DOC NO: 1426

"WHERE SUCCESS IS A TRADITION"

A Report on

1 Day Webinar
on

"Database Trends and Application"

Organized by

CE-IT Dept & GIT-IQAC

on

16/10/2021

Gandhinagar Institute of Technology

Academic Year: 2021-22

Level: National

Category: Webinar

Date: 16/10/2021 (1 Day)

No. of Resource Person: 1

No. of Participants: 32

Coordinator: Prof. Dhaval Vaja

Co-coordinator: Prof. Mukesh Parmar

Mode: Online

Inspiration:

Proper database management systems help increase organizational accessibility to data, which in turn helps the end users share the data quickly and effectively across the organization. A management system helps get quick solutions to database queries, thus making data access faster and more accurate. End-users like salespeople will have enhanced access to the data, enabling a faster sales cycle and a more sound decision making. Implementing a data management system promotes an integrated picture of an organization's operations. It becomes easy to see how processes in one segment of the organization affect other segments.

Objective:

The objective of the expert lecture was to give students a foundation on which to apply various computer science concepts which includes Database Management System. A database management system (DBMS) is a software package designed to define, manipulate, retrieve and manage data in a database. A DBMS generally manipulates the data itself, the data format, field names, record structure and file structure. It also defines rules to validate and manipulate data and records. Database management systems are set up on specific data handling concepts, as the practice of administrating a database evolves. The earliest databases only handled individual single pieces of specially formatted data. Today's more evolved systems can handle different kinds of less formatted data and tie them together in more elaborate ways. In the creation of their projects DBMS is very crucial role to play.
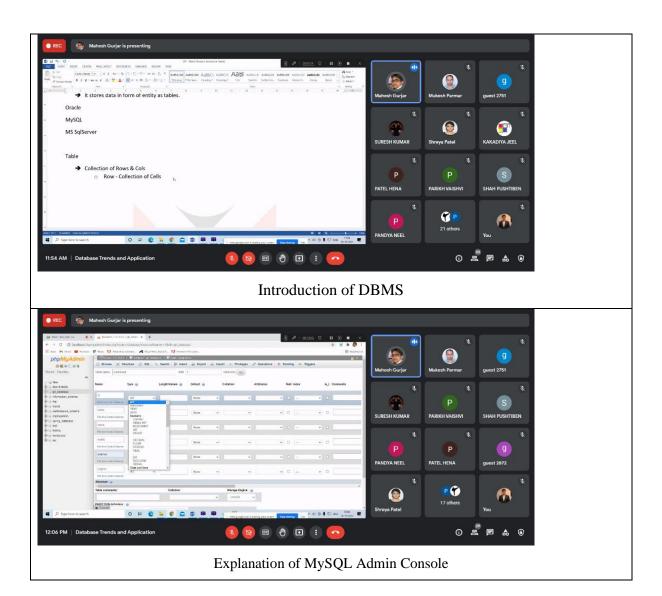
About Webinar: The GIT IQAC Cell, Computer Engineering, and Information Technology department has organized an Expert Lecture on " Database Trends and Application " for 3rd

semester CE -IT students on 16th October 2021(Saturday). Our expert ,Mr. Mahesh Gurjar is starting his journey from being a Founder, MG InfoSoft, Ahmedabad. MG is providing professional and industry-based training on Animation, VFX, Game Designing and Developing, Web Designing and Developing, Programming with experienced professional faculty since 2005. 32 participants have been attended from Sem-3 Students from Computer Engineering and Information Technology Department.

Day wise content of speaker:

Our Expert Mr Mahesh Gurjar explained A database management system stores data in such a way that it becomes easier to retrieve, manipulate, and produce information. Following are the important characteristics and applications of DBMS.ACID Properties − DBMS follows the concepts of Atomicity, Consistency, Isolation, and Durability (normally shortened as ACID). These concepts are applied on transactions, which manipulate data in a database. ACID properties help the database stay healthy in multi-transactional environments and in case of failure. Multiuser and Concurrent Access − DBMS supports multi-user environment and allows them to access and manipulate data in parallel. Though there are restrictions on transactions when users attempt to handle the same data item, but users are always unaware of them. Multiple views − DBMS offers multiple views for different users. A user who is in the Sales department will have a different view of database than a person working in the Production department. This feature enables the users to have a concentrate view of the database according to their requirements. Security − Features like multiple views offer security to some extent where users are unable to access data of other users and departments. DBMS offers methods to impose constraints while entering data into the database and retrieving the same at a later stage. DBMS offers many different levels of security features, which enables multiple users to have different views with different features. For example, a user in the Sales department cannot see the data that belongs to the Purchase department. Additionally, it can also be managed how much data of the Sales department should be displayed to the user. Since a DBMS is not saved on the disk as traditional file systems, it is very hard for miscreants to break the code.SQL is a programming language for Relational Databases. It is designed over relational algebra and tuple relational calculus. SQL comes as a package with all major distributions of RDBMS.SQL comprises both data definition and data manipulation languages. Using the data definition

properties of SQL, one can design and modify database schema, whereas data manipulation properties allow SQL to store and retrieve data from database.
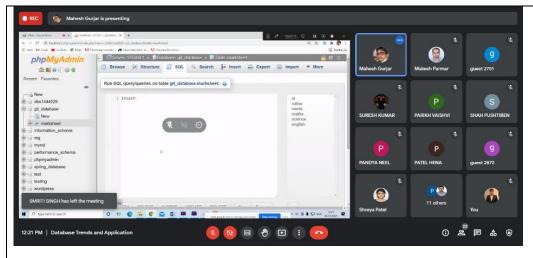

Introduction of DBMS

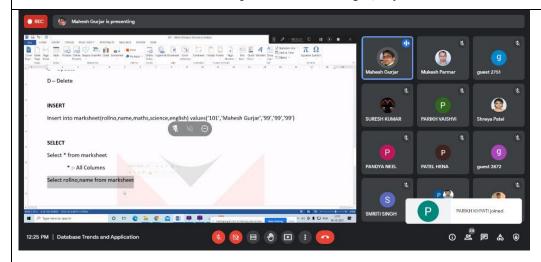Explanation of MySQL Admin Console

Explanation of Writing Query

Writing a Query

How to write JSON Query

Outcome:

At the end of this webinar, the student will learn have a broad understanding of database concepts and database management system software, have a high-level understanding of major DBMS components and their function, be able to model an application's data requirements using conceptual modelling tools like ER diagrams and design database schemas based on the conceptual model, be able to write SQL commands to create tables and indexes, insert/update/delete data, and query data in a relational DBMS, be able to program a data-intensive application using DBMS APIs.

Feedback:

The expert lecture is so informative and nice. I learned database query and structure of the SQL and operations. It covers cover basics to advance topics like DBMS architecture, data model, ER model diagram, relational calculus and algebra, concurrency control, keys, data independence, etc. to easily understand and learn DBMS for beginners. Let us start this DBMS tutorial by understanding. We're expecting second session for this topic.

~ Shah Kashish Vipulkumar (200120107072)

Concluding remark / Vote of thanks:

Thank you, Student, and thank you everyone for attending today's webinar. Special Thanks to Dr H N Shah Director, GIT, IQAC Cell, Prof Mukesh Parmar, Prof. Margil Shah and HOD CE IT. if you have any other questions, please contact Mr Mahesh Gurjar, He already shared his contact number in chat box. On behalf of GIT IQAC Cell and CE-IT Dept and our presenters, thank you for joining us today, and have a great rest of your day!