

Java Primitive Data Types

Type	Used to store	Default	Range	Size
boolean	true and false	false	true or false	1 bit
char	Unicode character	\u0000	Unicode (not ASCII)	16 bits
byte	signed integers	0	-128 to 127	8 bits
short	signed integers	0	-32,768 to 32,767	16 bits
int	signed integers	0	-2,147,483,648 to 2,147,483,647	32 bits
long	signed integers	0	-9,223,372,036,854,775,808 to +9,223,372,036,854,775,807	64 bits
float	floating point	0.0	1.40129846432481707e-45 to 3.40282346638528860e+38 (positive or negative)	32 bits
double	floating point	0.0	4.94065645841246544e-324d to 1.79769313486231570e+308d (positive or negative).	64 bits

Notes:

- Strings are an *object type*, an instance of the class `java.lang.String`. They are not null terminated and are not the same as an array of chars.
- Arrays are also objects. Multidimensional arrays are created via arrays of arrays.
- Ideally, every type in Java would be a class and inherit Java's base class - called Object - from which all Java classes are derived. However, the overhead to do that for basic numeric types - integer, float, etc. - would slow the processing significantly.

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