Part 28 –Cast and Convert functions

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In this session we will learn

- CAST and CONVERT functions
- When to choose one over the other

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CAST & CONVERT

To convert one data type to another, CAST and CONVERT functions can be used.

```
--Syntax of CAST and CONVERT functions from MSDN:
CAST ( expression AS data_type [ ( length ) ] )
CONVERT ( data_type [ ( length ) ] , expression [ , style ] )
```

Id	Name	DateOfBirth
1	Sam	1980-12-30 00:00:00.000
2	Pam	1982-09-01 12:02:36.260
3	John	1985-08-22 12:03:30.370
4	Sara	1979-11-29 12:59:30.670

Id	Name	DateOfBirth	ConvertedDOB
1	Sam	1980-12-30 00:00:00.000	Dec 30 1980 12:00AM
2	Pam	1982-09-01 12:02:36.260	Sep 1 1982 12:02PM
3	John	1985-08-22 12:03:30.370	Aug 22 1985 12:03PM
4	Sara	1979-11-29 12:59:30.670	Nov 29 1979 12:59PM

```
Select Id, Name, DateOfBirth, CAST(DateofBirth as nvarchar) as ConvertedDOB from tblEmployees
Select Id, Name, DateOfBirth, Convert(nvarchar, DateOfBirth) as ConvertedDOB from tblEmployees
```

```
Select Id, Name, DateOfBirth,
Convert(nvarchar, DateOfBirth, 103) as ConvertedDOB
from tblEmployees
```

Style	DateFormat
101	mm/dd/yyyy
102	yy.mm.dd
103	dd/mm/yyyy
104	dd.mm.yy
105	dd-mm-yy

Id	Name	DateOfBirth	ConvertedDOB
1	Sam	1980-12-30 00:00:00.000	30/12/1980
2	Pam	1982-09-01 12:02:36.260	01/09/1982
3	John	1985-08-22 12:03:30.370	22/08/1985
4	Sara	1979-11-29 12:59:30.670	29/11/1979

http://msdn.microsoft.com/en-us/library/ms187928.aspx

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DatePart of DateTime

```sql
--To get just the date part, from DateTime
SELECT CONVERT(VARCHAR(10),GETDATE(),101) -- Returns 09/02/2012

--In SQL Server 2008, Date datatype is introduced, so you can also use
SELECT CAST(GETDATE() as DATE)    -- 2012-09-02
SELECT CONVERT(DATE, GETDATE())   -- 2012-09-02
```

Note: To control the formatting of the Date part, DateTime has to be converted to NVARCHAR using the styles provided. When converting to DATE data type, the CONVERT() function will ignore the style parameter.

```sql
--Concatenate Id(INT) and Name(NVARCHAR)
Select Id, Name, Name + ' - ' + CAST(Id AS NVARCHAR) AS [Name-Id] FROM tblEmployees
```

Id	Name	Name-Id
1	Sam	Sam - 1
2	Pam	Pam - 2
3	John	John - 3
4	Sara	Sara - 4

Practical Example

Id	Name	Email	RegisteredDate
1	John	j@j.com	2012-08-24 11:04:30.230
2	Sam	s@s.com	2012-08-25 14:04:29.780
3	Todd	t@t.com	2012-08-25 15:04:29.780
4	Mary	m@m.com	2012-08-24 15:04:30.730
5	Sunil	sunil@s.com	2012-08-24 15:05:30.330
6	Mike	mike@m.com	2012-08-26 15:05:30.330

RegistrationDate	TotalRegistrations
2012-08-24	3
2012-08-25	2
2012-08-26	1

```
Select      CAST(RegisteredDate as DATE)as RegistrationDate, COUNT(Id) as TotalRegistrations
from        tblRegistrations
Group BY    CAST(RegisteredDate as DATE)
```

```
Select      RegisteredDate as RegistrationDate, COUNT(Id) as TotalRegistrations
from        tblRegistrations
Group BY    RegisteredDate
```

RegistrationDate	TotalRegistrations
2012-08-24 11:04:30.230	1
2012-08-24 15:04:30.730	1
2012-08-24 15:05:30.330	1
2012-08-25 14:04:29.780	1
2012-08-25 15:04:29.780	1
2012-08-26 15:05:30.330	1

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Difference CAST - CONVERT

1. Cast is based on ANSI standard and Convert is specific to SQL Server. So, if portability is a concern and if you want to use the script with other database applications, use Cast().

2. Convert provides more flexibility than Cast. For example, it's possible to control how you want DateTime datatypes to be converted using styles with convert function.

Note: The general guideline is to use CAST(), unless you want to take advantage of the style functionality in CONVERT().

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Additional Resources

- ## PRAGIM Home Page:

  - http://www.PragimTech.com

- ## Resources:

  - ASP.NET Interview Questions
  - http://www.VenkatASPInterview.Blogspot.com
  - C# Interview Questions
  - http://www.VenkatCSharpInterview.Blogspot.com

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