**ER Model For IRCTC**

**Assumptions :**

* IRCTC contains many trains
* Each trains can offer many numbers of Reservation Class
* User can book multiple tickets
* Many trains have same route
* Many routs can reach to a station
* Many trains can associate with each train\_status
* One train can go through many stations

**Step 1: Identify the Entities :**

* USER
* TRAIN
* TRAIN STATUS
* PASSENGER
* STATION
* ROUTE

**Step 2: Find the relationships:**

* One user can book multiple tickets, hance the cardinality between USER and TRAIN is One to Many.
* Trains are associated with each train\_status, hance the cardinality between TRAIN and TRAIN STATUS is Many to One.
* Trains can route from one route, hance the cardinality between TRAIN and ROUTE is Many to One
* Station has a set of route, hance the cardinality between STATION and ROUTE is One to Many.

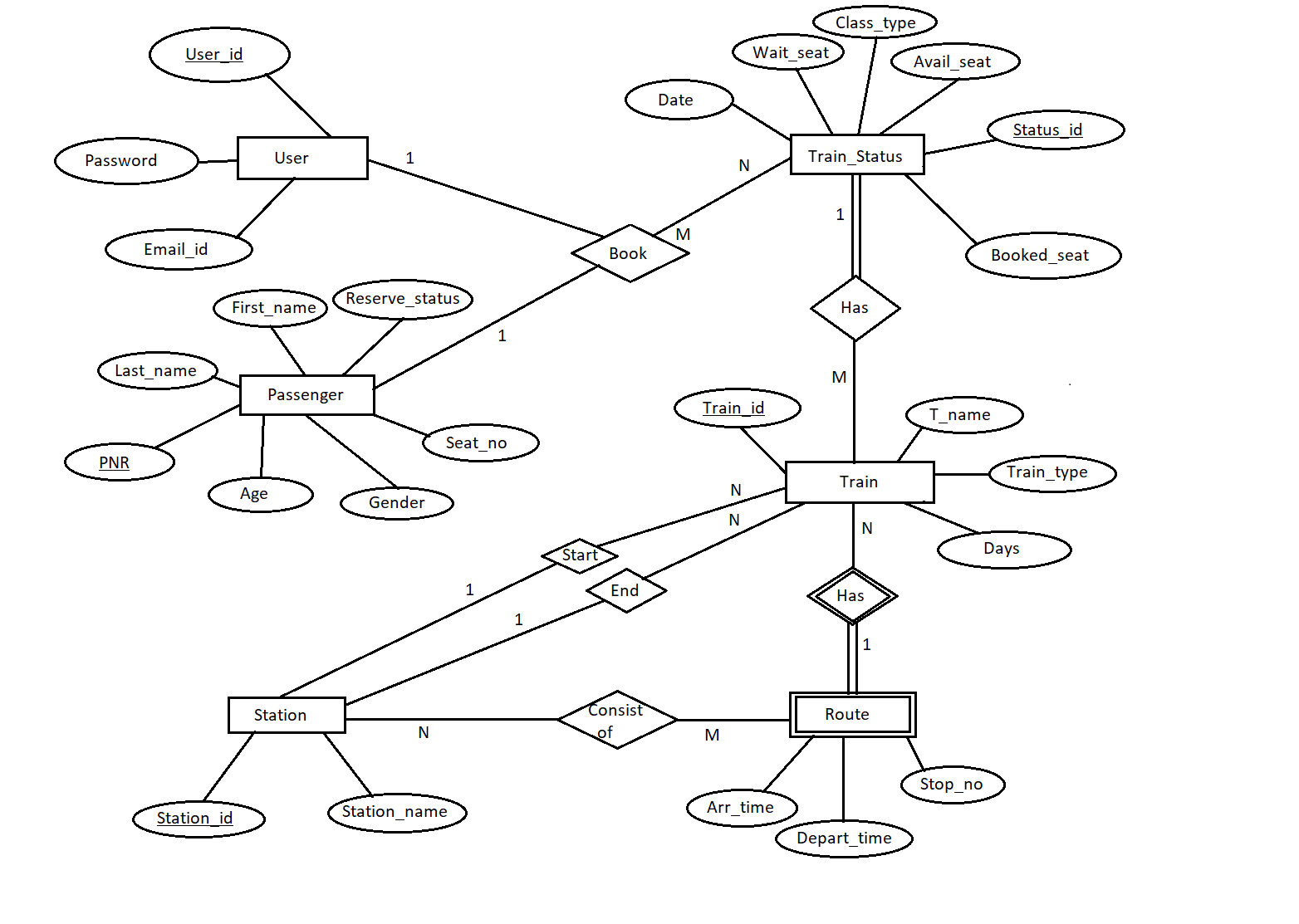
**Step 3: Identify the key attributes :**

* User\_id is the key attribute for USER Entity.
* PNR is the key attribute for PASSENGER Entity.
* Status\_id is the key attribute for TRAIN STATUS Entity.
* Train\_id is the key attribute for TRAIN Entity.
* Station\_id is the key attribute for STATION Entity.

**Step 4: Identify other relevant attributes :**

* For USER Password, Email\_id
* For PASSENGER First\_name, Last\_name, Age , Gender, Seat\_no, Reserve\_status
* For TRAIN STATUS Wait\_seat, Avail\_seat, Booked\_seat, Class\_type, Date
* For TRAIN T\_name, Train\_type
* For ROUTE Arr\_time, Depart\_time, Stop\_no
* For STATION Station\_name

**ER Diagram :**

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