LAB 1

# PART 1

## TASK 1

MS SQL Server 2019 (Developer Edition has been installed)

## TASK 2

A screenshot of a computer

Description automatically generated

Azure Data Studio and SSMS have been installed

TASK 3

AdventureWorks2022 has been deployed to Microsoft Azure

A screenshot of a computer

Description automatically generated

## TASK 4

-- TASK 4

-- List all tables in the AdventureWorks2022 database

USE AdventureWorks2022;

GO

SELECT TABLE\_NAME

FROM INFORMATION\_SCHEMA.TABLES

WHERE TABLE\_TYPE = 'BASE TABLE';

-- GET ALL SCHEMAS

/\*

MAIN SCHEMAS

HumanResources

Person

Production

Purchasing

Sales

\*/

SELECT schema\_name

FROM information\_schema.schemata;

-- GET SCHEMA NAME FOR PARTICULAR TABLE

SELECT TABLE\_SCHEMA

FROM INFORMATION\_SCHEMA.TABLES

WHERE TABLE\_NAME = 'Product';

-- GET COLUMN NAMES IN SELECTED TABLE

SELECT COLUMN\_NAME, DATA\_TYPE

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_NAME = 'Product';

-- SELECT SAMPLE DATA FROM SELECTED TABLE

SELECT TOP 10 \*

FROM Production.Product;

## TASK 5

-- TASK 5

-- a,b

SELECT Name,ListPrice FROM Production.Product

WHERE ListPrice > 2500;

-- c to save it as csv : write the query and in the right column of icons click the top one

# PART 2

## TASK 1

### POINT A

#### SUBPOINT I

-- I Where the detailed information about orders is stored? : in SalesOrderDetail Table

Where the detailed information about orders is stored? (SalesOrderDetail,SalesOrderHeader)

SELECT table\_name

FROM information\_schema.tables

WHERE table\_schema = 'Sales';

-- Sales order detail table

SELECT TOP 10 \* FROM Sales.SalesOrderDetail;

#### SUBPOINT II

-- II Are there different types of orders ? YES : Work Order, Purchase Order, Sales order

SELECT table\_name

FROM information\_schema.tables

WHERE table\_schema = 'Purchasing';

SELECT TOP 10 \* FROM Purchasing.PurchaseOrderDetail;

SELECT table\_name

FROM information\_schema.tables

WHERE LOWER(table\_name) LIKE '%order%';

#### SUBPOINT III

-- III Are there different statuses of orders? -- YES, there are : 1,3,4

-- STATUSES

SELECT TOP 10 \*

FROM Purchasing.PurchaseOrderHeader;

#### SUBPOINT IV

-- IV Which numerical data can be used to measure the performance of an order (TotalDue),(Order Date, Due Date, and Ship Date)

SELECT TOP 10 \* FROM Sales.SalesOrderHeader;

### POINT B

#### SUBPOINT I

-- I Information main tables about products

SELECT table\_name

FROM information\_schema.tables

WHERE table\_schema = 'Production';

SELECT table\_name

FROM information\_schema.tables

WHERE LOWER(table\_name) LIKE '%product%';

-- product, Product category,Product Description etc.

#### SUBPOINT II

-- II Are product organized in some manner? YES ( bikes,components,clothing,accessories)

SELECT TOP 10 \* FROM Production.ProductCategory;

#### SUBPOINT III

-- III what additional information is available ( \product ProductCostHistory, ProductPhoto, ProductInventory etc.)

SELECT table\_name

FROM information\_schema.tables

WHERE LOWER(table\_name) LIKE '%product%';

### POINT C

-- I

SELECT table\_name

FROM information\_schema.tables

WHERE LOWER(table\_name) LIKE '%customer%';

-- person types

SELECT DISTINCT [PersonType] FROM Person.Person;

SELECT TOP 10 \* FROM Sales.vIndividualCustomer;

SELECT TOP 10 \* FROM Sales.vSalesPerson;

### POINT D

-- D Employees handling orders

SELECT

TABLE\_SCHEMA,

TABLE\_NAME,

COLUMN\_NAME,

DATA\_TYPE

FROM

INFORMATION\_SCHEMA.COLUMNS

WHERE

LOWER(COLUMN\_NAME) LIKE '%employee%';

SELECT TOP 10 \* FROM Purchasing.PurchaseOrderHeader;

### POINT E

-- E sales location

SELECT

TABLE\_SCHEMA,

TABLE\_NAME,

COLUMN\_NAME,

DATA\_TYPE

FROM

INFORMATION\_SCHEMA.COLUMNS

WHERE

LOWER(COLUMN\_NAME) LIKE '%location%';

SELECT TOP 10 \* FROM Sales.SalesOrderHeader -- TerritoryID

SELECT TOP 10 \* FROM Sales.SalesTerritory; -- Sales Territory

POINT F

-- F IN SALES SCHEMA. ALL RELATED INFORMATION RELATED TO SALES CAN BE FOUND HERE

## TASK 2

### POINT A

SELECT TOP 10 \* FROM Sales.SalesOrderHeader;

SELECT SUM(TotalDue) 'GLOBAL SALES ORDER' FROM Sales.SalesOrderHeader;

### POINT B

SELECT

SUM(SubTotal) 'GLOBAL SALES AMOUNT'

FROM

Sales.SalesOrderHeader;

### POINT C

SELECT

SUM(SOD.LineTotal) AS GlobalSalesAmount,

SUM(SOD.OrderQty) AS TotalItemsSold

FROM

Sales.SalesOrderHeader AS SOH

JOIN

Sales.SalesOrderDetail AS SOD ON SOH.SalesOrderID = SOD.SalesOrderID;

### POINT D

SELECT

YEAR(OrderDate) AS SalesYear,

SUM(TotalDue) AS AnnualSalesAmount

FROM

Sales.SalesOrderHeader

GROUP BY

YEAR(OrderDate)

ORDER BY

SalesYear;

### POINT E

SELECT

SUM((SOD.UnitPrice - P.StandardCost) \* SOD.OrderQty) AS GlobalProfit

FROM

Sales.SalesOrderHeader AS SOH

JOIN

Sales.SalesOrderDetail AS SOD ON SOH.SalesOrderID = SOD.SalesOrderID

JOIN

Production.Product AS P ON SOD.ProductID = P.ProductID;