
Institución
Universitaria
Reacreditada en Alta Calidad
Introducción a Python
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Contenido

1. Instalación.
2. Aspecto del lenguaje Python: Palabras reservadas, ejecución en secuencia, condicionales, repetición.

Instalación

1. Sin instalar: **Google-colab**, REPLIT, Microsoft Azure, Linux.
2. Versión básica para Windows: (3.10.6) https://www.python.org/downloads/
3. Versión mas completa: https://www.anaconda.com/

```
name = input('Enter file:')
handle = open(name)

counts = dict()
for line in handle:
    words = line.split()
    for word in words:
        counts[word] = counts.get(word,0) + 1

bigcount = None
bigword = None
for word,count in counts.items():
    if bigcount is None or count > bigcount:
        bigword = word
        bigcount = count

print(bigword, bigcount)
```

Code: http://www.py4e.com/code3/words.py

A short “story” about how to count words in a file in Python

```
python words.py
Enter file: words.txt
to 16
```

2. Palabras reservadas

No se pueden emplear para nombres de variables e iedntificadores.

```
False      class      return     is         finally
None       if         for        lambda     continue
True       def        from       while      nonlocal
and        del        global     not        with
as         elif       try        or         yield
assert     else       import     pass
break      except     in         raise
```

2. Sentencias o líneas

```
x = 2
x = x + 2
print(x)
```

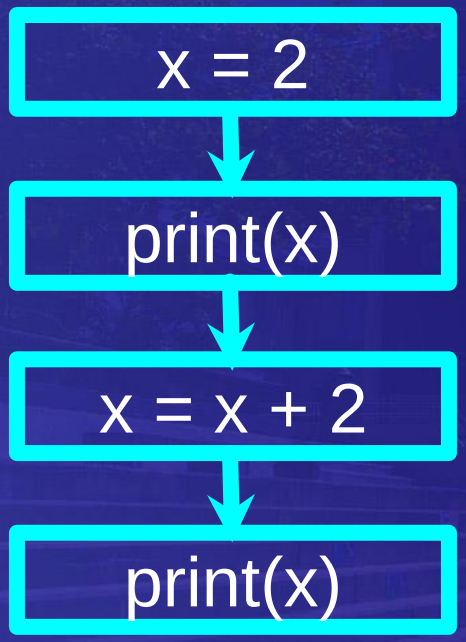
Assignment statement

Assignment with expression

Print statement

Variable Operator Constant Function

Pasos Secuenciales



Program:

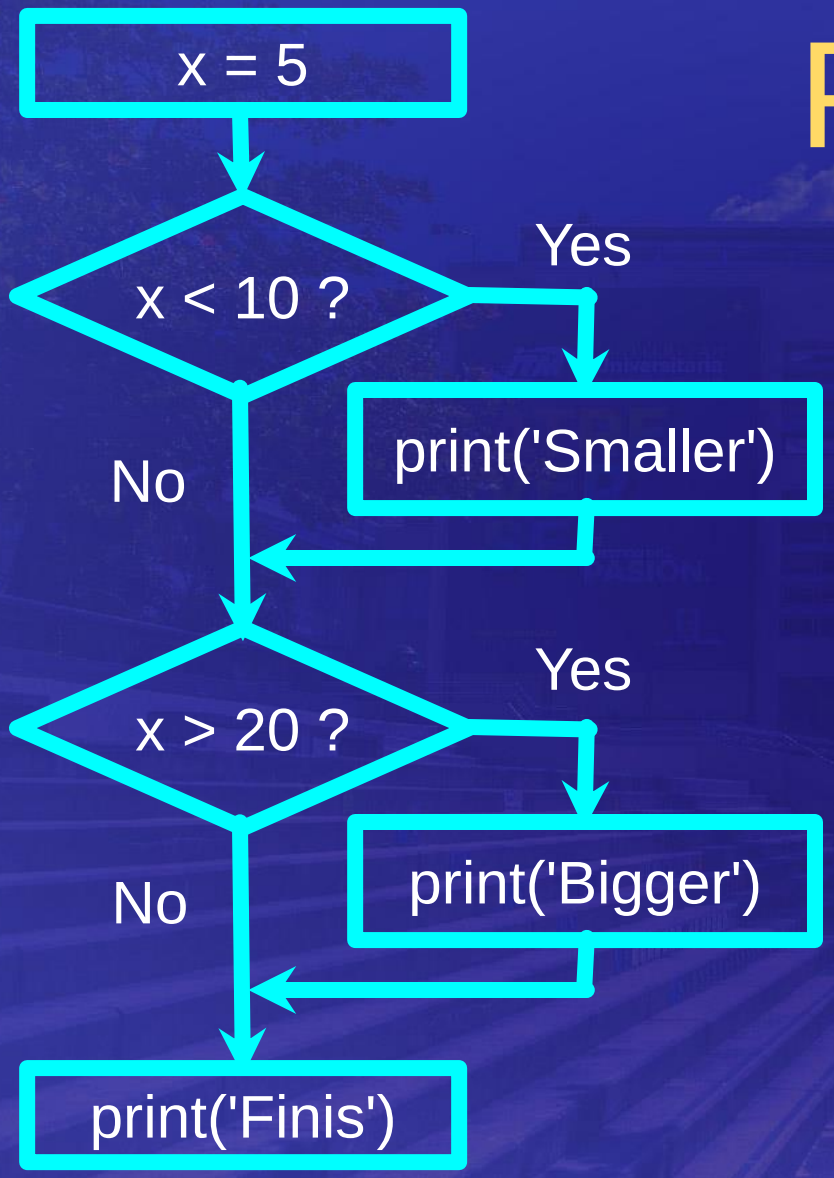
```
x = 2
print(x)
x = x + 2
print(x)
```

Output:

```
2
4
```

When a program is running, it flows from one step to the next. As programmers, we set up “paths” for the program to follow.

Pasos Condicionales



Program:

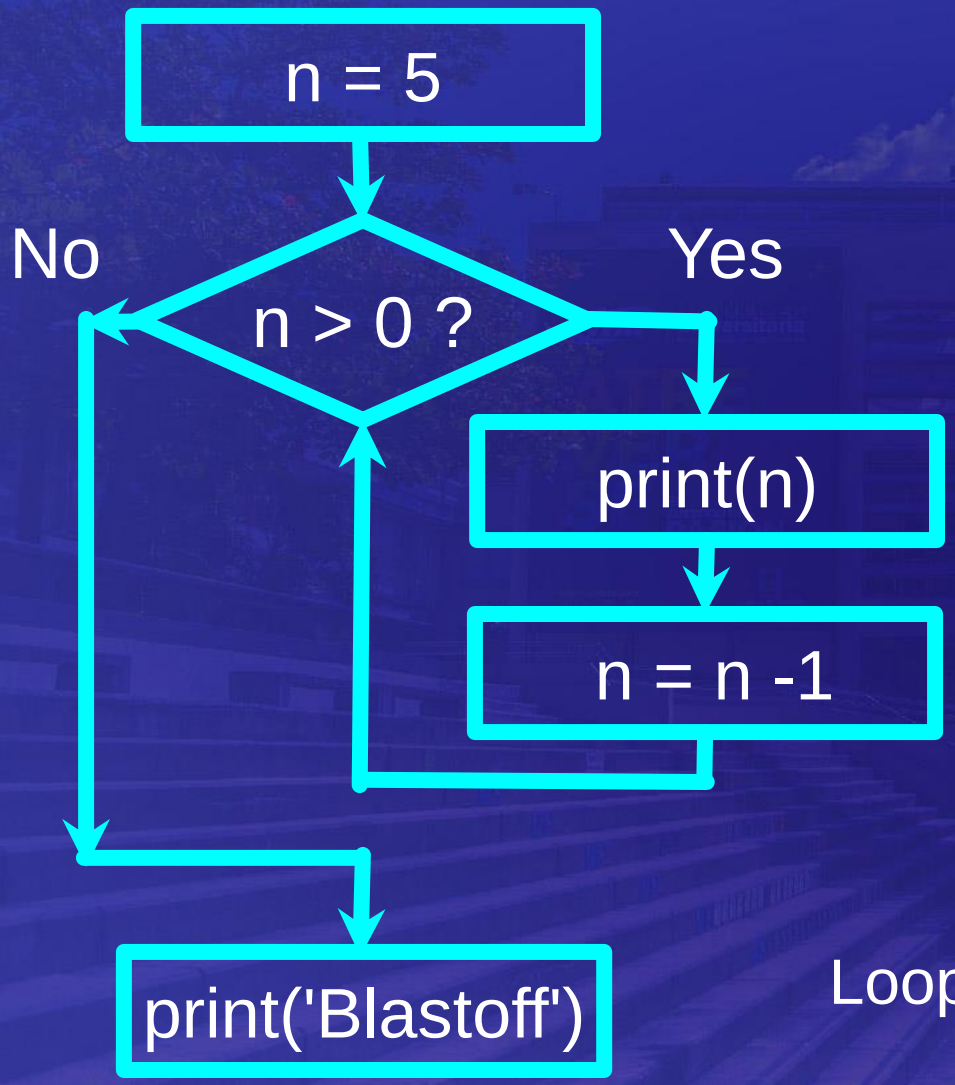
```
x = 5
if x < 10:
    print('Smaller')
if x > 20:
    print('Bigger')

print('Finis')
```

Output:

```
Smaller
Finis
```

Pasos Repetidos



Program:

```
n = 5
while n > 0 :
    print(n)
    n = n - 1
print('Blastoff!')
```

Output:

5
4
3
2
1
Blastoff!

Loops (repeated steps) have iteration variables that change each time through a loop.

```
name = input('Enter file:')
handle = open(name, 'r')

counts = dict()
for line in handle:
    words = line.split()
    for word in words:
        counts[word] = counts.get(word,0) + 1

bigcount = None
bigword = None
for word,count in counts.items():
    if bigcount is None or count > bigcount:
        bigword = word
        bigcount = count

print(bigword, bigcount)
```

Sequential

Repeated

Conditional

```
name = input('Enter file:')
handle = open(name, 'r')

counts = dict()
for line in handle:
    words = line.split()
    for word in words:
        counts[word] = counts.get(word,0) + 1

bigcount = None
bigword = None
for word,count in counts.items():
    if bigcount is None or count > bigcount:
        bigword = word
        bigcount = count

print(bigword, bigcount)
```

A short Python “Story” about how to count words in a file

A word used to read data from a user

A sentence about updating one of the many counts

A paragraph about how to find the largest item in a list

Referencias

1. Python for Everybody. https://www.py4e.com/lessons

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