Assignment Solution

PART A: Solution

Creating tables with constraints:

```
CREATE TABLE Authors (
AuthorID INT PRIMARY KEY,
Name VARCHAR(100) NOT NULL,
Nationality VARCHAR(50)
);

CREATE TABLE Books (
ISBN VARCHAR(13) PRIMARY KEY,
Title VARCHAR(255) NOT NULL,
AuthorID INT,
Genre VARCHAR(50),
Price DECIMAL(10,2),
FOREIGN KEY (AuthorID) REFERENCES Authors(AuthorID)
);

CREATE TABLE Customers (
CustomerID INT PRIMARY KEY,
Name VARCHAR(100) NOT NULL,
Email VARCHAR(255) UNIQUE,
Address VARCHAR(255)
);

CREATE TABLE Orders (
```

```
OrderID INT PRIMARY KEY,
CustomerID INT,
OrderDate DATE DEFAULT CURRENT_DATE,
TotalAmount DECIMAL(10,2),
FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);
```

Data entries:

```
-- Insert sample data into Authors table
INSERT INTO Authors (AuthorID, Name, Nationality) VALUES
(1, 'Stephen King', 'American'),
(2, 'J.K. Rowling', 'British'),
(3, 'Harper Lee', 'American');

-- Insert sample data into Books table
INSERT INTO Books (ISBN, Title, AuthorID, Genre, Price) VALUES
('9781982121312', 'It', 1, 'Horror', 19.99),
('9780545162074', 'Harry Potter and the Deathly Hallows', 2, 'Fantasy', 24.99),
('9780061120084', 'To Kill a Mockingbird', 3, 'Fiction', 14.99);

-- Insert sample data into Customers table
INSERT INTO Customers (CustomerID, Name, Email, Address) VALUES
(1, 'John Doe', 'john@example.com', '123 Main St'),
(2, 'Jane Smith', 'jane@example.com', '456 Elm St'),
(3, 'Alice Johnson', 'alice@example.com', '789 Oak St');

-- Insert sample data into Orders table
INSERT INTO Orders (OrderID, CustomerID, TotalAmount) VALUES
```

(1, 1, 39.98),
(2, 2, 24.99),
(3, 3, 14.99);

PART B: Solution

1. Retrieve all columns for all passengers from the Titanic table.
SELECT * FROM Titanic;

2. Retrieve distinct values of the "Embar_town" column from the Titanic table.
SELECT DISTINCT embark_town FROM Titanic;

3. Retrieve the names and ages of passengers who survived from the Titanic table.
SELECT first_name, Age FROM Titanic WHERE Survived = 1;

4. Retrieve the names and ticket numbers of passengers who paid fares greater than 60000.
SELECT Name, Ticket FROM Titanic WHERE Fare > 60000;

5. Retrieve the names and ages of passengers whose names start with 'J'.
SELECT Name, Age FROM Titanic WHERE Name LIKE 'J%';

6. Retrieve the names and ages of passengers who boarded deck numbers either 90 or 70.
SELECT Name, Age FROM Titanic WHERE deck_number IN (70,90);

7. Retrieve the names and ages of passengers with ages between 20 and 30.
SELECT Name, Age FROM Titanic WHERE Age BETWEEN 20 AND 30;

8. Retrieve the names and ages of passengers whose ages are belong to 20, 25, or 30.
SELECT Name, Age FROM Titanic WHERE Age IN (20, 25, 30);