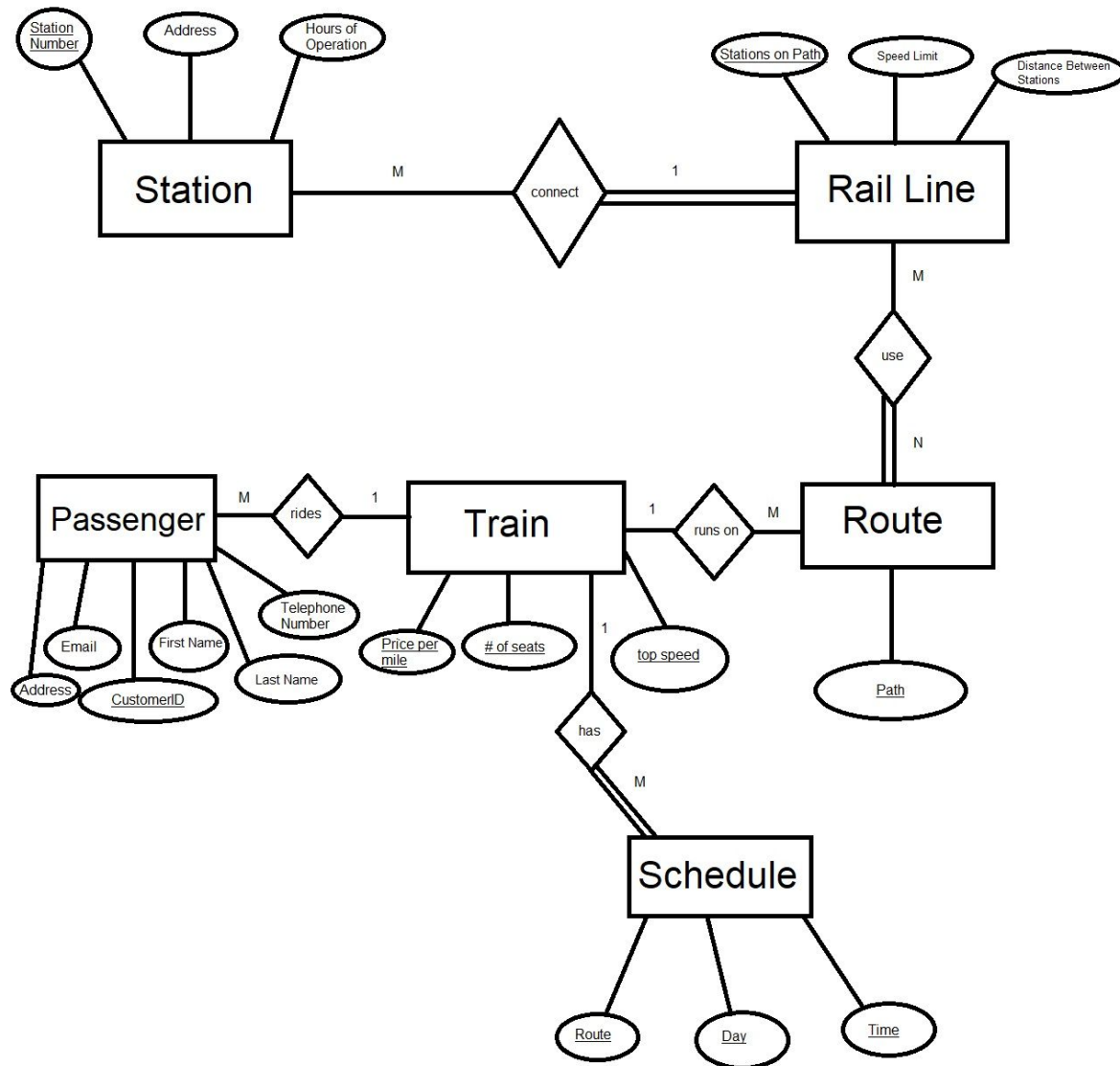


1. Refer to the ER diagram in ExpressRailwayERDiagram.jpeg if this image is unclear:



2. Transform the ER diagram from part 1 into relational schemas

### Entities

Station(Station Number, Address, Hours of Operation)

Rail Line(Stations on Path, Speed Limit, Distance Between Stations)

Route(Path)

Train(Price Per Mile, # of seats, Top Speed)

Schedule(Route, Day, Time)

Customer(CustomerID, First Name, Last Name, Email Address, Address, Telephone Number)

Relationships:

1. rail lines <connect> stations 1:M, TOTAL/PARTIAL
2. rail lines <use> routes M:N, PARTIAL/TOTAL
3. trains <run on> routes 1:M, PARTIAL/PARTIAL
4. trains<have>train schedules 1:M, PARTIAL/TOTAL
5. passenger<rides>trains M:1 PARTIAL/PARTIAL

Relational Schema:

STATION(Station Number, Address, Hours of Operation)

RAIL LINE(Stations on Path, Speed Limit, Distance Between Stations)

FK(Station Number) -> STATION(Station Number)

Route(Path)

FK(Stations on Path) -> RAIL LINE(Stations on Path)

FK(Station Number) -> STATION(Station Number)

Train(Price Per Mile, # of seats, Top Speed)

Schedule(Route, Day, Time)

Customer(CustomerID, First Name, Last Name, Email Address, Address, Telephone Number)