Lec 22 16 Feb 2022

TYPE	DESCRIPTION	DEFAULT	SIZE	EXAMPLE LITERALS	RANGE OF VALUES
boolean	true or false	false	1 bit	true, false	true, false
byte	twos complement integer	0	8 bits	(none)	-128 to 127
char	unicode character	\u0000	16 bits	'a', '\u0041', '\101', '\\', '\'','\n',' β'	character representation of ASCII values 0 to 255
short	twos complement integer	0	16 bits	(none)	-32,768 to 32,767
int	twos complement integer	0	32 bits	-2, -1, 0, 1, 2	-2,147,483,648 to 2,147,483,647
long	twos complement integer	0	64 bits	-2L, -1L, 0L, 1L, 2L	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807
float	IEEE 754 floating point	0.0	32 bits	1.23e100f, -1.23e-100f, .3f, 3.14F	upto 7 decimal digits
double	IEEE 754 floating point	0.0	64 bits	1.23456e300d, -1.23456e-300d, 1e1d	upto 16 decimal digits

Typecasting: It is converting one datatype to another.

① If 2 types are compatible, Java will perform conversion automatically.

int ⟶ long

② However, not all types are compatible

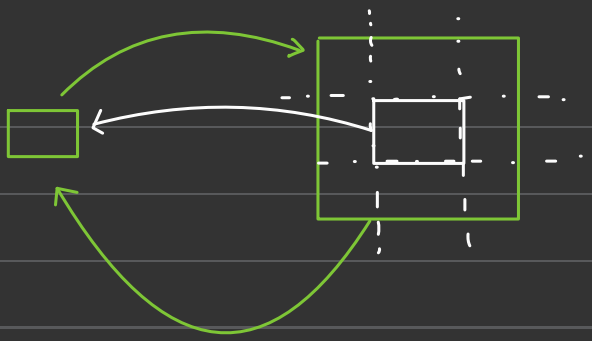
double → byte.

But it can be made possible by typecasting.

Typecasting is possible if foll. 2 conditions are met:

① Two types are compatible.

② Destination > Source



12 → 12.0
int → double

12.34716 → 12
double → int

'D' → (error)
char → double

Homework : (Do it in Java program, refer my code)

1. int → float
2. int → double
3. int → long
4. int → byte
5. int to char
6. char to int
7. double to int
8. double to float
9. double to byte