WORKSHOP ON DATABASE MANAGEMENT SYSTEM AND STRUCTURED QUERY LANGUAGE (SQL)

The Department of Health Systems Management Studies have conducted a 3-day workshop on "Database Management Systems DBMS" at the department on 19th, 22nd and 24th of January 2024. The resource persons, DR. Mohammed Muddasir, Prof. Swathi B.H. and Prof. Megha V were welcomed formally by Dr. Mamatha H. K., Dean, DHSMS.

Detailed report is as follows:

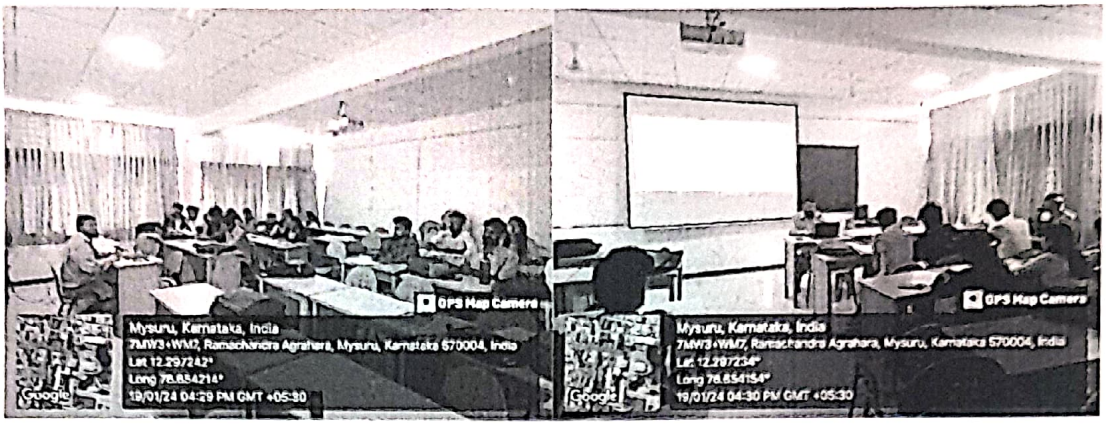
Day one:

Dr. Mohammed Muddasir started the class with brief introduction about Database Management System (DBMS). Concepts such as Data Organization and Storage, Data Retrieval and Querying, Data Integrity and Constraints, Concurrency Control, and Security and Access Control were discussed. Also Data Definition Language (DDL) & Data Manipulation Language(DML) concepts were explained in detail.

Later, students were taken through some basic tutorials of SQL coding through a free website called Oracle Live SQL. Oracle Live SQL is an online platform provided by Oracle that allows users to experience and practice with Oracle Database using a web-based interface. So, no installation is required and output can be seen from there itself.

Then, students were explained about Library Database creation as another tutorial. A Library Database in SQL is a relational database designed to manage information related to a library's operations, such as cataloging books, tracking borrowers, managing transactions, and handling other library-related tasks.

All these where shown as an example as an introduction of the workshop.



Day two:

Day two started with some basic theories and installation of MySQL software to students' PCs and the class was conducted by Prof. Swathi B.H. and Prof. Megha V.

In the theory class, Prof. Swathi gave students an idea about Entity Relationship (ER) diagram and Relational Schema.

An Entity Relationship (ER) diagram is a visual representation of the relationships among entities in a database. It employs a set of symbols and notation to illustrate how different entities, such as tables in a relational database, are connected and interact with each other.

Relational schema: A relational schema, outlines the structure and organization of tables in a relational database, specifying how tables are related to each other. It defines the foreign keys that establish connections between tables, indicating the relationships and dependencies within the database.

MySQL is an open-source relational database management system (RDBMS) that is widely used for building and managing databases. It is known for its speed, reliability, ease of use, and strong community support. MySQL is often used in web development, powering many dynamic websites and applications.

SQL can be termed as a back-end programming language. SQL is used to interact with database management systems (DBMS), which are a key component of the back-end infrastructure.

Prof. Swathi also had explained the Front-End and Back-End Programming Languages refer to the languages used to develop the user interface and server-side logic of a software application, respectively. Eg: SQL, Python etc.

After installation students had hands-on sessions on SQL by using MySQL. Some basic keywords of SQL such as CREATE, SELECT, UPDATE, DELETE, ALTER, DROP. With basic understanding of keywords, students started to do Order databases and queries.

Day Three:

Day three was also led by both Prof. Swathi B.H. and Prof. Megha V. Students were assigned to do Employee database where it is based on details the employees of an organization. Students had to code based on the queries that had given and it was little more complicated than last day. But students managed to crack it got the outputs. Then the resources person explained theory concepts on Transaction Processing in DBMS. A transaction is a logical unit of work (comprising one or more SQL statements) performed on the database to complete a common task and maintain data consistency. Transaction statements are closely related and perform interdependent actions.

Each statement performs part of the task, but all of them are required for the complete task.

After that, students got an assignment on the topic of Flight databases and queries, where the report has to be submitted after few days. The grand finale of the 3-day workshop was a quiz competition. Faculties conducted a quiz including all the topics that they have covered throughout the 3 days. The winners were Ms. Aswathy VP (first prize), Ms. Anjana Prabhakaran (second prize) and Mr. Jawad Muhammed (third prize).

The DBMS workshop was a great success and students gave good feedback based on classes conducted, tutorials, hands on practices and student-teacher interaction.

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