



Data Type Conversion Documentation

# C# Data Type Conversion



```
string id = "6500";  
int emplId = Convert.ToInt32(id);
```

# C# Implicit Numeric Conversions Table

From	To
sbyte	short, int, long, float, double, or decimal
byte	short, ushort, int, uint, long, ulong, float, double, or decimal
char	ushort, int, uint, long, ulong, float, double, or decimal
short	int, long, float, double, or decimal
ushort	int, uint, long, ulong, float, double, or decimal
int	long, float, double, or decimal
uint	long, ulong, float, double, or decimal
long	float, double, or decimal
ulong	float, double, or decimal
float	double

# C# Explicit Numeric Conversions Table

From	To
sbyte	byte, ushort, uint, ulong, or char
byte	sbyte or char
short	sbyte, byte, ushort, uint, ulong, or char
ushort	sbyte, byte, short, or char
int	sbyte, byte, short, ushort, uint, ulong, or char
uint	sbyte, byte, short, ushort, int, or char
long	sbyte, byte, short, ushort, int, uint, ulong, or char
ulong	sbyte, byte, short, ushort, int, uint, long, or char
char	sbyte, byte, or short
float	sbyte, byte, short, ushort, int, uint, long, ulong, char, or decimal
double	sbyte, byte, short, ushort, int, uint, long, ulong, char, float, or decimal
decimal	sbyte, byte, short, ushort, int, uint, long, ulong, char, float, or double

```
Program.cs*  X
EmployeeApplication  EmployeeApplication.Program
Main(string[] args)

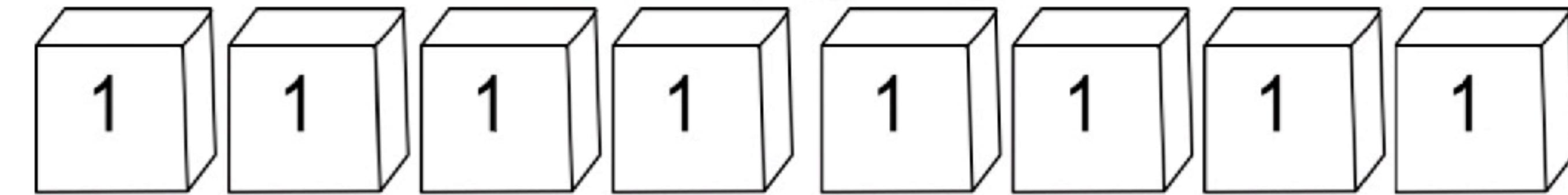
18     employeeId = Convert.ToInt32(Console.ReadLine());
19
20     Console.WriteLine("Please enter the employee's first name");
21
22     firstName = Console.ReadLine();
23
24     Console.WriteLine("Please enter the employee's last name");
25
26     lastName = Console.ReadLine();
27
28     Console.WriteLine("Please enter the employee's annual salary");
29
30     annualSalary = Convert.ToDecimal(Console.ReadLine());
31
32     Console.WriteLine("Please enter the employee's gender ('f' = female, 'm' = male)");
33
34     gender = Convert.ToChar(Console.ReadLine());
35
36     Console.WriteLine("The employee is a manager (true/false)");
37
38     isManager = Convert.ToBoolean(Console.ReadLine());
39
40
41 }
42 }
43 }
```

# Conversion of Short Data Type Value, 256, to Byte Data Type

Overflow

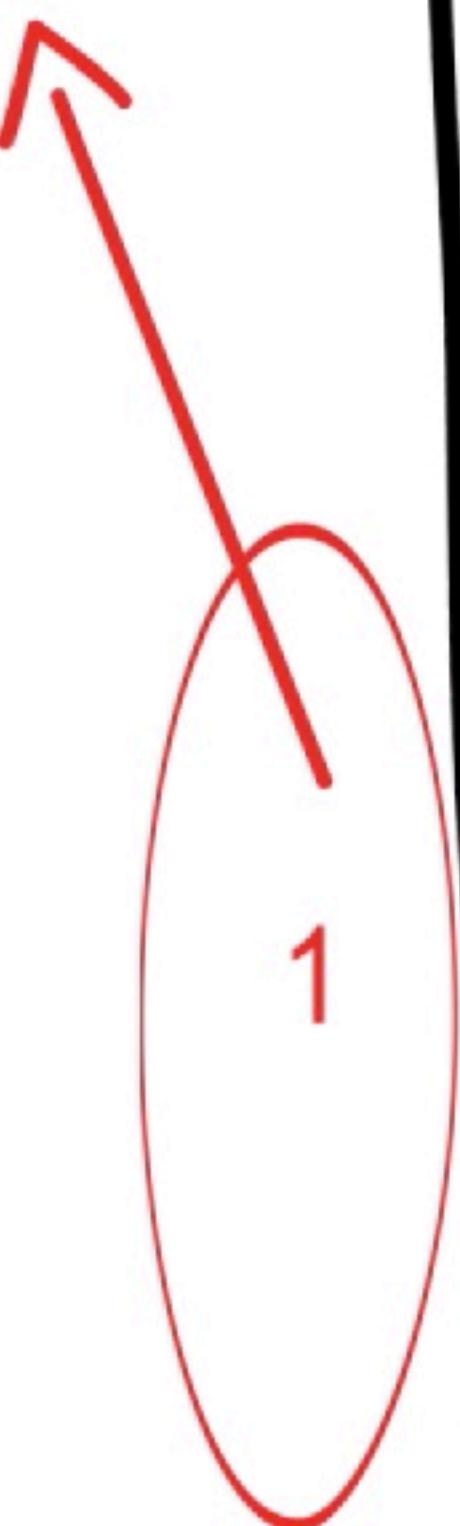
Byte

255



256

0 0 0 0 0 0 0 0



# Summary

- We have discussed what it means when we say that C# code is statically typed at compile time.
- We have discussed and provided an example of how certain numeric values can be implicitly converted to certain other data types.
- We have discussed how this is not possible in certain other cases and that explicit casting must be implemented to achieve the appropriate conversion operations. We also demonstrated an example of this.
- We demonstrated how a loss of data can occur when certain explicit conversion operations are implemented.
- We demonstrated how to implement a user defined data conversion operation both implicitly and explicitly.





gli

Digital