

# Type Casting

## Data Type size

1 byte = 8 bits

|         |                       |
|---------|-----------------------|
| byte    | 1 byte                |
| short   | 2 bytes               |
| Int     | 4 bytes               |
| long    | 8 bytes               |
| float   | 4 bytes               |
| double  | 8 bytes               |
| decimal | 16 bytes              |
| bool    | 1 bit                 |
| char    | 2 bytes               |
| string  | 2 bytes per character |

## Type Casting

**Implicit Casting:** converting a smaller type to a larger type

**Explicit Casting:** converting a larger type to a smaller type, there might be data loss during explicit casting

## String Parsing

String to Int - `int.Parse(<string>);` or `Convert.ToInt32(<string>);`

String to Float - `float.Parse(<string>);` or `Convert.ToSingle(<string>);`

## String TryParse

String to Int - `int.TryParse(<string>, out int a);`

String to Float - `float.TryParse(<string>, out float f);`

## Any type to String

Int to String - <string> + <int> or <int>.ToString();

Float to String - <string> + <float> or <float>.ToString();