

Funciones

Un repaso a cuestiones ya conocidas y algunas otras nuevas.

Sintaxis

```
def <<nombre>> (<<parámetros>>):    <<cuerpo de la función>>
```

```
In [1]: def cubo(n):  
        return n**3
```

```
In [2]: cubo(5), cubo(5*6/2)
```

```
Out[2]: 125
```

```
In [7]: def saludo (nombre, mensaje):  
        print "hola "+nombre+", "+mensaje
```

```
In [8]: saludo("juanita","buenos días")  
  
        hola juanita, buenos días
```

Parámetros de entrada

```
In [9]: def f(p1,p2,p3,p4,p5):  
        return p1, p2, p3, p4, p5
```

```
In [10]: f(1,2,3,4,5)
```

```
Out[10]: (1, 2, 3, 4, 5)
```

```
In [11]: f([1,2,3],"hola",(3,2),41.5,False)
```

```
Out[11]: ([1, 2, 3], 'hola', (3, 2), 41.5, False)
```

```
In [13]: x = 3  
        y = 2.6  
        l = [x,y,23]  
        b = x < 5  
        f(x,y,l,b,x*3)
```

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```
div = div + 1
```

```
return n == div
```

In [15]: primo (11)

Out[15]: True

In [17]: div

```
-----  
NameError                                Traceback (most recent call last)  
/home/carlos/docencia/curso13-14/inf/sesiones/<ipython-input-17-6a0defb53645> in <modu  
le>()  
----> 1 div
```

NameError: name 'div' is not defined

In [18]: f (1,2,3,4,cubo(x))

Out[18]: (1, 2, 3, 4, 27)

Funciones como parámetros

In [19]: f (1,2,l,x,cubo)

Out[19]: (1, 2, [3, 2.6, 23], 3, <function __main__.cubo>)

In [22]: type(x), type(l), type(cubo)

Out[22]: (int, list, function)

In [23]: **def** meta (f,n):
 return f(n)

In [28]: meta(cubo,3)

Out[28]: 27

In [25]: meta(primo,19)

Out[25]: True

In [26]: meta(abs, -13)

Out[26]: 13

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The logo for 'Cartagena99' features the text 'Cartagena99' in a stylized, blue, serif font. The '99' is significantly larger and more prominent than the 'Cartagena' part. The text is set against a background of a light blue starburst or explosion shape, with a yellow and orange gradient bar at the bottom.

```
In [29]: def filtro (propiedad,l):  
        si = []  
        no = []  
        for x in l:  
            if propiedad(x) :  
                si += [x] # si = si + [x]  
            else:  
                no += [x]  
        return si,no
```

```
In [35]: l = range(2,20)
```

```
In [36]: filtro(primo,l)
```

```
Out[36]: ([2, 3, 5, 7, 11, 13, 17, 19], [4, 6, 8, 9, 10, 12, 14, 15, 16, 18])
```

Parámetros de salida

```
In [40]: def foo (n):  
        if n < 0:  
            return True  
        elif n > 0:  
            return (n,0)  
        else:  
            return abs
```

```
In [41]: foo(-1), foo(1), foo(0)
```

```
Out[41]: (True, (1, 0), <function abs>)
```

```
In [42]: foo(0)(-34134)
```

```
Out[42]: 34134
```

The logo for Cartagena99 features the text 'Cartagena99' in a stylized, blue, serif font. The '99' is significantly larger and more prominent than the rest of the text. The logo is set against a light blue background with a white starburst effect behind the text.

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