MySQL Assignment 2: Solution for Railway Management System

Task 1: Database Creation and Table Setup

```
CREATE DATABASE RailwayManagementDB;
USE RailwayManagementDB;

CREATE TABLE Trains (
    TrainID INT,
    TrainName VARCHAR(50),
    TrainType VARCHAR(50),
    TotalSeats INT
);

CREATE TABLE Routes (
    RouteID INT,
    StartStation VARCHAR(50),
    EndStation VARCHAR(50),
    Distance INT
);

CREATE TABLE Schedules (
    ScheduleID INT,
    TrainID INT,
    RouteID INT,
```

```
    DepartureTime DATETIME,
    ArrivalTime DATETIME
);

CREATE TABLE Passengers (
    PassengerID INT,
    FirstName VARCHAR(50),
    LastName VARCHAR(50),
    Age INT,
    Email VARCHAR(100)
);

CREATE TABLE Bookings (
    BookingID INT,
    PassengerID INT,
    ScheduleID INT,
    BookingDate DATE,
    SeatNumber INT
);

-- Sample data insertion statements go here (omitted for brevity)
```

Task 2: Add Constraints After Data Insertion

```
ALTER TABLE Trains ADD PRIMARY KEY (TrainID);
ALTER TABLE Routes ADD PRIMARY KEY (RouteID);
```

```
ALTER TABLE Schedules ADD PRIMARY KEY (ScheduleID);

ALTER TABLE Passengers ADD PRIMARY KEY (PassengerID);

ALTER TABLE Bookings ADD PRIMARY KEY (BookingID);


ALTER TABLE Schedules ADD FOREIGN KEY (TrainID) REFERENCES Trains(TrainID);

ALTER TABLE Schedules ADD FOREIGN KEY (RouteID) REFERENCES Routes(RouteID);

ALTER TABLE Bookings ADD FOREIGN KEY (PassengerID) REFERENCES Passengers(PassengerID);

ALTER TABLE Bookings ADD FOREIGN KEY (ScheduleID) REFERENCES Schedules(ScheduleID);


-- More tasks will be included in the following pages
```