Table Name	Description
Accident	This table contains one row for each aviation accident investigated, capturing details such as the date, location, severity, and entities involved, including passengers, aircraft, airlines, pilots, and weather conditions.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_accidentID_ac	Contains a unique value for each accident	Y	I	6	0-999,999	
d_date_ac	The date of the accident occurred.	N	D	-	MM-DD-YYYY	
t_location_ac	Location of Accident or crash site	N	T	50	A-Z	
t_description_ac	Brief description of Accident, focusing on key points and events	N	T	255	A-Z	
i_severityLevel_ac	The location where the accident took place.	N	I	1	1-5	
c_casualties_pa	Contains foreign key referring to the number of casualties in crash from the Passengers table.	N	I	6	0-999,999	PA
c_aircraftType_ai	Contains foreign key referring to the aircraft type involved in crash from the Aircraft table.	N	T	50	A-Z	AI
c_airlinename_al	Contains foreign key referring to the name of the airline involved in crash from the Airline table.	N	T	50	A-Z	AL
c_ causeofaccidentdesc_acc	Contains foreign key referring to the cause of the accident from the Accident Cause table.	N	T	255	A-Z	ACC
c_pilotID_pi	Contains foreign key referring to the pilot involved in the accident from the Pilot table.	N	I	6	0-999,999	PI
c_passengersID_pa	Contains foreign key referring to the passengers involved in the accident from the Passenger table.	N	I	6	0-999,999	PA
c_weatherconditionID_wc	Contains foreign key referring to the weather conditions during the accident from the Weather Condition table.	N	I	6	0-999,999	WC
c_accidentcauseID_acc	Contains foreign key referring to the cause of the accident from the Accident Cause table.	N	I	6	0-999,999	ACC
c_aircraftID_ai	Contains foreign key referring to the aircraft involved in the accident from the Aircraft table.	N	I	6	0-999,999	AI
c_investigatorID_in	Contains foreign key referring to the investigator responsible for investigating the accident from the Investigator table.	N	I	6	0-999,999	IN

Table Name	Description					
Aircraft	This table contains one row for each aircraft involved in an aviation accident, capturing details such as the manufacturer, year built, type, tail identification, and entities involved, including airlines, pilots, and maintenance records.					

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_aircraftID_ai	Contains a unique value for each aircraft.	Y	I	6	0-999,999	-
t_manufacturer_ai	The manufacturer of the aircraft.	N	T	50	A-Z	
i_yearaccAircBuilt_ai	The year the accident aircraft was built.	N	I	4	1900-2100	
i_numUnitsBuilt_ai	Number of units of this aircraft type that have been built.	N	I	6	0-999,999	
i_yearsinProduction_ai	Year range that aircraft has been in production	N	I	4	1900-2100	
i_numCrashes_ai	Number of crashes that aircraft of this type have been involved in.	N	I	6	0-999,999	
i_totalFatalities_ai	Total fatalities involving aircraft of this type.	N	I	6	0-999,999	
t_Tailidentification_ai	Tail identification number of the accident aircraft.	N	T	50	A-Z	
t_aircraftType_ai	Type of Aircraft involved in accident	N	T	50	A-Z	
c_airlineID_al	Foreign key referring to the airline associated with the aircraft, from the Airline table.	N	I	6	0-999,999	AL
c_accidentID_ac	Foreign key referring to the accident associated with the aircraft, from the Accident table.	N	I	6	0-999,999	AC
c_pilotID_pi	Foreign key referring to the pilot associated with the aircraft, from the Pilot table.	N	I	6	0-999,999	PI
c_maintenanceID_ma	Foreign key referring to the maintenance record associated with the aircraft, from the Maintenance table.	N	I	6	0-999,999	MA

Table Name	Description
Airline	This table contains one row for each airline involved in an aviation accident, capturing details such as the airline's name, country of origin, fleet size, and related entities including aircraft, flight details, maintenance records, and accidents.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_airlineID_al	Contains a unique value for each airline.	Y	I	6	0-999,999	
t_airlinename_al	Name of the airline.	N	T	50	A-Z	
t_country_al	Country where the airline is based.	N	T	50	A-Z	
i_fleetSize_al	Number of aircraft operated by the airline.	N	I	6	0-999,999	
c_accidentID_ac	Foreign key referring to the accident involving the airline, from the Accident table.	N	I	6	0-999,999	AC
c_flightDetailsID_fd	Foreign key referring to flight details involving the airline, from the Flight Details table.	N	I	6	0-999,999	FD
c_maintenanceID_ma	Foreign key referring to the maintenance record involving the airline, from the Maintenance table.	N	I	6	0-999,999	MA
c_aircraftID_ai	Foreign key referring to the aircraft operated by the airline, from the Aircraft table.	N	I	6	0-999,999	AI

Table Name	Description
Investigator	This table contains one row for each investigator involved in an aviation accident, capturing details such as the investigator's name, qualifications, years of experience, and related entities, including accidents, risk assessments, safety recommendations, and investigative reports.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_investigatorID_in	Contains a unique value for each investigator.	Y	I	6	0-999,999	
t_Investigatorname_in	Name of the investigator.	N	T	50	A-Z	
t_qualification_in	The qualifications of the investigator.	N	T	255	A-Z	
i_yearsExperience_in	Number of years of experience the investigator has.	N	I	2	0-99	
c_accidentID_ac	Foreign key referring to the accident investigated by the investigator, from the Accident table.	N	I	6	0-999,999	AC
c_RiskAssessmentID_ra	Foreign key referring to the risk assessment conducted by the investigator, from the Risk Assessment table.	N	I	6	0-999,999	RA
c_safetyRecID_sr	Foreign key referring to the safety recommendations provided by the investigator, from the Safety Recommendation table.	N	I	6	0-999,999	SR
c_reportID_ir	Foreign key referring to the investigative report created by the investigator, from the Investigative Report table.	N	I	6	0-999,999	IR
c_accidentCauseID_acc	Foreign key referring to the accident cause determined by the investigator, from the Accident Cause Table.	N	I	6	0-999,999	ACC

Table Name	Description
Accident Cause	This table contains one row for each cause of an aviation accident, capturing details such as the description of the cause and related entities, including the accident and the investigator responsible for identifying the cause.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_ accidentcauseID _acc	Contains a unique value for each cause of the accident.	Y	I	6	0-999,999	
t_CoAccidentDesc_acc	Description of the cause of the accident.	N	T	255	A-Z	
c_accidentID_ac	Foreign key referring to the accident that this cause is linked to, from the Accident table.	N	I	6	0-999,999	AC
c_investigatorID_in	Foreign key referring to the investigator who identified the cause, from the Investigator table.	N	I	6	0-999,999	IN

Table Name	Description
Safety Recommendation	This table contains one row for each safety recommendation issued after an aviation accident, capturing details such as the recommendation details, the date issued, and related entities including the accident and the investigator responsible for the recommendation.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_safetyRecID_sr	Contains a unique value for each safety recommendation.	Y	I		6 0-999,999	
t_safetyRecDetails_sr	The detailed safety recommendation provided.	N	T	255	A-Z	
d_dateIssued_sr	Date when the safety recommendation was issued.	N	D	-	MM-DD-YYYY	
c_safetyimplementationID_si	Foreign key referring to the safety implementation associated with the recommendation, from the Safety Implementation table.	N	I		6 0-999,999	SI
c_investigatorID_in	Foreign key referring to the investigator responsible for the recommendation, from the Investigator table.	N	I		6 0-999,999	IN

Table Name	Description
Passenger	This table contains one row for each passenger involved in an aviation accident, capturing details such as whether the passenger was injured, the number of casualties, and related entities including the accident they were involved in.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_passengersID_pa	Contains a unique value for each passenger.	Y	I	6	0-999,999	
i_Injured_pa	Number of passangers injured.	N	I	6	0-999,999	
i_casualties_pa	The number of people who died in the accident from this passenger group.	N	I	6	0-999,999	
c_accidentID_ac	Foreign key referring to the accident the passenger was involved in, from the Accident table.	N	I	6	0-999,999	AC

Table Name	Description
Maintenance Record	This table contains one row for each maintenance activity performed on an aircraft, capturing details such as the date of maintenance, type of maintenance, work completed, and related entities, including the aircraft, airline, and whether the maintenance was a factor in the accident.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_maintenanceID_ma	Contains a unique value for each maintenance record.	Y	I	6	0-999,999	
d_dateMa_ma	Date when the maintenance was performed.	N	D	-	MM-DD-YYYY	
t_type_ma	Type of maintenance performed on the aircraft.	N	T	50	A-Z	
t_accCompletedWork_ma	Maintenance work that was actually completed prior to accident flight	N	T	255	A-Z	
b_affectedAcc_ma	Indicates whether the maintenance was a contributing factor in the accident (True/False).	N	B	1	True/False	
c_aircraftID_ai	Foreign key referring to the aircraft involved in the maintenance, from the Aircraft table.	N	I	6	0-999,999	AI
c_airlineID_al	Foreign key referring to the airline associated with the maintenance, from the Airline table.	N	I	6	0-999,999	AL

Table Name	Description
Risk Assessment	This table contains one row for each risk assessment conducted during an aviation accident investigation, capturing details such as the risk level, description of risk factors, and related entities including the accident.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_riskID_ra	Contains a unique value for each risk assessment.	Y	I	6	0-999,999	
i_riskLevel_ra	Risk level assigned during the assessment (e.g., on a scale from 1 to 5).	N	I	1	1-5	
t_riskDescription_ra	Description of the risk factors identified during the assessment.	N	T	255	A-Z	
c_accidentID_ac	Foreign key referring to the accident associated with the risk assessment, from the Accident table.	N	I	6	0-999,999	AC
c_investigatorID_in	Foreign key referring to the investigator conducting the risk assessment, from the Investigator table.	N	I	6	0-999,999	IN

Table Name	Description
Air Traffic Control	This table contains one row for each air traffic control instance related to an aviation accident, capturing details such as the controller's name, location, staff count, number of controllers on duty in charge of accident aircraft, and related entities including the date of the accident, the pilot, and flight details.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_airtclID_atc	Contains a unique value for each air traffic control record.	Y	I		6 0-999,999	
t_controllerName_atc	Name of the air traffic controller on duty.	N	T		50 A-Z	
t_ATClocation_atc	Location of the air traffic control tower.	N	T		50 A-Z	
i_staffcount_atc	Number of staff members present in the air traffic control tower.	N	I		2 0-99	
i_controllerDuty_atc	Controller on duty in charge of accident aircraft the day of accident	N	I		2 0-99	
c_date_ac	Foreign key referring to the date of the accident, from the Accident table.	N	D	-	MM-DD-YYYY	AC
c_pilotID_pi	Foreign key referring to the pilot involved in the accident, from the Pilot table.	N	I		6 0-999,999	PI
c_flightdetailsID_fd	Foreign key referring to the flight details on the day of the accident, from the Flight Details table.	N	I		6 0-999,999	FD

Table Name	Description					
Pilot	This table contains one row for each pilot involved in an aviation accident, capturing details such as the pilot's name, date of birth, years of experience, medical record, flight hours in the accident aircraft, and related entities including the aircraft, air traffic control, and the accident.					

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_pilotID_pi	Contains a unique value for each pilot.	Y	I	6	0-999,999	
t_pilotName_pi	Name of the pilot.	N	T	50	A-Z	
d_dateofBirth_pi	Date of birth of the pilot.	N	D	-	MM-DD-YYYY	
i_experienceyears_pi	Number of years of experience the pilot has.	N	I	2	0-99	
t_medicalRecord_pi	Medical record details of the pilot.	N	T	255	A-Z	
i_pilotFlightHoursinacair_pi	Number of flight hours in the accident aircraft logged by the pilot.	N	I	6	0-999,999	
c_TailidentificationNum_ai	Foreign key referring to the tail identification number of the accident aircraft, from the Aircraft table.	N	String/Varchar	7	Alphanumeric (e.g., 0-999,999 or A123)	AI
c_airtclID_atc	Foreign key referring to the air traffic control associated with the pilot, from the Air Traffic Control table.	N	I	6	0-999,999	ATC
c_accidentID_ac	Foreign key referring to the accident associated with the pilot, from the Accident table.	N	I	6	0-999,999	AC
c_aircraftID_ai	Foreign key referring to the aircraft involved in the accident, from the Aircraft table.	N	I	6	0-999,999	AI

Table Name	Description
Flight Details	This table contains one row for each flight involved in an aviation accident, capturing details such as the flight date, flight number, origin, destination, and related entities including air traffic control and the airline operating the flight.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_flightdetailsID_fd	Contains a unique value for each flight detail record.	Y	I	6	0-999,999	
d_flightdate_fd	The date of the flight.	N	D	-	MM-DD-YYYY	
t_flightnumber_fd	The flight number assigned to the flight.	N	String/Varchar	7	Alphanumeric (e.g., 0-999,999 or A123)	
t_flightOrigin_fd	The origin airport of the flight.	N	T	50	A-Z	
t_flightDestination_fd	The destination airport of the flight.	N	T	50	A-Z	
c_airtcID_atc	Foreign key referring to the air traffic control associated with the flight, from the Air Traffic Control table.	N	I	6	0-999,999	ATC
c_airlineID_al	Foreign key referring to the airline operating the flight, from the Airline table.	N	I	6	0-999,999	Al

Table Name	Description
Weather Conditions	This table contains one row for each set of weather conditions involved in an aviation accident, capturing details such as the weather description, visibility, wind speed, precipitation type, temperature, and related entities including the accident.

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_weatherconditionID_wc	Contains a unique value for each weather condition record.	Y	I	6	0-999,999	
t_weatherDescription_wc	Description of the weather conditions at time of the accident.	N	T	255	A-Z	
i_visibility_wc	Visibility in miles at time of accident.	N	I	3	0-999	
t_windspeed_wc	Wind speed at time of the accident.	N	T	50	A-Z	
t_precipitationType_wc	Type of precipitation (e.g., rain, snow) at time of the accident.	N	T	50	A-Z	
t_temperature_wc	Temperature at the time of the accident.	N	T	50	A-Z	
c_accidentID_ac	Foreign key referring to the accident associated with the weather conditions, from the Accident table.	N	I	6	0-999,999	AC

Table Name	Description					
Safety Implementation	This table contains one row for each safety implementation carried out in response to an aviation accident, capturing details such as the implementation description, date, status, and related entities including the safety recommendation.					

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_safetyimplementationID_si	Contains a unique value for each safety implementation record.	Y	I	6	0-999,999	
t_implementationDescription_si	Description of the safety implementation details.	N	T	255	A-Z	
d_implementationDate_si	Date when the safety implementation was carried out.	N	D	-	MM-DD-YYYY	
t_implementationStatus_si	Status of the safety implementation (e.g., Complete, In Progress).	N	T	50	A-Z	
c_safetyRecID_sr	Foreign key referring to the related safety recommendation, from the Safety Recommendation table.	N	I	6	0-999,999	SR

Table Name	Description					
Investigative Report	This table contains one row for each investigative report conducted after an aviation accident, capturing details such as the report title, submission date, key findings, report status, and related entities including the investigator and the accident.					

Attribute Name	Attribute Description	Primary Key	Data Type	Width	Range of Values	Foreign Key Table
c_reportID_ir	Contains a unique value for each investigative report.	Y	I	6	0-999,999	
t_reportTitle_ir	Title of the investigative report.	N	T	255	A-Z	
d_publishDate_i	Date when the report was published.	N	D	-	MM-DD-YYYY	
t_finalizedFindings_ir	Finalized key findings of the investigative report.	N	T	255	A-Z	
t_reportStatus_ir	Status of the investigative report (e.g., Completed, In Progress).	N	T	50	A-Z	
c_investigatorID_in	Foreign key referring to the investigator responsible for the report, from the Investigator table.	N	I	6	0-999,999	IN