

Module 5: Create Advance Database Objects

Assignment Solution

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Assignment Solution

Q1: Execute the following in SQL

- Create Functions
- Create Triggers
- Create and Execute Stored Procedure

```
CREATE TABLE [dbo].[employeeaudit](  
    [emp_id] [numeric](4, 0) NOT NULL,  
    [first_name] [varchar](20) NOT NULL,  
    [last_name] [varchar](20) NOT NULL,  
    [mgr_id] [numeric](4, 0) NULL,  
    [phone_number] [varchar](20) NULL,  
    [hire_date] [date] NULL,  
    [job_id] [numeric](2, 0) NULL,  
    [deptno] [numeric](2, 0) NULL,  
    machinename varchar(50),  
    Servername varchar(50))
```

- Create Functions

```
USE [empDB]  
GO
```

```
CREATE FUNCTION [dbo].[ufn_GetEmployeeInfo](@DeptID INTEGER)  
RETURNS @retGetEmployeeInfo TABLE  
(  
    EmployeeID int primary key NOT NULL,  
    FirstName nvarchar(255) NOT NULL,  
    LastName nvarchar(255) NOT NULL,  
    Deptno INT NOT NULL  
)  
AS  
BEGIN  
    INSERT @retGetEmployeeInfo  
    SELECT [emp_id]  
        ,[first_name]  
        ,[last_name]  
        ,[deptno]  
    FROM [empDB].[dbo].[employee]  
    WHERE deptno = @DeptID  
  
    RETURN  
END;
```

```
Execute:  
USE [empDB]
```

GO

```
SELECT EmployeeID, FirstName, LastName, Deptno
FROM ufn_GetEmployeeInfo(10);
```

- Create Triggers

```
CREATE TRIGGER trg_employee
ON employee
AFTER INSERT
AS
BEGIN
    -- SET NOCOUNT ON added to prevent extra result sets from
    -- interfering with SELECT statements.
    SET NOCOUNT ON;

    -- Insert statements for trigger here
    INSERT INTO [employeeaudit](
        [emp_id]
        ,[first_name]
        ,[last_name]
        ,[mgr_id]
        ,[phone_number]
        ,[hire_date]
        ,[job_id]
        ,[deptno]
        ,machinename
        ,serverName
        ,[InsertTime])

        SELECT [emp_id]
            ,[first_name]
            ,[last_name]
            ,[mgr_id]
            ,[phone_number]
            ,[hire_date]
            ,[job_id]
            ,[deptno]
            ,CAST( SERVERPROPERTY('MachineName') AS VARCHAR(50))
            ,CAST( SERVERPROPERTY('ServerName') AS VARCHAR(50))
            ,GETDATE()
        FROM INSERTED;

END
GO
```

- Create and Execute Stored Procedure

```
USE [empDB]
GO
```

```
CREATE PROCEDURE [dbo].[sp_GetEmployeeInfo]( @empid INT)
AS
BEGIN
```

```
SELECT [emp_id]
      ,[first_name]
      ,[last_name]
      ,[mgr_id]
      ,[phone_number]
      ,[hire_date]
      ,[job_id]
      ,[deptno]
FROM [empDB].[dbo].[employee]
WHERE emp_id = @empid
```

```
END
```

Execution:
USE [empDB]
GO

```
DECLARE @return_value int
```

```
EXEC @return_value = [dbo].[GetEmployeeInfo]
@empid = 1001
```

```
SELECT 'Return Value' = @return_value
```