

All part are included in this document! (With README also submitted separately)

PART 1 (README also submitted)

Tools used:

VSCode (Visual Database Management/File Management)

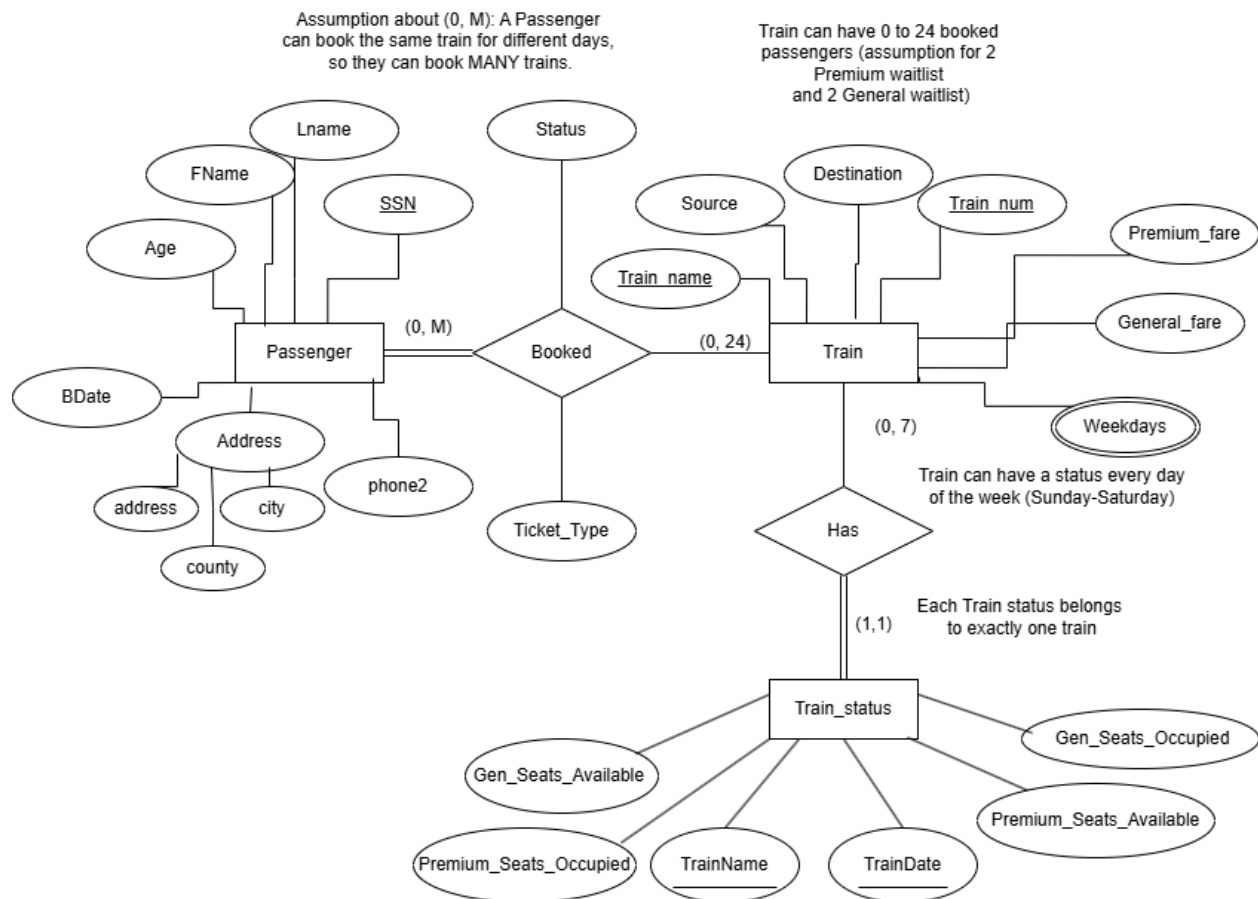
SQLite3 (Querying)

.import, .csv used to import data to database

.mode table used to display query results

Draw.io (ER Diagram)

PART 2



PART 3

```
CREATE TABLE Passenger (  
    SSN CHAR(9) PRIMARY KEY,  
    first_Name VARCHAR(15),  
    last_Name VARCHAR(15),  
    Address VARCHAR(50),  
    city VARCHAR(20),  
    county VARCHAR(20),  
    phone2 CHAR(10),  
    bdate DATE  
);
```

```
CREATE TABLE Train (  
    Train_Number INT,  
    Train_Name VARCHAR(100),  
    Premium_Fare DECIMAL(10,2),  
    General_Fare DECIMAL(10,2),  
    Source_Station VARCHAR(100),  
    Destination_Station VARCHAR(100),  
    Weekdays TEXT,  
    PRIMARY KEY (Train_Number, Train_Name)  
);
```

```
CREATE TABLE Train_Status (  
    TrainDate VARCHAR(9) NOT NULL,  
    TrainName CHARVAR(100),  
    Premium_Seats_Available INT,  
    Gen_Seats_Available INT,  
    Premium_Seats_Occupied INT,  
    Gen_Seats_Occupied INT,  
    PRIMARY KEY (TrainDate, TrainName),  
    FOREIGN KEY (TrainName) REFERENCES Train(Train_Name)  
);
```

```
CREATE TABLE Booking (  
    Passenger_SSN CHAR(9),  
    Train_Number INT,  
    Ticket_Type TEXT CHECK(Ticket_Type IN('Premium', 'General')),  
    Status TEXT CHECK(Status IN('Booked', 'WaitL')),  
    PRIMARY KEY (Passenger_SSN, Train_Number),  
    FOREIGN KEY (Passenger_SSN) REFERENCES Passenger(SSN),  
    FOREIGN KEY (Train_Number) REFERENCES Train(Train_Number)  
);
```

PART 4

4.

We used the .import method to load the data into the tables. .mode csv was used first to tell sqlite to interpret the incoming data in a csv format. Then we used the command '.import Passenger.csv Passenger' to import all the passenger data from the spreadsheet to the Passenger table in our database. We did this for each of the spreadsheets and tables.

We had to move SSN in the spreadsheet for Passenger.csv to the first column to match our Passenger Table. Additionally, we had to change the name of a train from "Flying Scotsman" to "Flying Scottsman" using UPDATE Train SET Train_Name = 'Flying Scottsman' WHERE Train_Number = 2; due to a typo in the spreadsheet/to ensure all data was consistent!

PART 5

-- database: ./train.db

-- 2

SELECT T.Train_Name

FROM Train T, Booking B, Passenger P

**WHERE P.first_Name = 'James' AND P.last_name = 'Butt' AND P.SSN = B.Passenger_SSN
AND B.Train_Number = T.Train_Number;**

/* Results

+-----+

| Train_Name |

+-----+

| Golden Arrow |

+-----+

***/**

-- 3

SELECT P.first_name, P.last_name

FROM Train T, Booking B, Passenger P, Train_Status TS

**WHERE TS.TrainDate = 'Sunday' AND TS.TrainName = T.Train_Name AND T.Train_Number =
B.Train_Number AND B.Status = 'Booked' AND B.Passenger_SSN = P.SSN;**

/* Results

```

+-----+-----+
| first_Name | last_Name |
+-----+-----+
| Kiley    | Caldarera |
| Fletcher | Flosi    |
| Josephine | Darakjy  |
| Sage     | Wieser   |
| Kris     | Marrier  |
| Graciela | Ruta     |
+-----+-----+
*/

```

--4 List train name, day and passenger names on that train.

```

SELECT T.Train_Name, TS.TrainDate, P.first_Name, P.last_Name
FROM Train T, Passenger P, Booking B, Train_Status TS
WHERE T.Train_Number = B.Train_Number AND B.Passenger_SSN = P.SSN AND
T.Train_Name = TS.TrainName;

```

/* Results

```

+-----+-----+-----+-----+
| Train_Name | TrainDate | first_Name | last_Name |
+-----+-----+-----+-----+
| Flying Scotsman | Sunday | Josephine | Darakjy |
| Golden Arrow | Tuesday | Simona | Morasca |
| Golden Arrow | Tuesday | Minna | Amigon |
| Golden Arrow | Tuesday | James | Butt |
| Golden Arrow | Tuesday | Leota | Dilliard |
| Golden Chariot | Saturday | Donette | Foller |
| Golden Arrow | Tuesday | Mitsue | Tollner |

```

Flying Scotsman Sunday Graciela Ruta
Flying Scotsman Sunday Kiley Caldarera
Golden Arrow Tuesday Art Venere
Golden Arrow Tuesday Gladys Rim
Golden Chariot Saturday Meaghan Garufi
Golden Arrow Tuesday Yuki Whobrey
Flying Scotsman Sunday Abel Maclead
Golden Chariot Saturday Lenna Paprocki
Flying Scotsman Sunday Sage Wieser
Flying Scotsman Sunday Fletcher Flosi
Flying Scotsman Sunday Kris Marrier
Golden Chariot Saturday Cammy Albares
Flying Scotsman Sunday Mattie Poquette
Golden Chariot Saturday Mathew Alison
Golden Chariot Saturday Sarah Johnson
Golden Chariot Saturday David Willson
Golden Chariot Saturday Jennifer David
Golden Chariot Saturday Emily Parker
Golden Chariot Saturday Michael Smith

+-----+-----+-----+-----+

*/

--5

```
SELECT TrainName, TrainDate, Premium_Seats_Occupied + Gen_Seats_Occupied AS
Number_of_passengers
FROM Train_Status;
```

/* Results

+-----+-----+-----+-----+

```
| TrainName | TrainDate | Number_of_passengers |
```

```
+-----+-----+-----+
```

```
| Orient Express | Friday | 0 |
```

```
| Flying Scotsman | Sunday | 6 |
```

```
| Golden Arrow | Tuesday | 7 |
```

```
| Golden Chariot | Saturday | 6 |
```

```
+-----+-----+-----+
```

```
*/
```

```
--6
```

```
SELECT P.first_Name, P.last_Name, P.Address, P.city, P.county, B.Ticket_Type AS Category,  
B.Status AS Ticket_Status
```

```
FROM Passenger P, Booking B, Train T
```

```
WHERE B.Passenger_SSN = P.SSN AND B.Status = 'Booked' AND T.Train_Name = 'Golden  
Chariot' AND T.Train_Number = B.Train_Number;
```

```
/* Results
```

```
+-----+-----+-----+-----+-----+-----+-----+
```

```
| first_Name | last_Name | Address | city | county | Category | Ticket_Status |
```

```
+-----+-----+-----+-----+-----+-----+-----+
```

```
| Donette | Foller | 34 Center St | Hamilton | Butler | Premium | Booked |
```

```
| Lenna | Paprocki | 639 Main St | Anchorage | Anchorage | Premium | Booked |
```

```
| Cammy | Albares | 56 E Morehead St | Laredo | Webb | Premium | Booked |
```

```
| Meaghan | Garufi | 69734 E Carrillo St | Mc Minnville | Warren | General | Booked |
```

```
| Emily | Parker | 1234 Elm Street | Los Angeles | Los Angeles | General | Booked |
```

```
| Michael | Smith | 5678 Oak Avenue | Chicago | Cook | General | Booked |
```

```
+-----+-----+-----+-----+-----+-----+-----+
```

```
*/
```

--7

```
SELECT P.first_Name, P.last_Name, P.Address, P.city, P.county, T.Train_Name
FROM Passenger P, Train T, Booking B
WHERE B.Passenger_SSN = P.SSN AND B.Status = 'WaitL' AND B.Train_Number =
T.Train_Number;
```

/* Results

first_Name	last_Name	Address	city	county	Train_Name
Abel	Maclead	37275 St Rt 17m M	Middle Island	Suffolk	Flying Scotsman
Mattie	Poquette	73 State Road 434 E	Phoenix	Maricopa	Flying Scotsman
Simona	Morasca	3 Mcauley Dr	Ashland	Ashland	Golden Arrow
Sarah	Johnson	4321 Maple Lane	New York	New York	Golden Chariot
David	Willson	7890 Birch Road	Houston	Harris	Golden Chariot
Jennifer	David	2468 Pine Street	San Francisco	San Francisco	Golden Chariot
Mathew	Alison	1357 Cedar Avenue	Miami	Dade	Golden Chariot

*/

--8

```
SELECT first_Name, last_Name
FROM Passenger
WHERE phone2 LIKE '605%'
ORDER BY first_name DESC;
```

/* Results

first_Name	last_Name
------------	-----------


```

+-----+-----+
| Sage   | Wieser  |
| Mattie | Poquette |
| Art    | Venere  |
+-----+-----+
*/

```

--9

```

SELECT P.first_Name, P.last_Name
FROM Passenger P, Train T, Train_Status TS, Booking B
WHERE TS.TrainDate = 'Tuesday' AND TS.TrainName = T.Train_Name AND T.Train_Number =
B.Train_Number AND B.Passenger_SSN = P.SSN
ORDER BY first_Name ASC;

```

/* Results

```

+-----+-----+
| first_Name | last_Name |
+-----+-----+
| Art        | Venere    |
| Gladys     | Rim       |
| James      | Butt      |
| Leota      | Dilliard  |
| Minna      | Amigon    |
| Mitsue     | Tollner   |
| Simona     | Morasca   |
| Yuki       | Whobrey   |
+-----+-----+
*/

```

PART 6

Brian Shamayev: ER Diagram, CREATE statements, SELECT Statements

Edosa Aigbuza: ER Diagram, CREATE statements, SELECT Statements

PART 7

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or that I contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.