyst, Project Manager, Database Administrator and Big Data analyst .

## About DBA University, Inc.

DBA University, Inc. is a professionally run organization based in Chicago, USA that specializes in research, training and consulting services in the field of computer databases. In our training division, we are currently offering courses in Oracle SQL, Oracle PL/SQL, Oracle DBA, Microsoft SQL Server DBA, Big Data and AWS Cloud Computing using expert instructors and excellent REMOTE LAB access through **affordable prices**.

We are a niche company and very dedicated and committed towards the success of our students. Our courses are **very hands-on** and aimed at **job placement** and preparing our students to face the real world with self-confidence and expert level technical skills.

Most of our courses are taught online and hence students all **over the world** are welcome to register for our courses. Registration for our upcoming courses can be done at <https://www.DBAuniversity.com>

## Srini Ramineni – Faculty and Founder, DBA University



This Oracle RAC, ASM and Data Guard training is provided by Srini Ramineni (Srini).

Srini Ramineni is also the founder of DBA University and a well experienced IT Professional with rich work experience in Oracle databases. He is an ex Oracle Corporation employee and has provides training in an interactive method with lots of LAB practice work in his classes.

He can be reached at [srini@DBAuniversity.com](mailto:srini@DBAuniversity.com)

## Eligibility

Anyone is eligible to register for the Oracle SQL course. But the below is our recommended target audience.

1. *Students and Professionals who are new to the IT industry and want to know about databases.*
2. *Students and Professionals who want to gain Senior Oracle Developer skills and confidence.*
3. *Students and Professionals who want to obtain Oracle database training.*
4. *Existing Software QA Engineers, Business Analysts, Project Managers who want to gain expert level SQL skills and database programming skills.*
5. *Students who want to become Big Data Analysts.*

## Pricing

We offer expert level Oracle SQL training at an affordable price of **\$499**. With \$499, you get all the below in the training package.

- 1) 12 months of On Demand access to our pre-recorded training videos on a 24\*7 basis.
- 2) Cloud based remote lab access for 6 months. Training material PDF book with lab exercises through Dropbox.com email download.
- 3) There are 20 video recordings for this course and each video is about 2 hours in duration.
- 4) These videos are from a previous Live training. So, you get a similar experience as a live training. Also, the courses are taught using a White Board to provide a classroom like experience.

*Please register online and pay online* at [https://dbauniversity.com/course/oracle\\_sql\\_training/](https://dbauniversity.com/course/oracle_sql_training/)

We accept online DEBIT CARD, CREDIT CARD or PayPal.

## Cloud lab Access (Remote lab access)

- We provide cloud lab access to all students. Students can connect to this remote lab server from a Windows PC or a MAC computer using the Remote Desktop Connection program. So, it is very easy.
- Each student connects to the lab environment with a login username and password.
- We provide SQL\*Developer as the Integrated Development Environment (IDE) for learning Oracle SQL.

## Oracle Database SQL Certified Associate

Students can use this training to prepare for the topics required to pass the Oracle Database SQL Exam Number: 1Z0-071 exam as part of becoming an [Oracle Database SQL Certified Associate](#). Once you complete this course, you can register for our [Oracle PL/SQL training](#) program to prepare for the Oracle Database 11g: Program with PL/SQL Exam 1Z0-144 exam.

## Course Topics

### PART I: How to design a relational database.

#### Relational database design

- 1.1. Computer Database Concepts
- 1.2. Relational Database Design – An interactive practical example.
- 1.3. Optimization of database design by using Normalization.
- 1.4 Installation of Oracle 19c Database Client software.
- 1.5 Setting up Oracle database connections using the netca tool.
- 1.6 How to obtain Entity Relationship Diagram of existing database from SQL\*Developer.
- 1.7. Role of SQL in RDBMS.

### PART II: Structured Query Language – SQL

#### Simple SQL statements

- 2.1. Basic SQL construct
- 2.2. Column naming conventions
- 2.3. Importance of NULL
- 2.4. Concatenation operator
- 2.5. Arithmetic operators and expressions
- 2.6. Operator precedence and Parenthesis
- 2.7. Character strings

## Tables and Table Joins

- 3.1. Need for joins
- 3.2. Cartesian products
- 3.3. Column aliases
- 3.4. Types of joins
- 3.5. ANSI Syntax and Oracle Syntax for writing Join statements.

## Filtering and Sorting data

- 4.1. Limiting rows retrieved
- 4.2. Using LIKE for pattern matching
- 4.3. Using logical operators AND, OR & NOT
- 4.4. Using BETWEEN & IN operators
- 4.5. Sorting data using ORDER BY clause

## Oracle SQL Functions part 1

- 5.1. SQL Functions overview
- 5.2. What are single row functions?
- 5.3. Using Character functions
- 5.4. Using Number functions
- 5.5. Using Date and timestamp functions. Avoid the YY and RR pitfall.
- 5.6. Using CASE and DECODE functions.
- 5.7. Nested functions
- 5.8. Data type conversion functions
- 5.9. Format masks in SQL functions

## Oracle SQL Functions part 2

- 6.1. What are multi row functions?
- 6.2. Various multi row functions
- 6.3. Grouping data with GROUP BY clause
- 6.4. Using the HAVING clause
- 6.5. Sorting GROUP BY data

## Nested SQL queries

- 7.1. Need for nested queries
- 7.2. Types of nested queries
- 7.3. USING EXISTS, ALL & ANY operators

## Database Manipulation Language - DML and Transactions

- 8.1. What is data manipulation in a database?
- 8.2. Need for data manipulation
- 8.3. INSERT statement
- 8.4. UPDATE statement
- 8.5. DELETE statement
- 8.6. Definition of Transaction
- 8.7. COMMIT & ROLLBACK statements
- 8.8. Using the SAVEPOINT statement
- 8.9. Automatic COMMIT behavior in SQL\*Developer and SQL\*Plus utilities.
- 8.10. MERGE statement

## Database Definition Language – DDL

- 9.1. Creating tables
- 9.2. Modifying tables, adding constraints to a table, renaming a table and its columns.
- 9.3. Dropping columns (set unused command) and dropping tables.
- 9.4. Creating and replacing views
- 10.1. Creating and dropping public synonyms
- 10.2. Creating modifying and dropping sequences
- 10.3 Grant and Revoke of object privileges between two Oracle database users

## Indexes and Index types

11.1. What are Indexes and how they work?

11.2. Need for Indexes

11.3. Types of Indexes

11.4. Composite Indexes

11.5. Function based Indexes

11.6. Analyzing and rebuilding Indexes

### ***Last but not the least...***

12.1. Set operators in SQL Language (UNION, UNION ALL, INTERSECT, MINUS)

12.2. RANK() and DENSE\_RANK() functions

12.3. ROWID & ROWNUM

12.4. Various other Analytical functions

12.5. Data dictionary views

## **Unique Teaching Methodology**

We use a **DIGITAL WHITE BOARD** for teaching our online courses. Teaching with a DIGITAL WHITE BOARD gives our students a traditional **classroom like experience**. The instructor writes and draws by free hand on the DIGITAL WHITE BOARD and this method of teaching is also adopted in Khan Academy (a world-famous mathematics training organization).

## **More Information**

1. Please register online for the Oracle SQL course at <https://www.DBAniversity.com>
2. For any additional information email [srini@DBAniversity.com](mailto:srini@DBAniversity.com).