INTEGRAL UNIVERSITY

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Brief Report on Two Days Workshop on "SQL from Scratch" Organized by Department of Computer Application In association with Integral University Center for Advanced Training, Integral University

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Brief Report on
Two Days Workshop
On
"SQL from Scratch"
(27th May - 28th May, 2022)

Organized by
Department of Computer Application
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Integral University, Lucknow

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The Department of Computer Application in association with Integral University Center for Advanced Training, Integral University, Lucknow organized two-days workshop on 'SQL from Scratch' for MCA 1st Year students. The workshop had interactive sessions, with 4-hours of active engagement, was organized from 27th May to 28th May 2022 in face-to-face mode.

Total 87 students registered for the workshop. The session delivery of the workshop was face-to-face mode with assignments, self-learning materials, collaborative learning through discussion. The entire workshop sessions were successfully delivered by Mr. Farooq Ahmad (Assistant Professor, Department of Computer Application and Coordinator, IUCAT).

Learning skills of the students were excellent. They attended the workshop with full dedication and clarified their doubts and queries during the interactive sessions of the workshop. Total 57 students successfully attended the workshop and received an e-Certificate. The distribution of e-Certificate was based on student's attendance.

SQL is a domain-specific programming language designed for managing data held in a relational database management system (RDBMS). It enables you to access and manipulate databases. SQL is used to interact with the database. In every business, the core and essential part is management of data. On data various CRUD operations are performed such as Create, Read, Update and Delete.

Data is a very important part of application clients that can perform CRUD (Create, Read, Update and delete) operation. A database is a systematic approach to storing the data. Data is created by using SQL. In Database, data is in tabular format such as rows and columns.

Learning SQL programming is essential and important skills for beginners to make a career in IT as well as experience to enhance the skills for better opportunities. SQL is a basic skill set for the IT industry; it helps in functional, support and technical consultant.

SQL knowledge is implemented in Data mining and various SQL queries are used. In Data collection SQL is used to collect data from different sources and combine data to perform an operation. Big data tools like Sqoop, Apache, Hadoop require SQL proficiency. Hence SQL programmer's demand is huge hence learning SQL is an important skill.

At the end of the workshop sessions, there was a questionnaire session in which students cleared their doubts with the expert. Students learned about the simple and advanced SQL used in database applications and SQL programming during the workshop.

Key Highlights of the workshop:
- It was a face-to-face interactive learning session.
- Total 87 students registered for the workshop.
- 57 students attended the workshop and received an e-Certificate.
- Two-days workshop, with 4-hours of active engagement consisting of collaborative learning through interactive learning discussion.
- Learning support by Resource person and Facilitators.

Content delivered during the workshop:

• Introduction to SQL and its development environments
• SQL data types and literals
• Types of SQL commands
• SQL Operators and their Procedure
• Add New Rows to a Table
• Change the Data in a Table
• Use the DELETE and TRUNCATE Statements
• List the capabilities of SQL SELECT statements
• Use arithmetic expressions and NULL values in the SELECT statement
• Invoke Column aliases
• Concatenation operator, literal character strings, alternative quote operator, and the DISTINCT keyword
• Display the table structure using the DESCRIBE command
• Write queries with a WHERE clause to limit the output retrieved
• Describe the comparison operators and logical operators
• Describe the rules of precedence for comparison and logical operators
• Usage of character string literals in the WHERE clause
• Write queries with an ORDER BY clause
• Sort the output in descending and ascending order
• Apply the NVL, NVL2 functions to data
• List the differences between single row and multiple row functions
• Manipulate strings using character functions
• Manipulate numbers with the ROUND, TRUNC, and MOD functions
• Usage of the aggregation functions in SELECT statements to produce meaningful reports
• Describe the AVG, SUM, MIN, and MAX function
• How to handle Null Values in a group function?
• Divide the data in groups by using the GROUP BY clause
• Exclude groups of date by using the HAVING clause
• Use of HAVING clause
• Write SELECT statements to access data from more than one table
• Join Tables Using SQL
• View data that does not meet a join condition by using outer joins
• Join a table to itself by using a self join
• Create Cross Joins
• Use a Subquery to Solve a Problem

• Single-Row Subqueries
• Group Functions in a Subquery
• Use a SET operator to combine multiple queries into a single query
• Describe the UNION, UNION ALL, INTERSECT, and MINUS Operators
• Use the ORDER BY Clause in Set Operations

Glimpses of Workshop

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Regards,
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