**Instructions:**

Please share your answers filled in line in the Word document. Submit code separately wherever applicable.

Please ensure you update all the details:

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**Topic: Introduction to Database**

1. Create a database with a sales table containing data types like int, varchar, char ,date, time, timestamp, Boolean, decimal, text ?

CREATE DATABASE IF NOT EXISTS sales\_database;

USE sales\_database;

CREATE TABLE IF NOT EXISTS sales (

id INT AUTO\_INCREMENT PRIMARY KEY,

product\_name VARCHAR(255),

product\_code CHAR(10),

sale\_date DATE,

sale\_time TIME,

updated\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

is\_active BOOLEAN,

price DECIMAL(10, 2),

description TEXT

);

1. Insert 10 random values in the table ?

INSERT INTO sales (product\_name, product\_code, sale\_date, sale\_time, is\_active, price, description)

VALUES

('Product A', 'A001', '2024-02-01', '12:30:00', TRUE, 50.25, 'Description for Product A'),

('Product B', 'B002', '2024-02-02', '13:45:00', TRUE, 75.50, 'Description for Product B'),

('Product C', 'C003', '2024-02-03', '14:15:00', FALSE, 100.75, 'Description for Product C'),

('Product D', 'D004', '2024-02-04', '11:00:00', TRUE, 120.00, 'Description for Product D'),

('Product E', 'E005', '2024-02-05', '09:30:00', TRUE, 150.25, 'Description for Product E'),

('Product F', 'F006', '2024-02-06', '10:45:00', FALSE, 200.50, 'Description for Product F'),

('Product G', 'G007', '2024-02-07', '08:15:00', TRUE, 250.75, 'Description for Product G'),

('Product H', 'H008', '2024-02-08', '16:00:00', TRUE, 300.00, 'Description for Product H'),

('Product I', 'I009', '2024-02-09', '17:30:00', FALSE, 350.25, 'Description for Product I'),

('Product J', 'J010', '2024-02-10', '14:45:00', TRUE, 400.50, 'Description for Product J');

1. Change the data type of the existing column from DECIMAL (10,2) to FLOAT ?

ALTER TABLE sales

MODIFY COLUMN price FLOAT;

1. Change the data type of the existing column from Text to Varchar?

ALTER TABLE sales

MODIFY COLUMN description VARCHAR(30);

1. What is “BLOB” Data Type in SQL, what are different types of BLOB?

BLOB (Binary Large Object) is a data type used to store binary data. In MySQL, there are several types of BLOB:

TINYBLOB: Maximum length of 255 bytes.

BLOB: Maximum length of 65,535 bytes.

MEDIUMBLOB: Maximum length of 16,777,215 bytes.

LONGBLOB: Maximum length of 4,294,967,295 bytes.

These types can store different sizes of binary data, with LONGBLOB being the largest.

1. Write different character data types and different numerical data types?

Different character data types and numerical data types:

Character Data Types:

CHAR(size): Fixed-length character string.

VARCHAR(size): Variable-length character string.

TEXT: Variable-length character string with a maximum length of 65,535 characters.

Numerical Data Types:

INT(size): Integer type with a maximum display width.

FLOAT(size, d): Floating-point number with a floating-point precision.

DECIMAL(size, d): Fixed-point number with a fixed-point precision.