Datatypes

Notes

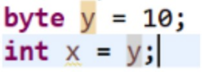
* if we try to store the data beyond the range of datatype we would get an error : incompatible types : possible lossy conversion

Type Casting

Converting from one datatype to another datatype is known as type casting

2 types ⟶ 1. implicit
2. explicit

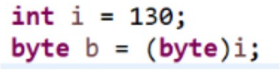
Implicit Type Casting: Converting from lower data type to higher data type is called as implicit type casting



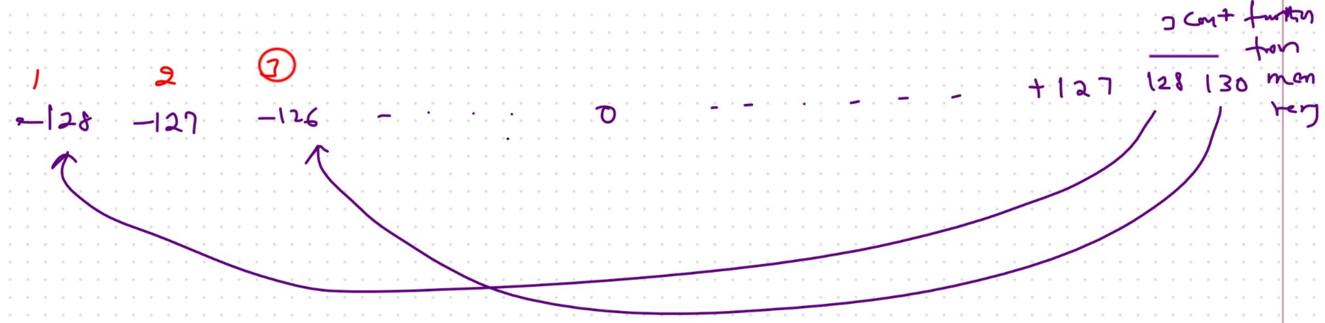
```
byte y = 10;
int x = y;
```

This process is done by Jvm on its own

Explicit Type Casting: Converting from higher data type to lower data type



```
int i = 130;
byte b = (byte)i;
```



Type Conversion Chart

base -2

e: 100

IEEE

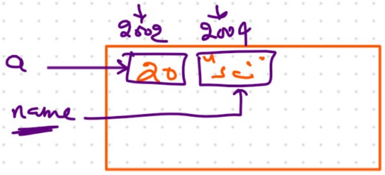
datatype	byte	short	int	long	float	double
no. of bytes	1byte	2bytes	4bytes	8bytes	4bytes	8 bytes
default value	0	0	0	0	0.0	0.0

⟵ explicit/Narrowing

⟶ implicit/Widening

Narrowing
Widening

Variable : Giving name to the memory location



Allowed characters :		Valid
	A–Z	abc ✓
	a–z	52c9 ×
	0–9	_ ×
Special Characters {	_ $	$ ✓

_abc ✓

Identifiers (Rules)

(1) Above Characters can be used as identifiers

(2) we can't start any identifier with a numeric value

(3) we can't use any special character apart from "$, _"

(4) keywords can't be used as identifiers

↳ these are reserved words which does specific operations

32 keywords in java

Literals : The value given to the variables

→ incase of floating point value we have suffix 'f' to the value

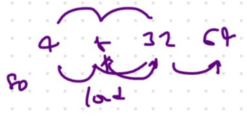
float y = 15.7f → float y = (float) 15.7

default decimal

if we don't use suffix 'f' it is considered as double
8b

script [JS, python]

→ Incase of long → we have suffix 'l' (1) int



long l = 2147483647(l)

if we don't use suffix 'l' it is considered as integer value