

Typecast

an introduction

“type conversion, typecasting, and coercion are different ways of, implicitly or explicitly, changing an entity of one data type into another”

https://en.wikipedia.org/wiki/Type_conversion

What?

Types

Let's assume we have two different types for integers (many languages do):

byte -128 through +127

int -2,147,483,648 through +2,147,483,647

Types

```
byte myAge = 13;  
int yourAge ;  
yourAge = myAge;
```

Uh oh, different types. Remember that we like to be warned about these things (think `int nr = "LFC"`).

Types

```
byte myAge = 13;  
int yourAge ;  
yourAge = myAge;
```

But byte and int are quite similar. So wouldn't it be ok?

Types

Any value of a byte would be possible to store in an int..... since

byte -128 through +127

int -2,147,483,648 through +2,147,483,647

So ***yourAge = myAge*** will work

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If it is ok, the system (compiler) allows this. This is called typecast or type conversion.

In this case it is automatically done - implicit typecast.

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How about

```
int yourAge = 13 ;
```

```
byte myAge;
```

```
myAge = yourAge ; ←note the different order
```

Types

```
int yourAge = 13 ;  
byte myAge;  
myAge = yourAge
```

But byte and int are quite similar. So wouldn't it be ok?

Types

Any value of a int would **NOT** be possible to store in an byte..... since

byte -128 through +127

int -2,147,483,648 through +2,147,483,647

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We can force it, sort of like... “please please, make it work”

myAge = “please please” yourAge

Not likely syntax...

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We can force it, sort of like... “please please, make it work”

myAge = (byte) yourAge

variable = (wanted type) variable

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We can force it, sort of like... “please please, make it work”

myAge = (byte) yourAge

.... but we're on our own. Things may not work.

Something to ponder upon

```
byte nrCars;
```

```
nrCars = 127; ← works
```

```
nrCars = 128; ← problematic
```