

**Generate Custom ID Code Using SQL  
Stored Procedure  
+ ASP.NET Core MVC Integration**

# What You'll Learn

- ✓ Create a SQL Stored Procedure to generate formatted ID codes.
- ✓ Understand code structure and logic.
- ✓ Integrate the procedure in ASP.NET Core MVC.
- ✓ Show real-time code generation.

# SQL Stored Procedure Code

```
ALTER PROCEDURE [dbo].[MakeID]
    @CategoryCode NVARCHAR(2),
    @StrDate DATE,
    @NewCode NVARCHAR(50) OUTPUT
AS
BEGIN
    SET NOCOUNT ON;

    DECLARE @Prefix NVARCHAR(20) = 'INV';
    DECLARE @YearSuffix NVARCHAR(2) = RIGHT(CAST(YEAR(@StrDate) AS NVARCHAR), 2);
    DECLARE @MaxCode INT;

    SET @MaxCode = (
        SELECT MAX(CAST(SUBSTRING(Code, LEN(@Prefix + '.' + @CategoryCode) + 2, 4) AS INT))
        FROM MyDBTable
        WHERE CategoryCode = @CategoryCode
            AND RIGHT(Code, 2) = @YearSuffix
            AND YEAR(tDate) = YEAR(@StrDate)
    );

    SET @MaxCode = ISNULL(@MaxCode, 0) + 1;

    SET @NewCode = @Prefix + '.' + @CategoryCode + '.' +
        RIGHT('0000' + CAST(@MaxCode AS NVARCHAR), 4) + '.' + @YearSuffix;
END
```

# Declare Variables and Call the Procedure

```
USE [TEST_DB]
GO

-- Declare variables for input and output
DECLARE @CategoryCode NVARCHAR(2) = 'A1'
DECLARE @StrDate DATE = '2025-05-18'
DECLARE @NewCode NVARCHAR(50)

-- Call the procedure
EXEC [dbo].[MakeID]
    @CategoryCode = @CategoryCode,
    @StrDate = @StrDate,
    @NewCode = @NewCode OUTPUT

-- See the result
SELECT @NewCode AS GeneratedCode
```

## Sample Output

Input:

CategoryCode = 'A1'

StrDate = '2025-05-18'

Generated Code:

INV.A1.0003.25

# ASP.NET Core MVC Integration

- ✓ Create a model class to hold input/output
- ✓ Use Dapper or ADO.NET to call the procedure
- ✓ Display generated code in a view

## Sample Model

```
public class CodeRequestModel {  
    public string CategoryCode { get; set; }  
    public DateTime StrDate { get; set; }  
    public string NewCode { get; set; }  
}
```

# Controller Action (ADO.NET)

```
using (var conn = new SqlConnection(_config.GetConnectionString("DefaultConnection")))
{
    var cmd = new SqlCommand("MakeID", conn);
    cmd.CommandType = CommandType.StoredProcedure;
    cmd.Parameters.AddWithValue("@CategoryCode", model.CategoryCode);
    cmd.Parameters.AddWithValue("@StrDate", model.StrDate);
    var output = new SqlParameter("@NewCode", SqlDbType.NVarChar, 50)
    {
        Direction = ParameterDirection.Output
    };
    cmd.Parameters.Add(output);
    conn.Open();
    cmd.ExecuteNonQuery();
    model.NewCode = output.Value.ToString();
}
```

# Razor View Example

```
<form method="post">  
    <input name="CategoryCode" />  
    <input type="date" name="StrDate" />  
    <button type="submit">Generate</button>  
</form>
```

```
@if (!string.IsNullOrEmpty(Model?.NewCode)) {  
    <div>Generated Code: @Model.NewCode</div>  
}
```

# Demo Result

User Input:

CategoryCode = A2

StrDate = 2025-05-18

Result on Form:

Generated Code: INV.A2.0001.25



**Thanks for watching!**