

Primitives Data types

Group	Type	Size	Minimum value	Maximum value
Integer	byte	1 Byte	-128	127
	short	2 Bytes	-32768	32767
	int	4 Bytes	-2147483648	2147483647
	long	8 Bytes	- 9223372036854775 808	9223372036854775807
Floating	float	4 Bytes	1.4 E-45	3.402,823,5 E+38
	double	8 Bytes	4.9 E-324	1.7976931348623157 E+308
Others	char	2 Bytes	0	65535
	boolean	1 Bit	true or false	

String to store group of characters.

Examples:

int: 12 , -324, 1234, 0

double: .34, -12.3, 12345.0, 0.0, 12576.5

boolean: true or false.

Do not use capitals, for example : True, TRUE, False.

Char:

'a', 'A', '+', '.', ' ', '2', '4'

each character has an integer code called ASCII code.

For example:

char	
'A'	65
'B'	66
'a'	97
' '	32
'0'	48
'+'	43
'>	62

Small character = capitol character + 32,

for example 'A' = 65,

'a' = 'A' + 32 ,

'a' = 65 + 32 = 97

usually the char is stored as an integer in the memory, you can do all operation (it is not recommended).

String:

```
"Programming"  
"Java",  
"First program"  
"12345"  
"Sami Ahmed"  
"AAAA"  
"+-()"  
"A"
```

```
String s = "Salam" + " Ali" ⇒ "Salam Ali"
```

```
String s = "Salam";  
s += " Ali" ⇒ "Salam Ali"
```

You can use only + and =.

```
String s = "A"; ✓ The string will contain only 1 character  
char s = "A"; ✗ You can't store String in one char.  
String s = 'A'; ✗ Error, you can't cast from char to String
```

```
String s = "123";  
int x = Integer.parseInt(s);
```

To transfer String to int you use parseInt, you must have correct integer otherwise you will get run-time error.

If you want to transfer to double you do :

```
Double.parseDouble(t);
```

and the same for other numerical numbers.

```
int x = 123;  
String t = String.valueOf(x);
```

To transfer int to String you use String.valueOf(x), you can use this method with the 8 primitive data types.

Note: You should put the string in double quotation " ".

```
String t = "Salam"; ✓
```

```
String t = Salam; ✗ it will look for variable called Salam
```