Both CAST and CONVERT are functions used to convert one data type to another data type. The Microsoft SQL server provides both functions to enable a user to change a data type and convert it to another if needed.

The CAST function is ANSI standard and is compatible to use in other databases while the CONVERT function is a specific function of the SQL server. Since the CAST function is compatible with other databases, it is also described as portable though it has fewer features compared to the CONVERT function. The CONVERT function, meanwhile, can do some things that the CAST function cannot.

There are also differences when it comes to what a function can and cannot do. For example, a CONVERT function can be used for formatting purposes especially for date/time, data type, and money/data type. Meanwhile, CAST is used to remove or reduce format while still converting. Also, CONVERT can stimulate set date format options while CAST cannot do this function.

In terms of syntax, both functions have the optional parameter of length. In the CONVERT function, there is an additional parameter called style which specifies the format of the data type after conversion.

The CAST function is often used to preserve decimal values and places while converting them into integers. The function can also truncate the decimal value if needed. The CONVERT function cannot perform this task.

Source: <http://www.differencebetween.net/technology/software-technology/difference-between-cast-and-convert-2/>

# CONVERT ()

Syntax: CONVERT (data\_type(length), expression, style)

Data\_type and expression are required.

-- mon dd yyyy hh:miAM/PM; Default

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 100) AS "The Trade Date"

FROM StockData

UNION ALL

--mm/dd/yyyy;US

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 101) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy.mm.dd; ANSI

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 102) AS "The Trade Date"

FROM StockData

UNION ALL

--dd/mm/yyyy; British/French

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 103) AS "The Trade Date"

FROM StockData

UNION ALL

--dd.mm.yyyy; German

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 104) AS "The Trade Date"

FROM StockData

UNION ALL

-- dd-mm-yyyy; Italian

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 105) AS "The Trade Date"

FROM StockData

UNION ALL

--dd mon yyyy

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 106) AS "The Trade Date"

FROM StockData

UNION ALL

--Mon dd, yyyy

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 107) AS "The Trade Date"

FROM StockData

UNION ALL

--hh:mm:ss

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 108) AS "The Trade Date"

FROM StockData

UNION ALL

--mon dd yyyy; hh:mi:ss:mmmAM (or PM); Default + millisec

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 109) AS "The Trade Date"

FROM StockData

UNION ALL

--mm-dd-yyyy; USA

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 110) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy/mm/dd; Japan

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 111) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyymmdd; ISO

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 112) AS "The Trade Date"

FROM StockData

UNION ALL

--dd mon yyyy hh:mi:ss:mmm Europe (24 hour clock)>

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 113) AS "The Trade Date"

FROM StockData

UNION ALL

--hh:mi:ss:mmm; 24 hour clock

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 114) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy-mm-dd hh:mi:ss; ODBC canonical (24 hour clock)

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 120) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy-mm-dd hh:mi:ss.mmm; ODBC canonical (24 hour clock)

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 121) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy-mm-dd

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 23) AS "The Trade Date"

FROM StockData

UNION ALL

--hh:mm:ss

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 24) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy-mm-dd hh:mi:ss.mmm

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 25) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy-mm-ddThh:mi:ss.mmm; ISO8601

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 126) AS "The Trade Date"

FROM StockData

UNION ALL

--yyyy-mm-ddThh:mi:ss.mmmZ; ISO8601 (with time zone Z)

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 127) AS "The Trade Date"

FROM StockData

UNION ALL

--dd mon yyyy hh:mi:ss:mmmAM; Hijiri

--In this style, mon represents a multi-token Hijri unicode representation of the full month name.

--This value does not render correctly on a default US installation of SSMS.

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 130) AS "The Trade Date"

FROM StockData

UNION ALL

--dd/mm/yy hh:mi:ss:mmmAM; Hijiri

SELECT TOP 1 CONVERT(VARCHAR, TradeDate, 131) AS "The Trade Date"

FROM StockData

# CAST()

Syntax: CAST(expression AS datatype(length))

SELECT CAST('07/26/1999' AS DATETIME) AS 'The Date';

SELECT CAST('1250.00' AS DECIMAL(10,2)) AS 'A Number';

SELECT CAST(CAST('6/8/1992' AS DATETIME) -

              CAST('10/3/1989' AS  DATETIME) AS INT)