-- Database: Sales Data

-- DROP DATABASE IF EXISTS "Sales Data ";

CREATE DATABASE "Sales Data "

WITH

OWNER = postgres

ENCODING = 'UTF8'

LC\_COLLATE = 'English\_United States.1252'

LC\_CTYPE = 'English\_United States.1252'

TABLESPACE = pg\_default

CONNECTION LIMIT = -1

IS\_TEMPLATE = False;

--1) Database creation

Create table Sales\_sample (Product\_Id Int, Region Varchar(50), On\_date Date,

Sales\_Amount Numeric);

--2) Data Creation

Insert into Sales\_sample (Product\_Id, Region, On\_date, Sales\_Amount) values

('1', 'East', '2023-11-10', '20000'),

('2', 'West', '2023-08-19', '50000'),

('2', 'East', '2023-11-21', '40000'),

('3', 'North', '2023-07-20', '15000'),

('4', 'North', '2023-08-07', '45000'),

('2', 'South', '2023-08-24', '45000'),

('5', 'North', '2023-11-22', '20000'),

('5', 'West', '2023-11-11', '60000'),

('3', 'East', '2023-09-19', '50000'),

('1', 'West', '2023-09-29', '70000')

;

Select \* from Sales\_Sample;

--3) OLAP operations

--a) Drill down

Select Region, Product\_Id, Sum(Sales\_Amount) as Sales\_Amount

From Sales\_Sample

Group By 1,2

Order By Region, Product\_Id, Sales\_Amount;

--b) Roll Up

Select Region, Product\_Id, Sum(Sales\_Amount) as Sales\_Amount

From Sales\_Sample

Group By Rollup (1,2)

Order By Region;

--c) Cube

Select Region, Product\_Id, On\_Date, Sum(Sales\_Amount) as Sales\_Amount

From Sales\_Sample

Group By Cube (1,2,3)

Order By Region, Product\_Id, On\_Date, Sales\_Amount;

--d) Slice

Select Region, Product\_Id, On\_Date, Sum(Sales\_Amount) as Sales\_Amount

From Sales\_Sample

Where Region in('North', 'South') OR On\_Date between To\_date('2023-08-20','YYYY-MM-DD') And To\_Date('2023-10-20','YYYY-MM-DD')

Group By 1,2,3

Order By Region, Product\_Id, On\_Date, Sales\_Amount;

--e) Dice

Select Region, Product\_Id, On\_Date, Sum(Sales\_Amount) as Sales\_Amount

From Sales\_Sample

Where Region in('North', 'South') AND Product\_Id IN (1,2) AND On\_Date between To\_date('2023-08-20','YYYY-MM-DD') And To\_Date('2023-10-20','YYYY-MM-DD')

Group By 1,2,3

Order By Region, Product\_Id, On\_Date, Sales\_Amount;









