

Checking for 2NF

Pilot

<u>StaffID</u>	FirstName	LastName	PassportNo	Adress	Gender	Designation	DateJoined	AirlineTraining Details	AcadamicEducation Details	AircraftModel	FlyingHours	TotalFlying Hours	LegNo	AirlineCode
FD1	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑

The table **Pilot** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **Pilot** does not have any partial functional dependencies. Therefore it's in 2NF.

FlightAttendant

<u>StaffID</u>	FirstName	LastName	PassportNo	Adress	Gender	Designation	DateJoined	AirlineTrainingDetails	AcadamicEducationDetails	TotalFlyingHours	LegNo	AirlineCode
FD1	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑

The table **FlightAttendant** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **FlightAttendant** does not have any partial functional dependencies. Therefore it's in 2NF.

Passenger

<u>PassportNo</u>	FirstName	LastName	Gender	Nationality	DOB	PassportIssueDate	PassportExpiryDate	TicketNo
FD1	↑	↑	↑	↑	↑	↑	↑	↑

The table **Passenger** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **Passenger** does not have any partial functional dependencies. Therefore it's in 2NF.

SpecialRequirements

<u>PassportNo</u>	RequirementDetails
FD1	↑

The table **SpecialRequirements** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **SpecialRequirements** does not have any partial functional dependencies. Therefore it's in 2NF.

Minor

<u>PassportNo</u>	AcconpanyPassportNumber
FD1	↑

The table **Minor** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **Minor** does not have any partial functional dependencies. Therefore it's in 2NF.

Arrival

<u>LegNo</u>	ArrivalTerminalNo	ArrivalTime	BaggageBeltNo	FlightStatus	DateOfFlight	AircrewCheckInTime	AircraftCode	FlightNo
FD1	↑	↑	↑	↑	↑	↑	↑	↑

The table **Arrival** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **Arrival** does not have any partial functional dependencies. Therefore it's in 2NF.

Departure

<u>LegNo</u>	DepartureTerminalNo	GateNo	BoardingTime	DepartureTime	FlightStatus	DateOfFlight	AircrewCheckInTime	AircraftCode	FlightNo
FD1	↑	↑	↑	↑	↑	↑	↑	↑	↑

The table **Departure** is in 1NF.
It has a functional dependency which is FD1 and it is a full functional dependency because all the non primary key attributes depend on the primary key completely.
The table **Departure** does not have any partial functional dependencies. Therefore it's in 2NF.

Delayed

<u>LegNo</u>	Reason	FlightStatus	DateOfFlight	AircrewCheckIn Time	Aircraft Code	FlightNo
FD1	↑	↑	↑	↑	↑	↑

Canceled

<u>LegNo</u>	Reason	FlightStatus	DateOfFlight	AircrewCheckInTime	Aircraft Code	FlightNo
FD1	↑	↑	↑	↑	↑	↑

The tables **Delayed** and **Canceled** are in 1NF. They have functional dependencies FD1 in each. The functional dependencies of both tables are full functional dependencies because all the non primary key attributes of each table depends completely on the primary key of the respective table.
None of the tables have partial functional dependencies.
Therefore both tables are in 2NF.

Passenger_Contact_No

<u>PassportNo</u>	<u>ContactNo</u>
FD1	↑

The table **Passenger_Contact_No** does not have non primary key attributes. They are already in 1NF.
Therefore the table **Passenger_Contact_No** is in 2NF

Pilot_Contact_No

<u>StaffID</u>	<u>ContactNo</u>
FD1	↑

FlightAttendant_Contact_No

<u>StaffID</u>	<u>ContactNo</u>
FD1	↑

The tables **Pilot_Contact_No** and **FlightAttendant_Contact_No** do not have non primary key attributes. They are already in 1NF. Therefore both tables are in 2NF.

