

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

5
4
3
2
1
Blastoff!
0

In [2]: for i in[5, 4, 3, 2, 1]:
    print(i)
    print('Blastoff!')

5
4
3
2
1
Blastoff!

In [3]: friends=['Joseph', 'Glenn', 'Sally']
for friend in friends:
    print('Happy New Year:', friend)
print('Done!')

Happy New Year: Joseph
Happy New Year: Glenn
Happy New Year: Sally
Done!

In [4]: print('Before')
for thing in [9,41,12,3,74,15]:
    print(thing)
print('After')

Before
9
41
12
3
74
15
After

In [5]: largest_so_far=-1
print('Before',largest_so_far)
for the_num in [9,41,12,3,74,15]:
    if the_num>largest_so_far:
        largest_so_far=the_num
    print(largest_so_far,the_num)
print('After',largest_so_far)

Before -1
9 9
41 41
41 12
41 3
74 74
74 15
After 74

In [6]: zork=0
print('Before',zork)
for thing in [9,41,12,3,74,15]:
    zork=zork+1
    print(zork,thing)
print('After',zork)

Before 0
1 9
2 41
3 12
4 3
5 74
6 15
After 6

In [7]: zork=0
print('Before',zork)
for thing in [9,41,12,3,74,15]:
    zork=zork+thing
    print(zork,thing)
print('After',zork)

Before 0
9 9
50 41
62 12
65 3
139 74
154 15
After 154

In [8]: count=0
sum=0
print('Before',count,sum)
for value in [9,41,12,3,74,15]:
    count=count+1
    sum=sum+value
    print(count,sum,value)
print('After',count,sum,sum/count)

Before 0 0
1 9 9
2 50 41
3 62 12
4 65 3
5 139 74
6 154 15
After 6 154 25.666666666666668

In [9]: print('Before')
for value in [9,41,12,3,74,15]:
    if value>20:
        print('Large number',value)
print('After')

Before
Large number 41
Large number 74
After

In [10]: found=False
print('Before',found)
for value in [9,41,12,3,74,15]:
    if value>3:
        found=True
        print(found,value)
print('After',found)

Before False
False 9
False 41
False 12
True 3
True 74
True 15
After True

In [11]: largest_so_far=-1
print('Before',largest_so_far)
for the_num in [9,41,12,3,74,15]:
    if the_num>largest_so_far:
        largest_so_far=the_num
    print(largest_so_far,the_num)
print('After',largest_so_far)

Before -1
9 9
41 41
41 12
41 3
74 74
74 15
After 74

In [14]: smallest_so_far=-1
print('Before',smallest_so_far)
for the_num in [9,41,12,3,74,15]:
    if the_num<smallest_so_far:
        smallest_so_far=the_num
    print(smallest_so_far,the_num)
print('After',smallest_so_far)

Before -1
-1 9
-1 41
-1 12
-1 3
-1 74
-1 15
After -1

In [15]: smallest=None
print('Before')
for value in [9,41,12,3,74,15]:
    if smallest is None:
        smallest=value
    elif value<smallest:
        smallest=value
    print(smallest,value)
print('After',smallest)

Before
9 9
9 41
9 12
3 3
3 74
3 15
After 3

In [16]: smallest=None
print('Before')
for value in [3,41,12,9,74,15]:
    if smallest is None:
        smallest=value
    elif value<smallest:
        smallest=value
    print(smallest,value)
print('After',smallest)

Before
3 3
3 41
3 12
3 9
3 74
3 15
After 3

In [17]: str1="Hello"
str2="there"
bob=str1+str2
print(bob)

Hellothere

In [20]: name=input('Enter:')
Enter:Chunk

In [21]: print(name)

Chunk

In [22]: apple=input('Enter:')
Enter:100

In [23]: x=int(apple)-10
print(x)

90

In [24]: fruit='banana'
letter=fruit[1]
print(letter)

a

In [25]: x=3
w=fruit[x-1]
print(w)

n

In [26]: fruit='banana'
print(len(fruit))

6

In [27]: fruit='banana'
index=0
while index<len(fruit):
    letter=fruit[index]
    print(index,letter)
    index=index+1

0 b
1 a
2 n
3 a
4 n
5 a

In [28]: fruit='banana'
for letter in fruit:
    print(letter)

b
a
n
a
n
a

In [29]: word='banana'
count=0
for letter in word:
    if letter=='a':
        count=count+1
print(count)

3

In [30]: s='Monty Python'
print(s[0:4])

Mont

In [31]: print(s[6:7])

P

In [32]: print(s[6:20])

Python

In [33]: a='Hello'
b=a+'There'
print(b)

HelloThere

In [34]: c=a+' '+'There'
print(c)

HelloThere

In [35]: if word=='banana':
    print('All right,bananas.')
if word<'banana':
    print('Your word,'+word+',comes before banana.')
elif word>'banana':
    print('Your word,'+word+',comes after banana.')
else:
    print('All right,bananas.')

All right,bananas.
All right,bananas.

In [36]: greet='Hello Bob'
zap=greet.lower()
print(zap)

hello bob

In [37]: print(greet)

Hello Bob

In [39]: print('Hi There'.lower())

hi there

In [42]: line='Please have a nice day'
line.startswith('Please')

True

Out[42]:

In [43]: line.startswith('p')

False

Out[43]:

In [44]: data='From stephen.marquard@uct.ac.za Sat Jan 5 09:14:16 2008'
atpos=data.find('@')
print(atpos)

21

In [47]: sppos=data.find(' ',atpos)
print(sppos)

31

In [48]: host=data[atpos+1 : sppos]
print(host)

uct.ac.za

In [ ] :
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