**Create a database**

CREATE DATABASE AUTOXYZ;

**Using SQL Create a source table for data warehouse.**

DROP TABLE IF EXISTS company;

CREATE TABLE company (id int AUTO\_INCREMENT PRIMARY KEY,

item\_name varchar(255),

brand varchar(255),

sold\_by varchar(255),

category varchar(255),

day int,

month varchar(255),

quarter varchar(255),

years int,

location\_name varchar(255),

state varchar(255),

pin\_code int,

branch\_name varchar(255),

branch\_manager varchar(255),

qty\_sold int,

amt\_sold int

);

INSERT INTO company(item\_name,

brand,

sold\_by,

category,

day,

month,

quarter,

years,

location\_name,

state,

pin\_code,

branch\_name,

branch\_manager,

qty\_sold,

amt\_sold)

VALUES("Car","Model X","Tesla","Four wheeler",13,"June","Q2",2021,"New Baneshwor","Bagmati","123","Baneshwor 1","Ashish",2,15000),

("Car","Model Y","Tesla","Four wheeler",15,"October","Q4",2022,"Old Baneshwor","Bagmati","123","Baneshwor 3","Manoj",1,5000);

SELECT \* FROM company;

**Using SQL Create time dimension table for data warehouse.**

DROP TABLE IF EXISTS timedim;

CREATE TABLE timedim (t\_id int AUTO\_INCREMENT PRIMARY KEY,

day int,

month varchar(255),

quarter varchar(255),

years int

);

INSERT INTO timedim(

day,

month,

quarter,

years

)

SELECT day,month,quarter,years FROM company;

SELECT \* FROM timedim;

**Using SQL Create item dimension table for data warehouse.**

DROP TABLE IF EXISTS itemdim;

CREATE TABLE itemdim (i\_id int AUTO\_INCREMENT PRIMARY KEY,

item\_name varchar(255),

brand varchar(255),

sold\_by varchar(255),

category varchar(255)

);

INSERT INTO itemdim(

item\_name,

brand,

sold\_by,

category

)

SELECT item\_name,brand,sold\_by,category FROM company;

SELECT \* FROM itemdim;

**Using SQL Create location dimension table for data warehouse.**

DROP TABLE IF EXISTS locationdim;

CREATE TABLE locationdim (l\_id int AUTO\_INCREMENT PRIMARY KEY,

location\_name varchar(255),

state varchar(255),

pin\_code int

);

INSERT INTO locationdim(

location\_name,

state,

pin\_code

)

SELECT location\_name,state,pin\_code FROM company;

SELECT \* FROM locationdim;

**Using SQL Create branch dimension table for data warehouse.**

DROP TABLE IF EXISTS branchdim;

CREATE TABLE branchdim (b\_id int AUTO\_INCREMENT PRIMARY KEY,

branch\_name varchar(255),

branch\_manager varchar(255)

);

INSERT INTO branchdim(

branch\_name,

branch\_manager

)

SELECT branch\_name,branch\_manager FROM company;

SELECT \* FROM branchdim;

**Using SQL Create sales fact table for data warehouse.**

DROP TABLE IF EXISTS salesFact;

CREATE TABLE salesFact (t\_id int,

i\_id int,

l\_id int,

b\_id int,

qty\_sold int,

amt\_sold int);

INSERT INTO salesFact(t\_id,

i\_id,

l\_id,

b\_id,

qty\_sold,

amt\_sold)

SELECT t\_id,i\_id,l\_id,b\_id,qty\_sold,amt\_sold FROM company c

LEFT OUTER JOIN timedim t ON t.day = c.day AND t.month = c.month AND t.quarter = c.quarter AND t.years = c.years

LEFT OUTER JOIN itemdim i ON i.item\_name = c.item\_name AND i.brand = c.brand AND i.sold\_by = c.sold\_by AND i.category = c.category

LEFT OUTER JOIN locationdim l ON l.location\_name = c.location\_name AND l.state = c.state AND l.pin\_code = c.pin\_code

LEFT OUTER JOIN branchdim b ON b.branch\_name = c.branch\_name AND b.branch\_manager = c.branch\_manager;

SELECT \* FROM salesFact;

**Using SQL Create sales fact table for data warehouse using Foreign Key.**

DROP TABLE IF EXISTS salesFact;

CREATE TABLE salesFact (t\_id int,

i\_id int,

l\_id int,

b\_id int,

qty\_sold int,

amt\_sold int,

FOREIGN Key(t\_id) REFERENCES timedim(t\_id),

FOREIGN Key(i\_id) REFERENCES itemdim(i\_id),

FOREIGN Key(l\_id) REFERENCES locationdim(l\_id),

FOREIGN Key(b\_id) REFERENCES branchdim(b\_id));

INSERT INTO salesFact(t\_id,

i\_id,

l\_id,

b\_id,

qty\_sold,

amt\_sold)

SELECT t\_id,i\_id,l\_id,b\_id,qty\_sold,amt\_sold FROM company c

LEFT OUTER JOIN timedim t ON t.day = c.day AND t.month = c.month AND t.quarter = c.quarter AND t.years = c.years

LEFT OUTER JOIN itemdim i ON i.item\_name = c.item\_name AND i.brand = c.brand AND i.sold\_by = c.sold\_by AND i.category = c.category

LEFT OUTER JOIN locationdim l ON l.location\_name = c.location\_name AND l.state = c.state AND l.pin\_code = c.pin\_code

LEFT OUTER JOIN branchdim b ON b.branch\_name = c.branch\_name AND b.branch\_manager = c.branch\_manager;

SELECT \* FROM salesFact;

**Query to select the records where years = 2022**

SELECT \* FROM salesFact s LEFT OUTER JOIN timedim t ON t.t\_id = s.t\_id WHERE years=2022;