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SUBJECT: **ADVANCE DATABASE SYSTEMS**

INSTRUCTOR: **BRENDHAL NATIVIDAD, MIT**

**MODULE 1**

1. What is MySQL, and what is its role in database management?

* MySQL is an open-source relational database management system (RDBMS) that is widely used for managing and organizing data in databases. It is a key component in the field of database management and is known for its reliability, performance, and ease of use. MySQL is developed, distributed, and supported by Oracle Corporation.

1. How do you create a new database in MySQL, and what are the basic steps?

* Programmers need to use the CREATE DATABASE statement/command to create a new database in MySQL. Basic steps are first, you need to specify the database name which needs to be created after the CREATE DATABASE keywords, next we have to specify IF NOT EXIST which ensures that if the name of the database we created already exist MySQL will not throw any error, lastly we have to specify the character set and collation for the database. If we don’t specify it MySQL database will be created with default character set and collation.

1. What is the significance of the MySQL SELECT statement, and how is it used to retrieve data from a table?

* The significance of the MySQL SELECT is to retrieve data from one or more columns of a table based on the specific condition in our database. It is used to retrieve data from a table by listing them after the SELECT keyword that is separated by commas.

1. Explain the primary key in MySQL and why it is important in database design?

* The primary key in MySQL can be defined on one or more fields, and it can be a single column or a combination of columns. The primary key column(s) must contain unique values, and it cannot contain NULL values. It is important in database design because it ensures data integrity, establishes relationships between tables, and enables efficient querying of data.

1. How do you connect to a MySQL database using the command line or a MySQL client?

* To connect to a MySQL database using a MySQL client, we need to use a variety of clients such as MySQL Workbench, HeidiSQL, or Navicat. The exact steps to connect to a MySQL database using a client will depend on the specific client we are using.