**Analytics Avenue for Research and Development**

-In the journey of empowering the digital minds

**Worksheet- 1**

**DDL (Data Definition Language) Programming Questions:**

**1) Create a table named products with the following columns:**

• product\_id (INT, primary key)

• product\_name (VARCHAR(100))

• price (DECIMAL(10,2))

ANSWER :

create table products (

product\_id int primary key,

product\_name varchar(100),

price decimal(10,2)

);

**2)** Add a column stock\_quantity (INT) to the products table.

ANSWER:

alter table products

add column stock\_quantity int ;

**3)** Rename the column price in the products table to product\_price.

ANSWER:

ALTER TABLE PRODUCTS

CHANGE COLUMN PRICE PRODUCT\_PRICE DECIMAL(10,2);

**4)** Change the datatype of the product\_name column to VARCHAR(150) in the products table.

ANSWER:

alter table products

modify column product\_name varchar(150);

**5)** Remove the column stock\_quantity from the products table.

ANSWER:

ALTER TABLE PRODUCTS

DROP COLUMN STOCK\_QUANTITY;

**6)** Delete the products table from the database.

ANSWER:

DROP TABLE PRODUCTS;

**7)** Truncate the products table to remove all rows but keep the table structure.

ANSWER:

TRUNCATE TABLE PRODUCTS;

**8) Create a new table customers with the following columns:**

customer\_id (INT, primary key)

first\_name (VARCHAR(50))

last\_name (VARCHAR(50))

email (VARCHAR(100), must be unique)

ANSWER:

CREATE TABLE CUSTOMERS (

CUSTOMER\_ID INT PRIMARY KEY,

FIRST\_NAME VARCHAR(50),

LAST\_NAME VARCHAR(50),

EMAIL VARCHAR(100) UNIQUE

);

**9)** Create a foreign key fk\_customer\_id in the orders table that references the customer\_id column in the customers table.

ANSWER:

CREATE TABLE ORDERS(

CUSTOMER\_ID INT PRIMARY KEY,

FIRST\_NAME VARCHAR(50),

LAST\_NAME VARCHAR(50),

EMAIL VARCHAR(100) UNIQUE,

CONSTRAINT FK\_CUSTOMER\_ID FOREIGN KEY (CUSTOMER\_ID) REFERENCES CUSTOMERS(CUSTOMER\_ID)

);

**DML (Data Manipulation Language) Programming Questions:**

**10)** Insert a new product into the products table with the following data:

* product\_id: 1
* product\_name: 'Laptop'
* product\_price: 999.99

ANSWER:

INSERT INTO PRODUCTS (PRODUCT\_ID,PRODUCT\_NAME,PRODUCT\_PRICE)

VALUES (1,'LAPTOP',999.99);

* **Insert multiple rows into the products table with the following data:**

(2, 'Smartphone', 499.99)

(3, 'Tablet', 299.99)

ANSWER:

INSERT INTO PRODUCTS (PRODUCT\_ID,PRODUCT\_NAME,PRODUCT\_PRICE)

VALUES (2,'SMARTPHONE',499.99), (3,'TABLET',299.99);

**12)** Update the price of the product with product\_id 1 to 1099.99.

ANSWER:

UPDATE PRODUCTS

SET PRODUCT\_PRICE = 1099.99

WHERE PRODUCT\_ID = 1;

**13)** Increase the price of all products by 10%.

ANSWER:

update products

set product\_price = product\_price \* 1.10;

**14)** Delete the product with product\_id 3 from the products table.

ANSWER:

DELETE FROM PRODUCTS

WHERE PRODUCT\_ID = 3;

**15) Insert a new customer into the customers table with the following data:**

• customer\_id: 1

• first\_name: 'John'

• last\_name: 'Doe'

• email: 'john.doe@example.com'

Answer:

INSERT INTO customers (CUSTOMER\_ID,FIRST\_NAME,LAST\_NAME,EMAIL)

VALUES (1,'JOHN','DOE','JOHN.DOE@EXAMPLE.COM');

**16) Insert multiple customers into the customers table:**

(2, 'Jane', 'Smith', 'jane.smith@example.com')

(3, 'Bob', 'Johnson', 'bob.johnson@example.com')

ANSWER:

insert into customers(customer\_id,first\_name,last\_name,email)

values(2,'jane','smith','jane.smith@example.com'),

(3,'bob','johnson','bob.johnson@example.com');

**17)** Update the email of the customer with customer\_id 2 to new.email@example.com.

ANSWER:

UPDATE CUSTOMERS

SET EMAIL = 'NEW.EMNAIL@EXAMPLE.COM'

WHERE customer\_id = 3;

**18)** Delete the customer with customer\_id 3 from the customers table.

ANSWER:

DELETE FROM CUSTOMERS

WHERE CUSTOMER\_ID = 3;

**19)** Update the first name of all customers with the last name Smith to Emily.

ANSWER:

UPDATE CUSTOMERS

SET FIRST\_NAME = 'EMILY'

WHERE LAST\_NAME = 'SMITH'