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| **基本** | **C** | | | | | | **Java** | | | | | | |
| **常量** | #difine PI=3.14 | | | | | | final int a=3; | | | | | | |
| **变量** | **数据类型(位数)** | | **例子** | | | **数据范围(默认值)** | **数据类型(位数)** | **例子** | | | | **数据范围(默认值)** | |
| 基本整型 | | int a=3; | | |  | byte型(8) | int a=3; | | | | -128~127(0) | |
| 短整型 | | short (int) a=3; | | |  | short型(16) | short a=1000; | | | | -32768~32767(0) | |
| 长整型 | | long (int) a=3; | | |  | int型(32) | int a=100000; | | | | -231~231-1(0) | |
| 单精度浮点型 | | float a=12.34334; | | |  | long型(64) | long a=100000L; | | | | -263~263-1(0L) | |
| 双精度浮点型 | | double a=12.33453; | | |  | float型(32) | float f=123.54f; | | | | (0.0f) | |
| 长双精度浮点型 | | long double a=1.23; | | |  | double型(64) | double d=123.44; | | | | (0.0d) | |
| **字符／串** | char c=‘a’; | | | String s=“I love you”; | | | char c=‘a’; | | | String s=“I love you”; | | | |
| **逻辑运算符**  **位运算符** | 与 && | 位与 & | | | 取反 ～ | | 与 && | | 位与 & | | 取反 ～ | | |
| 或 || | 位或 | | | | 右移 >> | | 或 || | | 位或 | | | 按位右移补零 >>> | | |
| 非 ! | 异或 ^ | | | 左移 << | | 非 ！ | | 异或 ^ | | 右移 >> | | 左移 << |
| **数组** | 一维数组 | | int a[]={1,2,3}; | | | | 一维数组 | int[] a=new int[]{1,2,3}; | | | | | |
| 二维数组 | | Int a[2][2]={{1,2},{3,4}}; | | | | 二维数组 | int[][] a=new int[][]{{1,2},{3,4}}; | | | | | |
| 指针数组 | | int \*p; int a[5]; p=a; | | | | foreach循环 | for(int ele: a){ println(ele) }; | | | | | |
| **if语句** | if(\*\*\*){ …… }else{ …… } | | | | | | if(\*\*\*){……}else{……} | | | | | | |
| **for循环** | for(int i=0;i<5;i++){……} | | | | | | for(int i=0;i<5;i++){……} | | | | | | |
| **While循环** | while(\*\*\*){……} | | | | | | while(\*\*\*){……} | | | | | | |
| **函数定义** | 返回值类型 函数名(形参){……} | | | | | | 访问修饰符 (static) 返回值 函数名(形参){……} | | | | | | |
| **输入输出** | printf(“内容”); & scanf(); | | | | | | System.out.println(““); & Input stream | | | | | | |

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| **基本** | **Kotlin** | | | | | | | **Python** | | | |
| **常量** | val a=3 | | | | | | | PI=3.1415 | | | |
| **变量** | **数据类型(位数)** | | **例子** | | | | **数据范围(默认值)** | **在Python中，等号=是赋值语句，可以把任意数据类型赋值给变量，同一个变量可以反复赋值，而且可以是不同类型的变量** | | | |
| Byte(8) | | var a: Byte = 12 | | | |  |
| Short(16) | | var a: Short = 12 | | | |  |
| Int(32) | | var a: Int = 12 | | | |  |
| Long(64) | | var a: Long = 12234 | | | |  |
| Float(32) | | var a: Float = 1223F | | | |  |
| Double(64) | | var a: Double = 1.34 | | | |  |
| **字符／串** | var / val c=‘a’ | | | var / val s=“ I love you” | | | | c=‘a’ | | | s=“ I love you” |
| **位操作符** | 与 && | 与 and(bits) | | 取反 inv() | | | | 与 and | | | |
| 或 || | 或 or(bits) | | 右移 shr(bits) | | 左移 shl(bits) | | 或 or | | | |
| 非 ！ | 异或 xor(bits) | | 无符号右移 ushr(bits) | | | | 非 not | | | |
| **数组** | var a = arrayof(1,2,3) | | | | | | | list列表(rw) | | Num = [‘one’，‘two’，‘three’] | |
| Var a: IntArray = intArrayof(1,2,3) | | | | | | | tuple元组(r) | | Num = (‘one’，‘two’，‘three’) | |
| **集合** | r | Val readonly:ListOf<Int>=listOf(1,2,3) | | | | | | dict字典 | D = {‘a’：23，‘b’：34，‘c’：89} | | |
| rw | Val rw:MutableList<Int>=mutableListOf(1,2,3) | | | | | | set(过滤重复) | s = ([1,2,2]) -🡪{1,2} | | |
| **区间** | 1..10 | | | | 40 downTo 1 step 1 | | |  | | | |
| **if语句** | if(\*\*\*){……}else{……} | | | | | | | if \*\*: else: \*\* | | | |
| **for循环** | for(a in b){……} | | | | | | | for name in names: …… | | | |
| **While循环** | while(\*\*\*){……} | | | | | | | while \*\*\*: …… | | | |
| **函数定义** | fun 函数名(形参):返回值类型{……} | | | | | | | def 函数名(形参): …… | | | |
| **输入输出** | println(“内容”) | | | | | | | print(‘内容’) && name = input() | | | |
| **基本** | **Swift** | | | | | | |
| **常量** | val a=3 | | | | | | |
| **变量** | **数据类型(位数)** | | **例子** | | | | **数据范围(默认值)** |
| Byte(8) | | var a: Byte = 12 | | | |  |
| Short(16) | | var a: Short = 12 | | | |  |
| Int(32) | | var a: Int = 12 | | | |  |
| Long(64) | | var a: Long = 12234 | | | |  |
| Float(32) | | var a: Float = 1223F | | | |  |
| Double(64) | | var a: Double = 1.34 | | | |  |
| **字符／串** | var / val c=‘a’ | | | var / val s=“ I love you” | | | |
| **位操作符** | 与 && | 与 and(bits) | | 取反 inv() | | | |
| 或 || | 或 or(bits) | | 右移 shr(bits) | | 左移 shl(bits) | |
| 非 ！ | 异或 xor(bits) | | 无符号右移 ushr(bits) | | | |
| **数组** | var a = arrayof(1,2,3) | | | | | | |
| Var a: IntArray = intArrayof(1,2,3) | | | | | | |
| **集合** | r | Val readonly:ListOf<Int>=listOf(1,2,3) | | | | | |
| rw | Val rw:MutableList<Int>=mutableListOf(1,2,3) | | | | | |
| **区间** | 1..10 | | | | 40 downTo 1 step 1 | | |
| **if语句** | if(\*\*\*){……}else{……} | | | | | | |
| **for循环** | for(a in b){……} | | | | | | |
| **While循环** | while(\*\*\*){……} | | | | | | |
| **函数定义** | fun 函数名(形参):返回值类型{……} | | | | | | |
| **输入输出** | println(“内容”) | | | | | | |