

1) List all system databases in MS SQL Server

```
SELECT name FROM sys.databases WHERE database_id <= 4;
```

- The sys.databases system table stores metadata about databases.
- database_id ≤ 4 filters out sys

tem databases:

- master
- model
- msdb
- tempdb

2) Retrieve physical file locations (MDF & LDF) of "CompanyDB"

```
SELECT name AS FileName, physical_name AS FilePath, type_desc AS FileType  
FROM sys.master_files  
WHERE database_id = DB_ID('CompanyDB');
```

- sys.master_files stores details of all database files.
- DB_ID('CompanyDB') retrieves the database ID dynamically.

3) Create "HRDB" Database with Specific File Sizes

```
CREATE DATABASE HRDB  
ON PRIMARY (  
    NAME = 'HRDB_Data',  
    FILENAME = 'C:\SQLData\HRDB.mdf',  
    SIZE = 10MB,  
    FILEGROWTH = 2MB  
)  
LOG ON (  
    NAME = 'HRDB_Log',  
    FILENAME = 'C:\SQLData\HRDB.ldf',  
    SIZE = 5MB,
```

FILEGROWTH = 1MB

);

Creates HRDB with:

- Primary Data File (MDF): 10MB, auto-grows by 2MB.
- Log File (LDF): 5MB, auto-grows by 1MB.

4) Rename "HRDB" to "EmployeeDB"

EXEC sp_renamedb 'HRDB', 'EmployeeDB';

- sp_renamedb renames a database from HRDB to EmployeeDB.

5) Drop the "EmployeeDB" Database

USE master;

ALTER DATABASE EmployeeDB SET SINGLE_USER WITH ROLLBACK IMMEDIATE;

DROP DATABASE EmployeeDB;

- Sets the database to SINGLE_USER mode to avoid conflicts.
- Drops the database permanently.

6) Display all supported data types in MS SQL Server

SELECT name AS DataType, system_type_id, user_type_id

FROM sys.types

ORDER BY name;

The sys.types table stores SQL Server's built-in and user-defined data types.

7) Create "Employees" Table

CREATE TABLE Employees (

EmpID INT PRIMARY KEY,

EmpName VARCHAR(100) NOT NULL,

JoinDate DATE NOT NULL,

Salary DECIMAL(10,2) DEFAULT 30000.00

);

- EmpID → INT, Primary Key
- EmpName → VARCHAR(100), Not Null
- JoinDate → DATE, Not Null
- Salary → DECIMAL(10,2), Default: 30000.00

8) Add "Department" Column to "Employees"

```
ALTER TABLE Employees ADD Department VARCHAR(50);
```

- Adds a new column Department (VARCHAR(50)) to Employees.

9) Rename "Employees" Table to "Staff"

```
EXEC SP_RENAME 'Employees', 'Staff';
```

- Renames Employees → Staff.

10) Drop the "Staff" Table

```
DROP TABLE Staff;
```

- Deletes the Staff table permanently.