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'