

Checking for 3NF

PilotFlownAircrafts

<u>StaffID</u>	<u>AircraftModel</u>	FlyingHours
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FD1

The table **PilotFlownAircrafts** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key which is StaffID. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **PilotFlownAircrafts** is in 3NF.

FlightAttendant

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

The table **FlightAttendant** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **FlightAttendant** is in 3NF.

Passenger

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

The table **Passenger** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **Passenger** is in 3NF.

SpecialRequirements

<u>PassportNo</u>	RequirementDetails
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FD1

The table **SpecialRequirements** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **SpecialRequirements** is in 3NF.

Minor

<u>PassportNo</u>	AcconpanyPassportNumber
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FD1

The table **Minor** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **Minor** is in 3NF.

Arrival

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

The table **Arrival** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **Arrival** is in 3NF.

Departure

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

The table **Departure** is in 2NF and it does not have any transitive functional dependencies and all the non primary key attributes depend on the primary key. There's only one functional dependency (FD1) and it's determinant is a super key. Therefore the table **Departure** is in 3NF.

Delayed

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

Canceled

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

The tables **Delayed** and **Canceled** are in 2NF and they do not have any transitive functional dependencies. All the non primary key attributes depends on the primary key. The tables **Delayed** and **Canceled** each has a functional dependency called FD1 and their determinents are a super keys. Therefore the table **Departure** is in 3NF.

Passenger\_Contact\_No

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

The table **Passenger\_Contact\_No** is in 2NF and it does not have any transitive functional dependencies. The table **Passenger\_Contact\_No** has a functional dependency called FD1 and it's dependent is a prime attribute. Therefore the table **Passenger\_Contact\_No** is in 3NF.

Pilot\_Contact\_No

<u>StaffID</u>	<u>ContactNo</u>
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FD1

FlightAttendant\_Contact\_No

<u>StaffID</u>	<u>ContactNo</u>
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FD1

The tables **Pilot\_Contact\_No** and **FlightAttendant\_Contact\_No** are in 2NF and they do not have any transitive functional dependencies. The tables **Pilot\_Contact\_No** and **FlightAttendant\_Contact\_No** each has a functional dependency called FD1 and their dependents are prime attributes. Therefore the tables **Pilot\_Contact\_No** and **FlightAttendant\_Contact\_No** are in 3NF.