**Create table queries**

**Creating Accident table**

CREATE TABLE Accident(AccidentID Integer NOT NULL PRIMARY KEY, time1 TIMESTAMP,

Lattitude varchar(20), Longitude varchar(20), NoOfVehicles Integer,

NoOfCasualities Integer, DayOfWeek Integer);

**Creating WeatherConditions table**

CREATE TABLE WeatherConditions(WeatherConditionID Integer NOT NULL PRIMARY KEY,

WeatherConditionDesc varchar(50) NOT NULL);

**Creating Severity table**

CREATE TABLE Severity(SeverityID Integer NOT NULL PRIMARY KEY,

SeverityDesc varchar(50) NOT NULL);

**Creating RoadType table**

CREATE TABLE RoadType(RoadTypeID Integer NOT NULL PRIMARY KEY,

RoadTypeDesc varchar(50) NOT NULL);

**Creating RoadSurfaceConditions table**

CREATE TABLE RoadSurfaceConditions(RoadSurfaceID Integer NOT NULL PRIMARY KEY,

RoadSurfaceDesc varchar(50) NOT NULL);

**Creating LightConditions table**

CREATE TABLE LightConditions(LightConditionID Integer NOT NULL PRIMARY KEY,

LightConditionDesc varchar(50) NOT NULL);

**Creating Accidentdetails table**

CREATE TABLE AccidentDetails(AccidentID Integer NOT NULL PRIMARY KEY,

UrbanOrRural Integer NOT NULL, RoadTypeID Integer NOT NULL,

RoadSurfaceID Integer NOT NULL, LightConditionID Integer NOT NULL,

WeatherConditionID Integer NOT NULL, SeverityID Integer NOT NULL,

FOREIGN KEY(AccidentID) REFERENCES Accident(AccidentID),

FOREIGN KEY(RoadTypeID) REFERENCES RoadType(RoadTypeID),

FOREIGN KEY(RoadSurfaceID) REFERENCES RoadSurfaceConditions(RoadSurfaceID),

FOREIGN KEY(LightConditionID) REFERENCES LightConditions(LightConditionID),

FOREIGN KEY(WeatherConditionID) REFERENCES WeatherConditions(WeatherConditionID),

FOREIGN KEY(SeverityID) REFERENCES Severity(SeverityID));

**Inserting Values into the table**

**Inserting Values into the RoadType table**

insert into RoadType values(1,'Roundabout');

insert into RoadType values(2,'One way street');

insert into RoadType values(3,'Dual carriageway');

insert into RoadType VALUES(6,'Single carriageway');

insert into RoadType VALUES(7,'Slip road');

insert into RoadType VALUES(9,'Unknown');

insert into RoadType VALUES(12,'One way street/Slip road');

insert into RoadType VALUES(-1,'Data missing or out of range');

**Inserting Values into the RoadSurfaceConditions table**

insert into RoadSurfaceConditions values(1, 'Dry');

insert into RoadSurfaceConditions values(2, 'Wet or Damp');

insert into RoadSurfaceConditions values(3, 'Snow');

insert into RoadSurfaceConditions values(4, 'Frost or Ice');

insert into RoadSurfaceConditions values(5, 'Flood over 3cm. deep');

insert into RoadSurfaceConditions values(6, 'Oil or Diesel');

insert into RoadSurfaceConditions values(7, 'Mud');

insert into RoadSurfaceConditions values(-1, 'Data missing or out of range');

insert into RoadSurfaceConditions values(9, 'unknown');

**Inserting Values into the LightConditions table**

insert into LightConditions values(1, 'Daylight');

insert into LightConditions values(4, 'Darkness - lights lit');

insert into LightConditions values(5, 'Darkness - lights unlit');

insert into LightConditions values(6, 'Darkness - no lighting');

insert into LightConditions values(7, 'Darkness - lighting unknown');

insert into LightConditions values(-1, 'Data missing or out of range');

**Inserting Values into the WeatherConditions table**

insert into WeatherConditions values(1, 'Fine no high winds');

insert into WeatherConditions values(2, 'Raining no high winds');

insert into WeatherConditions values(3, 'Snowing no high winds');

insert into WeatherConditions values(4, 'Fine + high winds');

insert into WeatherConditions values(5, 'Raining + high winds');

insert into WeatherConditions values(6, 'Snowing + high winds');

insert into WeatherConditions values(7, 'Fog or mist');

insert into WeatherConditions values(8, 'Other');

insert into WeatherConditions values(9, 'Unknown');

insert into WeatherConditions values(-1, 'Data missing or out of range');

**Inserting Values into the Severity table**

insert into Severity values(1, 'Fatal');

insert into Severity values(2, 'Serious');

insert into Severity values(3, 'Slight');

The values are inserted into the Accident and Accidentdetails table using a python script. Since it’s a bulk import from the dataset.

**Index:**

create index id3 on accidentdetails(WeatherConditionID)

create index id5 on accidentdetails(LightConditionID)

create index id1 on accident(noofvehicles)

create index id4 on accidentdetails(SeverityID)

**Advanced SQL Queries:**

**Delete trigger:**

CREATE OR REPLACE FUNCTION public.clientedelete()

RETURNS trigger

LANGUAGE 'plpgsql'

COST 100

VOLATILE NOT LEAKPROOF

AS $BODY$

BEGIN

DELETE FROM accidentdetails WHERE accidentdetails.accidentid = OLD.accidentid;

RETURN OLD;

END

$BODY$;

ALTER FUNCTION public.clientedelete()

OWNER TO postgres;

CREATE TRIGGER delete\_contacto

BEFORE DELETE

ON public.accident

FOR EACH ROW

EXECUTE FUNCTION public.clientedelete();