ASSIGNMENT 2

1. (2 Marks) Write a query to list all system databases in SQL Server.

ANSWER: SELECT name FROM sys.databases WHERE database\_id <= 4;

1. (2 Marks) Identify the physical database files (MDF, LDF) of a user-defined database named "SalesDB" using a SQL query.

ANSWER:

USE SalesDB;

GO

SELECT

name AS LogicalFileName,

physical\_name AS PhysicalFileName,

type\_desc AS FileType

FROM sys.database\_files;

1. (2 Marks) Create a user-defined database named "InventoryDB" with a primary data file of 5MB and a log file of 2MB.

ANSWER:

CREATE DATABASE InventoryDB

ON

(

NAME = InventoryDB\_Data,

FILENAME = 'C:\SQLData\InventoryDB.mdf',

SIZE = 5MB,

MAXSIZE = 50MB,

FILEGROWTH = 5MB

)

LOG ON

(

NAME = InventoryDB\_Log,

FILENAME = 'C:\SQLData\InventoryDB.ldf',

SIZE = 2MB,

MAXSIZE = 20MB,

FILEGROWTH = 2MB

);

1. (2 Marks) Rename the database "InventoryDB" to "StockDB" using a SQL query.

ANSWER: EXEC sp\_renamedb 'InventoryDB', 'StockDB';

1. (2 Marks) Drop the database "StockDB" using a SQL query.

ANSWER: DROP DATABASE stockDB;

1. (2 Marks) Write a query to display all available data types in SQL Server.

ANSWER:

SELECT name AS DataType, system\_type\_id, user\_type\_id

FROM sys.types

ORDER BY name;

7) (2 Marks) Create a table "Products" with the following columns:

ProductID (Integer, Primary Key)

ProductName (Variable-length string, max 50 characters, Not Null)

Price (Decimal with 2 decimal places)

StockQuantity (Integer, Default value 0)

ANSWER:

CREATE TABLE Products (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(50) NOT NULL,

Price DECIMAL(10,2),

StockQuantity INT DEFAULT 0

);

8)(2 Marks) Modify the "Products" table to add a new column Category (VARCHAR(30)).

ANSWER:

ALTER TABLE Products

ADD Category VARCHAR(30);

9)(2 Marks) Rename the table "Products" to "Inventory".

ANSWER:

EXEC sp\_rename 'Products', 'Inventory';

10)(2 Marks) Drop the "Inventory" table from the database.

ANSWER:

DROP TABLE inventory;

11)(5 Marks) Identify and list the system databases available in SQL Server. Provide a brief description of each.

ANSWER: SELECT name FROM sys.databases WHERE database\_id <= 4;

12)(5 Marks) Write a query to display all database files (MDF, LDF, NDF) for a specific database.

ANSWER:

USE SalesDB;

GO

SELECT

name AS LogicalFileName,

physical\_name AS PhysicalFileName,

type\_desc AS FileType,

size \* 8 / 1024 AS SizeMB -- Converts size from pages to MB

FROM sys.database\_files; USE SalesDB;

GO

SELECT

name AS LogicalFileName,

physical\_name AS PhysicalFileName,

type\_desc AS FileType,

size \* 8 / 1024 AS SizeMB -- Converts size from pages to MB

FROM sys.database\_files;

13) (5 Marks) Create a new user-defined database named SalesDB with a primary data file of 10MB and a log file of 5MB.

ANSWER:

CREATE DATABASE SalesDB

ON

(

NAME = SalesDB\_Data,

FILENAME = 'C:\SQLData\SalesDB.mdf',

SIZE = 10MB,

MAXSIZE = 100MB,

FILEGROWTH = 10MB

)

LOG ON

(

NAME = SalesDB\_Log,

FILENAME = 'C:\SQLData\SalesDB.ldf',

SIZE = 5MB,

MAXSIZE = 50MB,

FILEGROWTH = 5MB

);

14)(5 Marks) Rename the database SalesDB to RetailDB using an SQL query.

ANSWER: EXEC sp\_renamedb 'SalesDB', 'RetailDB';

15) (5 Marks) Drop the RetailDB database safely, ensuring that no active connections exist before deletion.

ANSWER: ALTER DATABASE RetailDB SET SINGLE\_USER WITH ROLLBACK IMMEDIATE;