

# RRS(Railway Reservation System)

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A railway management system. It can help you track your tickets and train schedules.

## How to run up the server

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Step 1: Download the ZIP folder of the code and extract it.

Step 2: CD into the extracted folder

```
cd "path to the folder"
```

Step 3: Download python from [Python](#).

Step 4: Follow the steps from [PIP](#) to install it.

Step 5: Install the requirements

```
pip install -r requirements.txt
```

Step 6: Intialize the Database

```
flask --app app init-db
```

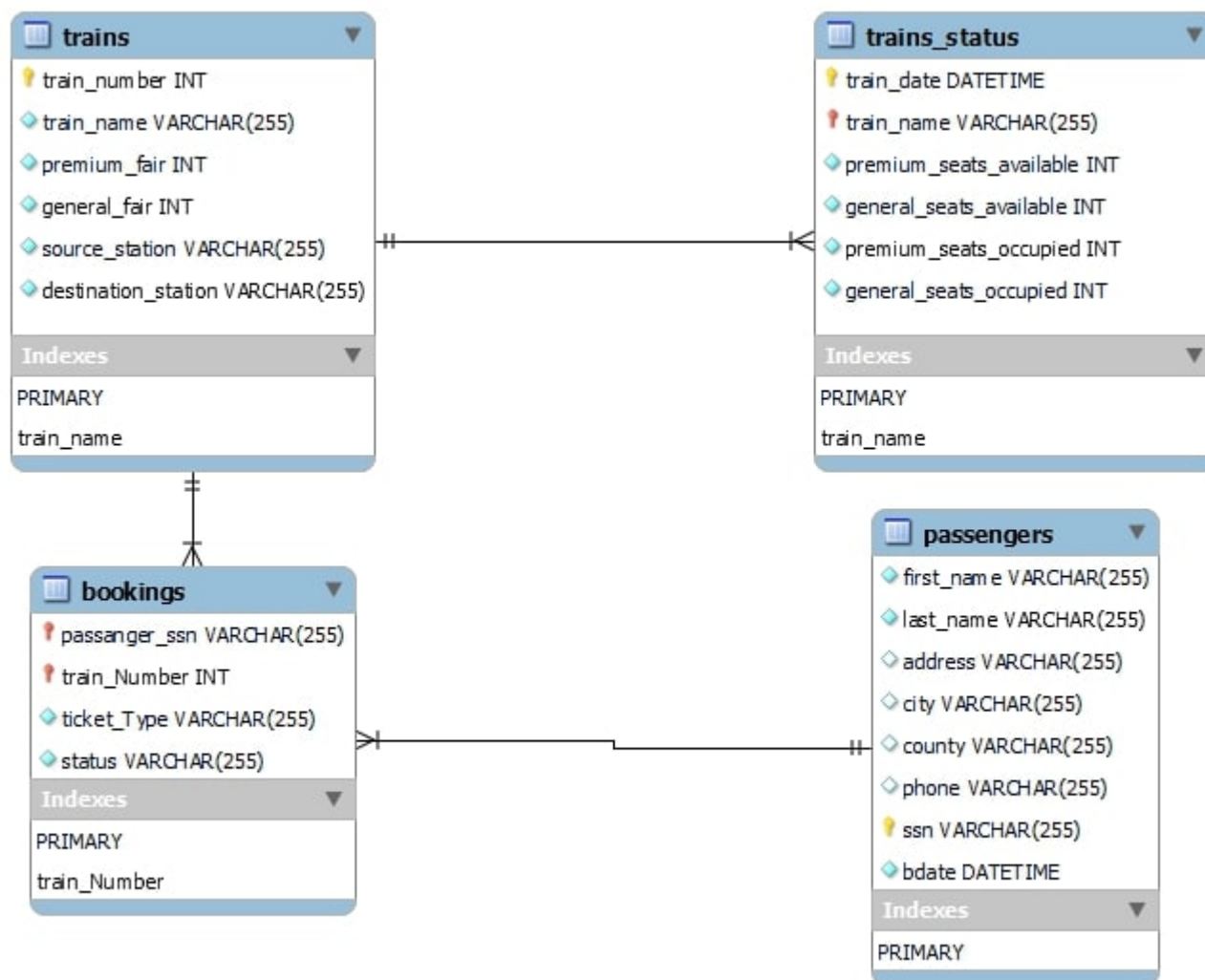
Step 7: Run the app

```
flask --app app run --host=0.0.0.0
```

Optional Step: If you want to run the app in debug mode run by add --debug option

```
flask --app app run --debug --host=0.0.0.0
```

# Database Schema



## Queries

**Query 1:** User input the passenger's last name and first name and retrieve all trains they are booked on

```
SELECT DISTINCT(t.train_name) FROM (Passengers as p INNER JOIN Bookings AS b ON
p.ssn = b.passanger_ssn) INNER JOIN Trains AS t ON b.train_Number = t.train_number
WHERE p.first_name = 'James' AND p.last_name = 'Butt';
```

**Query 2:** User input the Date and list of passengers travelling on entered day with confirmed tickets displays on UI.

```
SELECT (p.first_name|| " " ||p.last_name) AS full_name FROM Bookings AS b JOIN
Trains as t ON b.train_Number = t.train_number JOIN Passengers as p ON p.ssn =
```

```
b.passanger_ssn WHERE b.status = 'Booked' AND t.train_number in (SELECT
t.train_number FROM Trains_Status AS ts JOIN Trains AS t ON ts.train_name =
t.train_name WHERE ts.train_date = '2022-02-19');
```

**Query 3: User input the age of the passenger (50 to 60) and UI display the train information (TrainNumber, Train Name, Source and Destination) and passenger information (Name, Address, Category, ticket status) of passengers who are between the ages of 50 to 60.**

```
SELECT t.train_number, t.train_name, t.source_station, t.destination_station,
p.first_name, p.last_name, p.address, b.ticket_Type as category, b.status as
status, cast(strftime('%Y', 'now') - strftime('%Y', bdate) as int) AS age FROM
Trains AS t JOIN Bookings AS b ON b.train_Number = t.train_number Join Passengers
AS p ON p.ssn = b.passanger_ssn WHERE age BETWEEN 50 AND 60 ORDER BY age;
```

**Query 4: List all the train name along with count of passengers it is carrying.**

```
SELECT train_name, train_date, (premium_seats_occupied+general_seats_occupied) AS
passengers_count FROM Trains_Status;
```

**Query 5: Enter a train name and retrieve all the passengers with confirmed status travelling in that train.**

```
SELECT (p.first_name || ' ' || p.last_name) AS full_name FROM Passengers as p JOIN
Bookings as b ON p.ssn = b.passanger_ssn JOIN Train as t ON b.train_Number =
t.train_number WHERE t.train_name = 'Flying Scotsman' AND b.status = 'Booked';
```

**Query 6: User Cancel a ticket (delete a record) and show that passenger in waiting list get ticket confirmed**

- Query to check if passenger has a ticket booked for train

```
SELECT * FROM Bookings WHERE status = 'Booked' AND passanger_ssn = '264816896' AND
train_Number = '3' AND ticket_Type = 'Premium';
```

- Delete the ticket if it exists

```
DELETE FROM Bookings WHERE status = 'Booked' AND passanger_ssn = '264816896' AND
```

```
train_Number = '3' AND ticket_Type = 'Premium';
```

- Get the next passenger on waitlist

```
SELECT * FROM Bookings WHERE status = 'WaitL' AND train_Number = '3' AND  
ticket_Type = 'Premium' LIMIT 1;
```

- Update if there is a passenger on waitlist

```
UPDATE Bookings SET status = "Booked" WHERE status = 'WaitL' AND passanger_ssn =  
'256558303' AND train_Number = '3' AND ticket_Type = 'Premium'
```