

SQL Development Sample – Computed Columns

This code sample is part of a project where I migrated a Microsoft Access database to SQL Server to improve scalability, reporting, and multi-user performance. The computed columns below were added to support custom business logic, improve reporting, and streamline invoice and scheduling workflows.

The use of PERSISTED computed columns ensures performance by physically storing these values in the database and allowing indexing where appropriate.

SQL Code

```
-- Computed Columns for dbo.JobList

-- 1. CompletionMonth (numeric) and CompletionMonthName (text)
ALTER TABLE dbo.JobList
ADD CompletionMonth AS MONTH(InvoiceSent) PERSISTED,
    CompletionMonthName AS
        CASE MONTH(InvoiceSent)
            WHEN 1 THEN 'January'
            WHEN 2 THEN 'February'
            WHEN 3 THEN 'March'
            WHEN 4 THEN 'April'
            WHEN 5 THEN 'May'
            WHEN 6 THEN 'June'
            WHEN 7 THEN 'July'
            WHEN 8 THEN 'August'
            WHEN 9 THEN 'September'
            WHEN 10 THEN 'October'
            WHEN 11 THEN 'November'
            WHEN 12 THEN 'December'
        END PERSISTED;

-- 2. SupplyBudget (flat 15% of Amount)
ALTER TABLE dbo.JobList
ADD SupplyBudget AS (Amount * 0.15) PERSISTED;

-- 3. AdjustedScheduledDate (based on weekday of ScheduledDate)
ALTER TABLE dbo.JobList
ADD AdjustedScheduledDate AS
    CASE
        WHEN DATEPART(WEEKDAY, ScheduledDate) <= 2
            THEN DATEADD(DAY, 23 - DATEPART(WEEKDAY, ScheduledDate), ScheduledDate)
        ELSE
            DATEADD(DAY, 30 - DATEPART(WEEKDAY, ScheduledDate), ScheduledDate)
    END PERSISTED;

-- 4. PriorityScore (based on Priority text field)
ALTER TABLE dbo.JobList
ADD PriorityScore AS
    CASE
        WHEN Priority = 'Critical' THEN 5
        WHEN Priority = 'Emergency' THEN 7
        WHEN Priority = 'PO' THEN 10
        ELSE 14
    END PERSISTED;
```