

Relational Schema for Indian Railways System

Station(station_id PK, station_name, city, state, pincode)

Route(route_id PK, route_name, origin_station_id FK → Station(station_id),
destination_station_id FK → Station(station_id), distance_km)

Train(train_id PK, train_name, train_number, route_id FK → Route(route_id), total_seats)

Schedule(schedule_id PK, train_id FK → Train(train_id), station_id FK → Station(station_id),
arrival_time, departure_time, day_number, sequence_number)

Class(class_id PK, class_name, base_fare_per_km)

Seat(seat_id PK, train_id FK → Train(train_id), class_id FK → Class(class_id),
seat_number, availability_status)

Passenger(passenger_id PK, first_name, last_name, age, gender,
mobile_number, email)

Ticket(ticket_id PK, pnr_number, passenger_id FK → Passenger(passenger_id),
train_id FK → Train(train_id), source_station_id FK → Station(station_id),
destination_station_id FK → Station(station_id), booking_date,
journey_date, seat_id FK → Seat(seat_id), ticket_status)

Payment(payment_id PK, ticket_id FK → Ticket(ticket_id), amount,
payment_date, payment_method, payment_status)