**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 ?

**Answers:**

Create database sales\_table;

CREATE TABLE IF NOT EXISTS sales (

id INT PRIMARY KEY AUTO\_INCREMENT,

product\_name VARCHAR(255) NOT NULL,

product\_code CHAR(10),

sale\_date DATE,

sale\_time TIME,

sale\_timestamp TIMESTAMP,

is\_discounted BOOLEAN,

total\_amount DECIMAL(10, 2),

comments TEXT

);

1. Insert 10 random values in the table ?

**Answers:**

-- Insert 10 random records into the sales table

INSERT INTO sales (product\_name, product\_code, sale\_date, sale\_time, sale\_timestamp, is\_discounted, total\_amount, comments)

VALUES

('Product D', 'P004', '2022-01-04', '08:45:00', '2022-01-04 08:45:00', FALSE, 120.50, 'No discounts.'),

('Product E', 'P005', '2022-01-05', '16:20:00', '2022-01-05 16:20:00', TRUE, 250.00, 'Special offer.'),

('Product F', 'P006', '2022-01-06', '11:30:00', '2022-01-06 11:30:00', FALSE, 180.75, 'No discounts applied.'),

('Product G', 'P007', '2022-01-07', '14:15:00', '2022-01-07 14:15:00', TRUE, 300.25, 'Seasonal discount.'),

('Product H', 'P008', '2022-01-08', '09:10:00', '2022-01-08 09:10:00', FALSE, 210.50, 'No discounts.'),

('Product I', 'P009', '2022-01-09', '13:45:00', '2022-01-09 13:45:00', TRUE, 180.00, 'Limited-time offer.'),

('Product J', 'P010', '2022-01-10', '10:00:00', '2022-01-10 10:00:00', FALSE, 150.75, 'No discounts applied.'),

('Product K', 'P011', '2022-01-11', '15:30:00', '2022-01-11 15:30:00', TRUE, 220.25, 'Flash sale.'),

('Product L', 'P012', '2022-01-12', '12:00:00', '2022-01-12 12:00:00', FALSE, 190.50, 'No discounts.'),

('Product M', 'P013', '2022-01-13', '17:00:00', '2022-01-13 17:00:00', TRUE, 270.75, 'Holiday promotion.');

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

**Answers:**

ALTER table sales modify column total\_amount float;

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

**Answers:**

ALTER table sales modify column comments varchar(255);

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

**Answers:**

There are several types of BLOBs in SQL:

TINYBLOB: A BLOB column with a maximum length of 255 (2^8 - 1) bytes.

BLOB: A BLOB column with a maximum length of 65,535 (2^16 - 1) bytes.

MEDIUMBLOB: A BLOB column with a maximum length of 16,777,215 (2^24 - 1) bytes.

LONGBLOB: A BLOB column with a maximum length of 4,294,967,295 (2^32 - 1) bytes.

The difference between them is mainly the maximum length of data they can store. The choice of which type to use depends on the size of the binary data you want to store. If your data is relatively small, you might choose TINYBLOB, and for larger data, you might choose LONGBLOB.

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

**Answers:**

Character datatypes:

1. CHAR 2)VARCHAR 3)TEXT

numerical data types:

1. FLOAT 2) INT 3)DECIMAL 4)NUMERIC