



Preparación de Parcial

Tarea 04

Luis Florian

0710082

Maestría en Data Science
Ciencia de Datos en Python
Sección U
Universidad Galileo

Guatemala, marzo de 2021

Usuario



Problemas

1) <https://www.hackerrank.com/challenges/py-if-else/problem>

Solución:

```
if n % 2 == 0:
    if n >= 2 and n <= 5:
        print("Not Weird")
    elif n >= 6 and n <= 20:
        print("Weird")
    elif n > 20:
        print("Not Weird")
else:
    print("Weird")
```

Python If-Else ★

Problem	Submissions	Leaderboard	Discussions	Editorial	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
Accepted	10.0	Python 3	8 minutes ago	View Results	

- 2) <https://www.hackerrank.com/challenges/python-arithmetic-operators/submissions>

Solución

```
print(a+b)
print(a-b)
print(a*b)
```

Arithmetic Operators ★

Problem	Submissions	Leaderboard	Discussions	Editorial 	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
 Accepted	10.0	Python 3	3 minutes ago		View Results

- 3) <https://www.hackerrank.com/challenges/python-division/submissions>

Solución

```
if b != 0:
    print(a//b)
    print(a/b)
```

Python: Division ★

Problem	Submissions	Leaderboard	Discussions	Editorial 	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
 Accepted	10.0	Python 3	a few seconds ago		View Results

4) <https://www.hackerrank.com/challenges/python-loops/problem>

Solución

```
for i in range(0,n):
    if i>0:
        print(i**2)
    else:
        print(i)
```

Loops ★


Problem	Submissions	Leaderboard	Discussions	Editorial 	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
 Accepted	10.0	Python 3	a minute ago	View Results	

5) <https://www.hackerrank.com/challenges/write-a-function/problem>

Solución

```
if (year % 4 == 0) and (year % 100 != 0):
    leap = True
elif (year % 100 == 0) and (year % 400 != 0):
    leap = False
elif (year % 400 == 0):
    leap = True
else:
    leap = False
```

Write a function ★

Problem	Submissions	Leaderboard	Discussions	Editorial
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	10.0	Python 3	a few seconds ago	View Results

- 6) <https://www.hackerrank.com/challenges/find-second-maximum-number-in-a-list/problem>

Solución

```
conjunto = set(arr)
lista = sorted(list(conjunto))
print(lista[-2])
```

Find the Runner-Up Score! ★

Problem	Submissions	Leaderboard	Discussions	Editorial
RESULT	SCORE	LANGUAGE	TIME	
Accepted	10.0	Python 3	a minute ago	View Results

- 7) <https://www.hackerrank.com/challenges/finding-the-percentage/problem>

Solución

```
print("%.2f" % (sum(student_marks[query_name])/len(student_marks[query_name])))
```

Finding the percentage ★

Problem	Submissions	Leaderboard	Discussions	Editorial	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
Accepted	10.0	Python 3	a minute ago	View Results	

8) <https://www.hackerrank.com/challenges/python-lists/problem>

Solución

```
lista = []
for i in range(0,N):
    command = input().split()
    if command[0] == 'insert':
        lista.insert(int(command[1]),int(command[2]))
    elif command[0] == 'print':
        print(lista)
    elif command[0] == 'remove':
        lista.remove(int(command[1]))
    elif command[0] == 'append':
        lista.append(int(command[1]))
    elif command[0] == 'sort':
        lista.sort()
    elif command[0] == 'pop':
        lista.pop()
    elif command[0] == 'reverse':
        lista.reverse()
```

Lists ★



Problem	Submissions	Leaderboard	Discussions	Editorial 	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
 Accepted	10.0	Python 3	2 minutes ago	View Results	

9) <https://www.hackerrank.com/challenges/python-tuples/problem>

Solución

```
tupla = tuple(integer_list)
print(hash(tupla))
```

Tuples ★

Problem	Submissions	Leaderboard	Discussions	Editorial 	Tutorial
RESULT	SCORE	LANGUAGE	TIME		
 Accepted	10.0	Python 3	a minute ago		View Results

10) <https://www.hackerrank.com/challenges/defaultdict-tutorial/problem>

Solución

```
from collections import defaultdict

if __name__ == '__main__':
    n,m = map(int,input().split())
    a = defaultdict(list)
    b = []

    for i in range(0,n):
        a[input()].append(i+1)

    for i in range(0,m):
        b.append(input())

    for i in b:
        if i in a:
            #getting each element of a[i] as str in a single line
            x = " ".join(map(str,a[i]))
            print(x)
        else:
            print(-1)
```

DefaultDict Tutorial ★

Problem	Submissions	Leaderboard	Discussions	Editorial 
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	20.0	Python 3	a minute ago	View Results

11) <https://www.hackerrank.com/challenges/collections-counter/problem>

Solución

```
from collections import Counter

if __name__ == '__main__':
    n_shoes = int(input())
    sizes_available = list(map(int, input().split()))
    count_sizes = Counter(sizes_available)
    n_customers = int(input())
    total = 0

    for p in range(0, n_customers):
        size, price = map(int, input().split())
        if size in count_sizes and count_sizes[size] > 0:
            total += price
            count_sizes[size] -= 1

    print(total)
```

collections.Counter() ★

Problem	Submissions	Leaderboard	Discussions	Editorial 
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	10.0	Python 3	a minute ago	View Results

- 12) https://www.hackerrank.com/challenges/minimum-swaps-2/problem?h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=arrays

Solución

```
# Complete the minimumSwaps function below.
def minimumSwaps(arr):
    arr_referencia = sorted(arr)
    indexes = {v: i for i,v in enumerate(arr)}
    swaps = 0

    # Without enumerate the function was giving timeout failure.
    for i,v in enumerate(arr):
        ordenado = arr_referencia[i]
        if v != ordenado:
            to_swap = indexes[ordenado]
            arr[to_swap],arr[i] = arr[i], arr[to_swap]
            indexes[v] = to_swap
            indexes[ordenado] = i
            swaps += 1

    return swaps
```

Minimum Swaps 2 ★

Problem	Submissions	Leaderboard	Discussions	Editorial 
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	40.0	Python 3	a minute ago	View Results

- 13) <https://www.hackerrank.com/challenges/floor-ceil-and-rint/problem>

Solución

```
import numpy as np
np.set_printoptions(legacy='1.13')

if __name__ == '__main__':
    arr = list(map(float, input().rstrip().split()))
    nparray = np.array(arr)
    print(np.floor(nparray))
    print(np.ceil(nparray))
    print(np rint(nparray))
```

Floor, Ceil and Rint ★

Problem	Submissions	Leaderboard	Discussions	Editorial 
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	20.0	Python 3	a minute ago	View Results

- 14) https://www.hackerrank.com/challenges/ctci-bubble-sort/problem?h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=sorting

Solución

```
# Complete the countSwaps function below.
def countSwaps(a):
    swaps = 0
    if a != sorted(a):
        for i in range(0, len(a)):
            for j in range(0, len(a)-1):
                if a[j] > a[j+1]:
                    a[j], a[j+1] = a[j+1], a[j]
                    swaps += 1

    print("Array is sorted in " + str(swaps) + " swaps. ")
    print("First Element: " + str(a[0]))
    print("Last Element: " + str(a[-1]))
```

Sorting: Bubble Sort ★

Problem	Submissions	Leaderboard	Discussions	Editorial 
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	30.0	Python 3	a minute ago	View Results

15) <https://www.hackerrank.com/challenges/np-arrays/problem>

Solución

```
def arrays(arr):  
    return numpy.flip(numpy.array(arr, float))
```

Arrays ★

Problem	Submissions	Leaderboard	Discussions	Editorial 
RESULT	SCORE	LANGUAGE	TIME	
 Accepted	20.0	Python 3	a minute ago	View Results

16) <https://www.hackerrank.com/challenges/np-zeros-and-ones/problem>

Solución

```
nums = tuple(map(int, input().split()))
print (numpy.zeros(nums, dtype = numpy.int))
print (numpy.ones(nums, dtype = numpy.int))
```

Zeros and Ones ★

Problem	Submissions	Leaderboard	Discussions	Editorial
RESULT	SCORE	LANGUAGE	TIME	
Accepted	20.0	Python 3	2 minutes ago	View Results