**ExperimentNo. 1.6**

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1. **Aim/Overview of the practical:**
   1. Explain the meaning of Database.
   2. Discuss the steps to create and alter a table, views, and functions.
2. **Code for practical: (a)**

* **DATABASE:** A database is a structured collection of data that is organized and stored in a way that allows for efficient retrieval and management of information. It is a crucial component of information systems and plays a central role in storing, retrieving, and managing data for various applications and purposes. Databases are used to store structured data, such as customer information, product details, financial records, and more. They provide a structured and organized way to work with data, allowing users to perform operations like data retrieval, insertion, updating, and deletion. Databases can vary in size from small, single-user systems to large, enterprise-level systems, and they are used across a wide range of industries and applications.

**Code for practical: (b)**

1. To create database, we can use **create database <DBName>** command.
2. To use created database, we can use the command **use <DBName>.**
3. To create a table inside that database we can use **create table** command

**Syntax:**

create table <TableName> (column1 datatype1 constraint1,

column2 datatype2 constraint2, ..., columnN datatypeN constraintN);

**Ex:**

CREATE TABLE student (student\_id INT PRIMARY KEY,

first\_name VARCHAR(50), last\_name VARCHAR(50),

date\_of\_birth DATE, major VARCHAR(50) );

1. To create a table view from a table we can use **create view** command followed by select statement.

**Syntax:** CREATE VIEW view\_name AS

SELECT column1, column2, ...

FROM table\_name

WHERE condition;

**Ex:** CREATE VIEW student\_name\_dob AS

SELECT first\_name, date\_of\_birth

FROM student;

1. To create a MySQL function, we can use **create function** command.

**Syntax:** CREATE FUNCTION function\_name (arguments)

RETURNS return\_type

BEGIN

-- Function body

END;

**Ex:** CREATE FUNCTION current\_age(date\_of\_birth DATE)

RETURNS INT

BEGIN

DECLARE age INT;

RETURN TIMESTAMPDIFF(YEAR, date\_of\_birth, CURDATE());

END;

1. After that you can use above current\_age function to calculate the age of students.

Ex: SELECT current\_age('1990-05-15') AS age;

A computer screen shot of a computer code

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