

# \* AIRPORT MANAGEMENT SYSTEM \*

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## • Entity type in Airport Management System:-

- 1) Airport - {Airport name, country}
  - Airport name is key attribute.
- 2) Airline - {Airline ID, Airline name}
  - Airline Id is key attribute.
- 3) Flight - {Flight number, source, destination, status, duration time, arrival time, connected}
  - Flight no is key attribute. & duration is derived attribute.
- 4) Employee - {Employee ID, Name, Address, phone number, sex, Date of Birth, Salary, designation}
  - Employee ID is key attribute, phone number, sex, Date of Birth multivalued attribute and age is derived attribute.


5) passenger - { passport no , Name , Address , Sex  
Date of Birth , phone number , Age }

- passport number is key attribute & Age  
is derived attribute

6) Ticket - { ticket no , Airline name , price ,  
Seat number , class , Departure time ,  
Arrival time , Duration , Destination ,  
Source }

- ticket no is key attribute & duration  
is derived attribute

~~E-R~~  
~~Diagram~~



### Airport

Airport Name	city	state
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contains

Airport - Name	Airline - ID
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Airline

Airline - ID	Airline - Name	Airport - Name
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Flight

flight - Number	Source	destination	Statey	D - time	A - time	Connected	Duration	Airline
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### Employee

Emplo - ID	Name	Add	Sex	Destination	Salary	Age	DOB	Airport - Name
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Emp - Phone - NO

E - ID	Emp - phone - Number
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Serves

F - ID	Passport - Number
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### Passenger

Passport - no	Name	Add	Sex	DOB	Age	flight - no	ticket - Number
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passenger - phone - no

Pass - no	Passenger - phone - NO
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### Ticket

Ticket - no	Airline - name	Price	Seat - no	Class	D - Time	A - time	Destination
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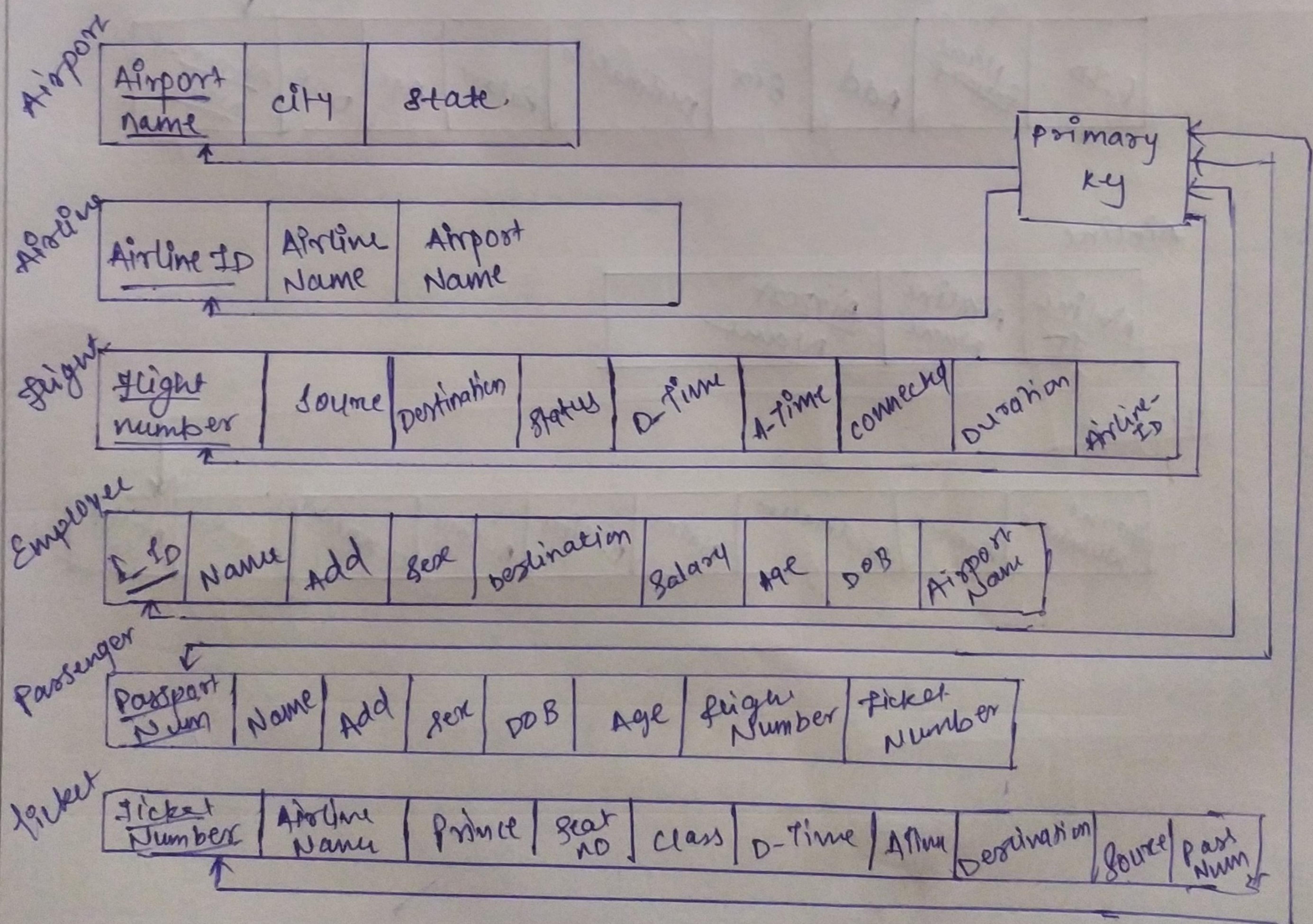
Source	Passport - no	Name
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Steps for mapping of ER to Relational Schema :

Step 2 :- Mapping of Strong entity types

we create relations AIRPORT, AIRLINE, EMPLOYEE, FLIGHT, PASSENGER & TICKET in the relational schema corresponding to regular entities in ER diagram.

Airport name, Airline ID, Employee ID, Flight number, passport number & ticket number are the primary keys for the relations respectively.



Step 2: - mapping of weak entities  
NO weak entity in our ER diagram

Step 3: - 1:1 Relationship types.

NO 1:1 relationship

Step 4: - 1:N Relationship Types.

Airport

Airport Name	City	State
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Employee

EID	Name	Add	Sex	Destination	Salary	Age	DOB	Airport Name
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Airline

Airline ID	Airline Name	Airport Name
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Flight

Flight Number	Source	Destination	status	D-Time	A-Time	connected	duration	Flight ID
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## Flight

Flight Number	Name	Destination	Status	D-time	A-time	contains	Duration	Airline-ID
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## Passenger

Passport no	Name	Add	Sex	DOB	Age	Flight no	Ticket no
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## Passenger

Passport no	Name	Add	Sex	DOB	Age	Flight no	Ticket no
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## Ticket

Ticket no	Airline-name	price	seat no	Class	D-time	A-time	Duration	destination	source	Passenger no
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Step 5:- m:n relationship

Employee ID & passport no is mapped under serves.

## Serves

Em-ID	Passport no
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Also airport name & airline ID are mapped under contains

Airport name	Airline ID
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Step 6:- Mapping & multi valued Attributes

Employee - phone number.

Passenger - phone number

Employee - phone no.

E-ID	Employee phone no
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passenger - phone no

Passport no	Passenger phone no
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