

OOP JAVA

Data Types. Arrays

Data Types

Primitive Types

boolean

byte, short, int, long

float, double

char

Reference Types

classes (enums)

interfaces (annotations)

arrays

Null type

the type of the expression **null** which has no name

Primitive Types

boolean (true/false)

Integer numbers

byte (1) -128..127

short (2) $-2^{15}..2^{15} - 1$

int (4) $-2^{31}..2^{31} - 1$

long (8) $-2^{63}..2^{63} - 1$

Unsigned integer

char (2) $[0..2^{16} - 1]$

Decimal numbers

float (4)

double (8)

Reference Types

classes

interfaces

arrays

The null reference
can always be assigned or cast to any reference type

Literals

- boolean
- int
- long
- float
- double
- char
- String
- Null-type (null)



Boolean Literals

- false
- true

int literals

base 10

0 1 1_000 1_000_000_000

base 16

0x12 0X12 0xAB_CD_EF_FF

base 2

0b101 0B101

base 8

00 01 02 0377

long literals

base 10

0L 1L 2_000_000_000_000 L

base 16

0xFFL 0xFFFF_FFFF_FFFF_FFFFL

base 2

0b101L 0B101L

base 8

00L 0377L

double literals

base 10

12.34	123.	.123	123D	123d
123E3D	1e2	1E-2	12.34e-5D	

base 16

0x12P3	0X12.3p4
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float literals

base 10

12.34F 123.f .123f 123F 123f
123E2F 1e2F 1E-2f 12.34e-5F

base 16

0x12P3F 0X12.3p4f 0x1p2f

char literals

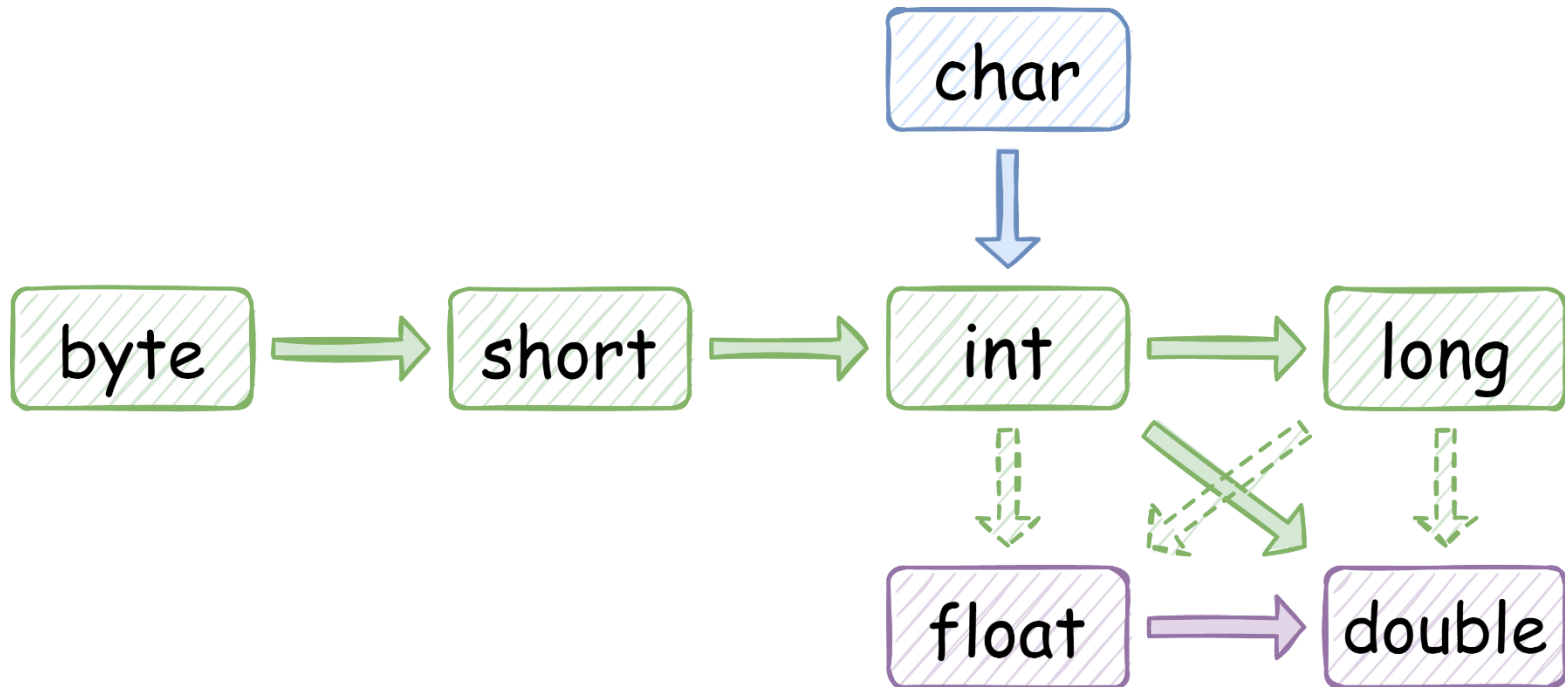
'a' 'b' 'i' 'e'

'\u0061' '\u0430'

'\n' '\r' '\t'

'\12' '\377'

Primitive Type Conversion



Data types



Links:

- [The Java Tutorials: Primitive Data Types](#)
- [Java Language Specification: Types, Values, and Variables](#)

Arrays

One-dimensional

Anonymous array

Constant array

Multidimensional

Arrays.
Clone Method

one-dimensional
array

multidimensional
array

Клас
java.util.Arrays

Метод
Arrays.toString

Метод
Arrays.deepToString

Arrays



Links:

- [The Java Tutorials: Arrays](#)
- [Java Language Specification: Arrays](#)