

“UNIVERSIDAD DE LA FUERZAS ARMADAS – ESPE”

OBJECT-ORIENTED PROGRAMMING



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Race: Software

Theme: Primitive data limits

Definition of primitive data type

The primitive type or elementary type is called the original data types of a programming language, that is, those that the language provides us and with which we can build abstract data types and data structures.

¿What is a primitive data in Java?

java defines the data type of the variable when defining it. That is why all variables will have a data type assigned.

The Java language is based on a series of primitive data types.

- byte
- short
- int
- long
- float
- double
- boolean
- char

byte	-128, 127, 8 bits
short	-32768, 32767, 16 bits
int	-2^{31} , $2^{31}-1$, 32 bits
long	-2^{63} , $2^{63}-1$, 64 bits
float	Coma, 32 bits
double	Coma, 64 bits
boolean	True or false, 1 bit
char	Character of 16 bits

VARIABLES DE TIPOS PRIMITIVOS.					
Nombre	Tipo	Tamaño	Valor por defecto	Forma de inicializar	Rango
Boolean	Lógico	1 bit	False	Boolean a=true	True-false
Char	Carácter	16 bits	Null	Char a='Z'	Unicode
Byte	Numero entero	8 bits	0	Byte a =0	-128 a 127
Short	Numero entero	16 bits	0	Short a =12	-32.768 a 32.767
Int	Numero entero	32 bit	0	Int a= 1250	-2.147.483.648 a 2.147.483.649
Long	Numero entero	64 bits	0	Long a= 125000	$-9*10^{18}$ a $9*10^{18}$
Float	Numero real	32 bits	0	Float a =3.1	$-3,4*10^{38}$ a $3,4*10^{38}$
Double	Numero real	64 bits	0	Double a = 125.2333	$-1,79*10^{308}$ a $1,79*10^{308}$

¿What is a primitive data in Python?

In Python we can find different types of data with different characteristics and classifications.

The basic Python data types are Boolean, numeric (integer, floating point, and complex), and character strings.

- Sequences: The list, tuple and range types
- Maps: The dict type
- Sets: The set type
- Iterators
- Lessons
- Instances
- Exceptions

Tipos de Datos	Memoria que ocupa	Rango de valores
boolean	1 byte	0 o 1 (True o False)
byte / unsigned char	1 byte	0 – 255
char	1 byte	-128 – 127
int	2 bytes	-32.768 – 32.767
word / unsigned int	2 bytes	0 – 65.535
long	2 bytes	-2.147.483.648 – 2.147.483.647
unsigned long	4 bytes	0 – 4.294.967.295
float / double	4 bytes	-3,4028235E+38 - 3,4028235E+38
string	1 byte + x	Array de caracteres
array	1 byte + x	Colección de variables

Bibliography:

<https://j2logo.com/python/tutorial/tipos-de-datos-basicos-de-python/>

<http://www.manualweb.net/java/tipos-datos-primitivos-java/>

http://dis.um.es/~lopezquesada/documentos/IES_1213/IAW/curso/UT3/ActividadesAlumnos/8/index.html#:~:text=primitivas%20en%20Aprenderaprogramar-,Datos%20primitivos,que%20no%20necesitan%20ser%20declarados.