Type conversion is converting one type of data to another type. It is also known as Type Casting. In C#, type casting has two forms −

* **Implicit type conversion** − These conversions are performed by C# in a type-safe manner. For example, are conversions from smaller to larger integral types and conversions from derived classes to base classes.
* **Explicit type conversion** − These conversions are done explicitly by users using the pre-defined functions. Explicit conversions require a cast operator.

The following example shows an explicit type conversion −

[Live Demo](http://tpcg.io/JzfLhC)

using System;

namespace TypeConversionApplication {

class ExplicitConversion {

static void Main(string[] args) {

double d = 5673.74;

int i;

// cast double to int.

i = (int)d;

Console.WriteLine(i);

Console.ReadKey();

}

}

}

When the above code is compiled and executed, it produces the following result −

5673

C# Type Conversion Methods

C# provides the following built-in type conversion methods −

|  |  |
| --- | --- |
| **Sr.No.** | **Methods & Description** |
| 1 | **ToBoolean**  Converts a type to a Boolean value, where possible. |
| 2 | **ToByte**  Converts a type to a byte. |
| 3 | **ToChar**  Converts a type to a single Unicode character, where possible. |
| 4 | **ToDateTime**  Converts a type (integer or string type) to date-time structures. |
| 5 | **ToDecimal**  Converts a floating point or integer type to a decimal type. |
| 6 | **ToDouble**  Converts a type to a double type. |
| 7 | **ToInt16**  Converts a type to a 16-bit integer. |
| 8 | **ToInt32**  Converts a type to a 32-bit integer. |
| 9 | **ToInt64**  Converts a type to a 64-bit integer. |
| 10 | **ToSbyte**  Converts a type to a signed byte type. |
| 11 | **ToSingle**  Converts a type to a small floating point number. |
| 12 | **ToString**  Converts a type to a string. |
| 13 | **ToType**  Converts a type to a specified type. |
| 14 | **ToUInt16**  Converts a type to an unsigned int type. |
| 15 | **ToUInt32**  Converts a type to an unsigned long type. |
| 16 | **ToUInt64**  Converts a type to an unsigned big integer. |

The following example converts various value types to string type −

using System;

namespace TypeConversionApplication {

class StringConversion {

static void Main(string[] args) {

int i = 75;

float f = 53.005f;

double d = 2345.7652;

bool b = true;

Console.WriteLine(i.ToString());

Console.WriteLine(f.ToString());

Console.WriteLine(d.ToString());

Console.WriteLine(b.ToString());

Console.ReadKey();

}

}

}

When the above code is compiled and executed, it produces the following result −

75

53.005

2345.7652

True