

Ejercicios de iterables

Cree un programa que itere e imprima los valores de dos listas del mismo tamaño al mismo tiempo.

```
1 list1=["january","february","march","april"  
2      ,"may","june","july","august","september",  
3      "october", "november","december"]  
4 list2=["1","2","3","4","5","6","7","8","9","10","11","12"]  
5 for time in range(12):  
6     print("month ",list2[time]," of the year: ",list1[time])  
7
```

```
month 1 of the year: january  
month 2 of the year: february  
month 3 of the year: march  
month 4 of the year: april  
month 5 of the year: may  
month 6 of the year: june  
month 7 of the year: july  
month 8 of the year: august  
month 9 of the year: september  
month 10 of the year: october  
month 11 of the year: november  
month 12 of the year: december
```

Cree un programa que itere e imprima un string letra por letra de derecha a izquierda.

- Pista: investigue de que otras maneras se puede usar el range.

```
string1="my favorite shirt"  
  
for word in string1:  
    print(word)
```

m
y

f
a
v
o
r
i
t
e

s
h
i
r
t

Cree un programa que intercambie el primer y ultimo elemento de una lista. Debe funcionar con listas de cualquier tamaño.

```
list1=[2,3,4,5,6]
last=list1[-1]
first=list1[0]
list1[0]=last
list1[-1]=first
print(list1)
```

```
thon-debugpy 2023
[6, 3, 4, 5, 2]
```

Cree un programa que elimine todos los números impares de una lista.

```
list1=[1,2,3,4,5,6,7,8,9,10]
index=0
✓ while index<len(list1):
✓     if list1[index]%2 !=0:
        list1.pop(index)
        index -=1

    index +=1
print(list1)
```

```
thon:debugpy 2023.
[2, 4, 6, 8, 10]
```

Cree un programa que le pida al usuario 10 números, y al final le muestre todos los números que ingresó, seguido del numero ingresado más alto.

```
list1=[]
max_value=0
index=0
while index<=10:
    number=int(input("enter the 10 numbers:"))
    list1.append(number)
    if list1[index]>max_value:
        max_value=list1[index]
    index +=1

print("values on the list:", list1, "maximum value:", max_value)
```

```

enter the 10 numbers:2
enter the 10 numbers:3
enter the 10 numbers:6
enter the 10 numbers:8
enter the 10 numbers:3
enter the 10 numbers:5
enter the 10 numbers:6
enter the 10 numbers:9
enter the 10 numbers:3
enter the 10 numbers:4
enter the 10 numbers:5
values on the list: [2, 3, 6, 8, 3, 5, 6, 9, 3, 4, 5] maximum value: 9

```

Ejercicios extra de iterables

Cree un programa que cuente cuántas veces aparece un número específico en una lista. Pida al usuario una lista de números y otro número a buscar

```

list1=[]
number=1
count=0
while number!=0:
    number=int(input(" enter the numbers on the list(to stop press 0):" ))
    list1.append(number)

    new_number=int(input("enter a new number:"))

    for index in range(len (list1)):
        if list1[index]==new_number:
            count +=1

    print("the number", new_number, "appears", count, "times in the list")

```

```

enter the numbers on the list(to stop press 0):4
enter the numbers on the list(to stop press 0):4
enter the numbers on the list(to stop press 0):4
enter the numbers on the list(to stop press 0):4
enter the numbers on the list(to stop press 0):5
enter the numbers on the list(to stop press 0):6
enter the numbers on the list(to stop press 0):7
enter the numbers on the list(to stop press 0):6
enter the numbers on the list(to stop press 0):5
enter the numbers on the list(to stop press 0):0
enter a new number:4
the number 4 appears 4 times in the list

```

Cree un programa que verifique si todos los elementos de una lista son positivos

```

list1=[]
numbers=1
while numbers!=0:
    numbers=int(input("enter the numbers in the list (stop with 0):"))
    if numbers==0:
        break
    list1.append(numbers)
print(list1)
for index in range(len(list1)):
    if list1[index] > 0:
        print(list1[index],"is positive a number")

```

```

enter the numbers in the list (stop with 0):4
enter the numbers in the list (stop with 0):5
enter the numbers in the list (stop with 0):7
enter the numbers in the list (stop with 0):9
enter the numbers in the list (stop with 0):2
enter the numbers in the list (stop with 0):-5
enter the numbers in the list (stop with 0):-6
enter the numbers in the list (stop with 0):-9
enter the numbers in the list (stop with 0):-8
enter the numbers in the list (stop with 0):5
enter the numbers in the list (stop with 0):0
[4, 5, 7, 9, 2, -5, -6, -9, -8, 5]
4 is positive a number
5 is positive a number
7 is positive a number
9 is positive a number
2 is positive a number
5 is positive a number

```

Cree un programa que muestre el valor más pequeño de una lista sin usar min()).

Use una variable para comparar uno a uno

```
my_list=[5,6,9,8,6,4,2,1,-1]
min_value=my_list[0]
for index in range(1,len(my_list)):
    if my_list[index]<min_value:
        min_value=my_list[index]
print("the minimum value on the list:", min_value)
```

```
the minimum value on the list: 2
alemedina@MacBook-Pro-de-Alejandra tareas lyfter % cd /Users/
debugpy/launcher 64669 -- /Users/alemedina/Downloads/tareas\
the minimum value on the list: -1
```

Cree un programa que reciba una lista de números y **calcule el promedio** de los valores, luego cree una nueva lista con **solo los valores mayores al promedio**

```
list1=[5,6,9,8,6,4,2,1]
over_average=[]
average=0
sum=0
for index in range(len(list1)):
    sum +=list1[index]
average=sum//index
print("the average is:", average)

for index in range(len(list1)):
    if list1[index]>=average:
        over_average.append(list1[index])
print("list of numbers over average", over_average)
```

```
the average is: 5  
list of numbers over average [6, 9, 8, 6]  
alemedina@MacBook-Pro-de-Alejandra tareas lyfte  
debugpy/launcher 64750 -- /Users/alemedina/Down  
the average is: 5  
list of numbers over average [5, 6, 9, 8, 6]
```

Cree un programa que le pida al usuario ingresar 5 palabras.
Luego muestre una nueva lista con solo aquellas palabras que
tengan más de 4 letras

```
list1=[]  
new_list=[]  
for index in range(5):  
    words=input("enter the words:")  
    list1.append(words)  
  
for index in range(len(list1)):  
    if len(list1[index])>=4:  
        new_list.append(list1[index])  
print("the new list is with 4 or more words is:", new_list)
```

```
enter the words:pancake  
enter the words:cupcake  
enter the words:cream  
enter the words:ice  
enter the words:cream  
the new list is with 4 or more words is: ['pancake', 'cupcake', 'cream', 'cream']
```