Employee Management System - SQL Server Cursor Exercises

Database Schema

We will use the following schema for the Employee Management System:

1. Departments

Column	Data Type	Description
DepartmentID	INT (PK)	Unique department ID
DepartmentName	VARCHAR(100)	Name of the department

2. Employees

Column	Data Type	Description
EmployeeID	INT (PK)	Unique employee ID
FirstName	VARCHAR(50)	Employee's first name
LastName	VARCHAR(50)	Employee's last name
DepartmentID	INT (FK)	Linked to Departments
Salary	DECIMAL(10,2)	Monthly salary
JoinDate	DATE	Date of joining

Sample Data

We will use the following sample data for testing:

Departments:

DepartmentID	DepartmentName
1	HR
2	IT
3	Finance

Employees:

EmployeeID	FirstName	LastName	DepartmentID	Salary	JoinDate
1	John	Doe	1	5000.00	2020-01-15
2	Jane	Smith	2	6000.00	2019-03-22
3	Bob	Johnson	3	5500.00	2021-07-30

Exercises

Exercise 1: Create a Cursor

Goal: Create a cursor to iterate over all employees and print their details.

Steps:
1. Declare a cursor to select all columns from the Employees table.
2. Open the cursor.
3. Fetch each row from the cursor.
4. Print the details of each employee.
5. Close the cursor.

Exercise 2: Types of Cursors

Goal: Understand the different types of cursors in SQL Server.

Steps:
1. Declare a static cursor to select all columns from the Employees table.
2. Declare a dynamic cursor to select all columns from the Employees table.
3. Declare a forward-only cursor to select all columns from the Employees table.
4. Declare a keyset-driven cursor to select all columns from the Employees table.
5. Compare the behavior of each cursor type.