**STEPS TO REPRODUCE**

**Drop the existing tables**

DROP TABLE IF EXISTS plantports;

DROP TABLE IF EXISTS vmicustomers;

DROP TABLE IF EXISTS productsperplant ;

DROP TABLE IF EXISTS warehouse;

DROP TABLE IF EXISTS freightrates;

DROP TABLE IF EXISTS orderlist ;

**Creating tables**

CREATE TABLE plantports

(

plant\_code varchar(50) REFERENCES warehouse(plant\_code),

port varchar(50) NOT NULL

);

CREATE TABLE vmicustomers

(

plant\_code varchar(50) REFERENCES warehouse(plant\_code),

customers varchar(50) NOT NULL

);

CREATE TABLE productsperplant

(

plant\_code varchar(50) REFERENCES warehouse(plant\_code),

product\_id int NOT NULL

);

CREATE TABLE warehouse

(

plant\_code varchar(50) PRIMARY KEY,

cost\_per\_unit decimal NOT NULL,

daily\_capacity int NOT NULL

);

CREATE TABLE freightrates

(

carrier varchar(50) NOT NULL,

orig\_port\_cd varchar(50),

dest\_port\_cd varchar(50),

minm\_wgh\_qty decimal,

max\_wgh\_qty decimal,

svc\_cd varchar(50),

minimum\_cost decimal,

rate decimal,

mode\_dsc varchar(50),

tpt\_day\_cnt int,

carrier\_type varchar(50) NOT NULL

);

CREATE TABLE orderlist

(

order\_id decimal PRIMARY KEY,

order\_date DATE ,

origin\_port varchar(50),

carrier varchar(50),

tpt int ,

service\_level varchar(50),

ship\_ahead\_day\_count int,

ship\_late\_day\_count int,

customer varchar(50),

product\_id INT,

plant\_code varchar(50) references warehouse(plant\_code),

destination\_port varchar(50),

unit\_quantity int,

weight decimal

);

**Alter the tables**

ALTER TABLE warehouse

ADD CONSTRAINT wh\_pkey PRIMARY KEY (wh);

ALTER TABLE warehouse

RENAME COLUMN wh TO plant\_code;

ALTER TABLE orderlist

ADD CONSTRAINT order\_id\_pkey PRIMARY KEY (order\_id);

**Insert the data from csv to schema**

COPY plantports FROM 'C:\Program Files\PostgreSQL\15\project\project556\PlantPorts.csv' delimiter ',' CSV Header;

COPY vmicustomers FROM 'C:\Program Files\PostgreSQL\15\project\project556\VmiCustomers.csv' delimiter ',' CSV Header;

COPY productsperplant FROM 'C:\Program Files\PostgreSQL\15\project\project556\ProductsPerPlant.csv' delimiter ',' CSV Header;

COPY warehouse FROM 'C:\Program Files\PostgreSQL\15\project\project556\Warehouse.csv' delimiter ',' CSV Header;

COPY freightrates FROM 'C:\Program Files\PostgreSQL\15\project\project556\FreightRates.csv' DELIMITER ',' CSV Header;

COPY orderlist FROM 'C:\Program Files\PostgreSQL\15\project\project556\OrderList.csv' delimiter ',' CSV Header;

**Creating Indexes**

CREATE index plant\_index on orderlist(plant\_code);

CREATE index product\_idindex on orderlist(product\_id);

**Run the SQL Queries**