use assignment;

show tables;

**-- Assignment: Constraints in MySQL – Advanced Practice**

**-- Part 1: Create Tables with Constraints**

-- Suppliers Table

create table Suppliers(

SupplierID INT Primary Key,

SupplierName VARCHAR(50) NOT NULL,

ContactEmail VARCHAR(100) Unique NOT NULL,

Country VARCHAR(50) Default 'Unknown'

);

-- Shipments Table

create table Shipments (

ShipmentID INT Primary Key,

SupplierID INT,

ShipmentDate DATETIME Default CURRENT\_TIMESTAMP,

TotalWeight DECIMAL(5,2) check (TotalWeight> 0),

Foreign Key (SupplierID)references Suppliers(SupplierID)

);

-- Items Table

create table Items (

ItemID INT Primary Key ,

ItemName VARCHAR(100) NOT NULL,

Price DECIMAL(10,2) CHECK (Price> 0),

StockQuantity INT Default 50

);

-- SupplierItems Table

create table SupplierItems (

SupplierID INT ,

ItemID INT,

SupplyPrice DECIMAL(10,2) check (SupplyPrice>0),

AvailableQuantity INT Default 10,

Foreign Key (SupplierID) references Suppliers(SupplierID),

Foreign Key (ItemID )references Items(ItemID)

);

**-- Part 2: Insert Sample Data**

insert into Suppliers(SupplierID ,SupplierName ,ContactEmail ,Country)

values(1,'shii','1232@gmail','india'),

(2,'shivhi','123678@gmail','ice'),

(3,'aa','124432@gmail','india'),

(4,'bb','4444@gmail','');

select \* from Suppliers;

insert into Shipments (ShipmentID ,SupplierID ,ShipmentDate ,TotalWeight )

values(113,4,'2022-03-13 17:51:11',12.1)

;

select \* from Shipments;

insert into Items (ItemID ,ItemName ,Price ,StockQuantity)

values(10,'gold',9000.25,1234),

(100,'silver',10.25,null),

(10000,'plat',111.9,90),

(1000,'plat',9877.25,null)

;

insert into Items (ItemID ,ItemName ,Price ,StockQuantity)

values(10000000,'gold',9000.25,default);

select \* from Items;

insert into SupplierItems (SupplierID ,ItemID ,SupplyPrice ,AvailableQuantity)

values(2,100,20000,default),

(3,10000,2,400),

(4,10,3000,default);

;

select \* from SupplierItems;

**-- Part 3: Practical Exercises**

**-- Check the Primary Key Constraint: Attempt to insert a duplicate SupplierID in the Suppliers table.**

insert into Suppliers(SupplierID ,SupplierName ,ContactEmail ,Country)

values(1,'shii','1232@gmail','india');

**-- Test the Foreign Key Constraint: Insert a row into SupplierItems with a non-existent SupplierID.**

insert into SupplierItems (SupplierID ,ItemID ,SupplyPrice ,AvailableQuantity)

values(5,100,20000,default);

**-- Test the Unique Constraint: Attempt to insert a duplicate email in the Suppliers table.**

insert into Suppliers(SupplierID ,SupplierName ,ContactEmail ,Country)

values(145,'shii','1232@gmail','india');

**-- Test the Default Value Constraint: Add a new row to Items without specifying StockQuantity and observe the default value.**

insert into Items (ItemID ,ItemName ,Price ,StockQuantity)

values(10000000,'gold',9000.25,default);

**-- Check the Check Constraint: Insert a row in Shipments with a TotalWeight of -5 and observe the result.**

insert into Shipments (ShipmentID ,SupplierID ,ShipmentDate ,TotalWeight )

values(113,4,'2022-03-13 17:51:11',-5)

;

**-- Verify Composite Primary Key Constraint: Insert a duplicate (existing SupplierID and ItemID combination) into SupplierItems.**

insert into SupplierItems (SupplierID ,ItemID ,SupplyPrice ,AvailableQuantity)

values(2,100,20000,default);

**-- Enforce Data Integrity: Try deleting a supplier from Suppliers that has entries in SupplierItems and observe the constraint behavior.**

delete from Suppliers where SupplierID=2 ;