

Person is an entity with attributes (personID, name, age, phoneNum).

Passenger is a subclass of person, with attribute (dietaryPreference), and has an exactly one to all relationship with ticket. Inherits (personID, name, age, phoneNum) from person.

Pilot is a subclass of person, with attributes (position, salary), and has an all to many relationship with airplane. Inherits (personID, name, age, phoneNum) from person.

Cabin crew is a subclass of person, with attributes (position, salary) and has an all to one relationship to airline. Inherits (personID, name, age, phoneNum) from person.

Ground staff is a subclass of person, with attributes (department, salary) and has an all to one relationship with airport. Inherits (personID, name, age, phoneNum) from person.

Ticket is an entity with attributes (ticketNum, seatNum, class) with an all to exactly one relationship to passenger and an all to exactly one relationship with scheduled flights.

Airplane is an entity with attributes (serialNum, manufacturer, model) and has a many to all relationship with pilot, and an all to exactly one relationship to airline.

Airline is an entity with attributes (name, alias) and has an exactly one to many relationship with airplane, a many to exactly one relationship with country, a many to many relationship with route, an exactly one to all relationship with scheduled flights, and a one to all relationship with cabin crew.

Country is an entity with attributes (code, name, continent), with an exactly one to many relationship with airline and an exactly one to many relationship with airport.

Airport is an entity with attributes (name, IATA code, city), with two exactly one to many relationships with route, a one to all relationship with ground staff, and a many to exactly one relationship with country.

Route is an entity with attributes (routeID, duration, stops) and has an exactly one to many relationship with scheduled flights, a many to many relationship with airline, and two many to exactly one relationships to airport.

Scheduled flights is an entity with attributes (flightNum, departDate, arrivalDate, schedDepartTime, schedArrivalTime, actualDepartTime, actualArrivalTime), and an exactly one to all relationship to ticket, and a many to exactly one relationship to route.

Baggage is a weak entity with attributes (type, quantity, weight, fragile) and a many to exactly one relationship to ticket, with the foreign key ticketNum.

Buys is an exactly one to many relationship between passenger and ticket, with attribute (price).

Flies is an all to many relationship between pilot and airplane.

Works for (cabin crew) is an all to one relationship between cabin crew and airline.

Works for (ground staff) is an all to one relationship between ground staff and airport.

Owens is an all to exactly one relationship between airplane and airline.

Belongs to is a many to exactly one relationship between airline and country.

Bought for is an all to exactly one relationship between ticket and scheduled flights.

Use is an all to exactly one relationship between scheduled flights and airline.

In is a many to exactly one relationship between airport and country.

Has is a many to many relationship between route and airline.

Source is a many to exactly one relationship between route and airport.

Destination is a many to exactly one relationship between route and airport.

Contains is a many to exactly one relationship between scheduled flights and route.