
Condicionales

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1 Un condicional simple

```
In [1]: def abs(x):  
        """  
        returns the absolute value of x  
        @type x:int  
        @rtype: int  
        """  
        if x<0:  
            x=-x  
        return x  
  
abs(10)  
In [2]: 10  
Out [2]: abs(-10)  
In [3]: 10  
Out [3]:
```

2 Consideramos la negación

```
In [4]: def abs(x):  
        """  
        returns the absolute value of x  
        @type x:int  
        @rtype: int  
        """  
        if x<0:  
            return -x  
        else:  
            return x
```

3 Podemos anidar condicionales

```
In [5]: def degree(a,b,c):  
        """  
        returns the degree of the polynomial a*x^2+b*x+c  
        @type a,b,c:float  
        @rtype :int  
        """  
        if a==0:  
            if b==0:  
                result=0  
            else:
```

```

        result=1
    else:
        result=2
    return result
degree(2,3,4),degree(0,1,2),degree(1,0,0),degree(0,0,1)

```

In [6]: (2, 1, 2, 0)

Out [6]:

4 Elecciones múltiples

```

def grade(note):
    """converts the numerical grade to the Spanish word
    @type note:float
    @rtype :str
    @precondition : note>=0 and note <=10
    """
    if note<5:
        return "Suspenso"
    elif note<7:
        return "Aprobado"
    elif note<9:
        return "Notable"
    else:
        return "Sobresaliente"

```

```

grade(10),grade(1.23),grade(3.45),grade(4.999),grade(7),grade(5)

```

In [9]: ('Sobresaliente', 'Suspenso', 'Suspenso', 'Suspenso', 'Notable',

Out [9]: 'Aprobado')

5 Otro ejemplo más complicado

Completa la siguiente definición de función

```

def solve_linear_system(a,b,c,d,e,f):
    """
    solves the linear system of equations:
        a*x+b*y=e
        c*x+d*y=f
    @type a,b,c,d,e,f:float
    @rtype :(float,float)
    @precondition: a*d-b*c!=0
    """
    .....

```