

CYCLE 1-2

1. count the occurrence of each word in a line of text.

Algorithms.

- ① Start
- ② Read a string
- ③ split words
- ④ count = dict()
- ⑤ if word in count
 count = count + 1
- ⑥ print word and count
- ⑦ stop

Programs.

```
input = input("Enter a string")  
def word_count(str):  
    counts = dict()  
    words = str.split()
```

for word in words:

if word in counts:

 counts[word] += 1

else:

 counts[word] = 1

return(counts)

print(word_count(input))

Output

enter a string b99 all b99 all

{'b99': 2, 'all': 2}

2) prompt the user for a list of integers. For all values greater than 100 store 'over' instead.

Algorithms:

- ① start
- ② enter size of list
- ③ enter elements.
- ④ store elements in item
- ⑤ if item < 100
 append item to list
- ⑥ else
 append 'over' to list
- ⑦ print list
- ⑧ stop.

Programs:

```
numbers = []
n = int(input("Enter the total number of elements : "))
print("Enter elements")
for i in range(0,n):
    item = int(input())
    if 100 > item:
        numbers.append(item)
    else:
        numbers.append("over")
print("Output = ", numbers)
```

Output

Enter the total number of elements : 5

Enter elements

10

20

100

101

30

output = [10, 20, 'over', 'over', 30]

3) Store a list of first names. count the occurrence of 'a' with in the list.

Algorithm:

- ① Start
- ② enter size of list
- ③ enter elements
- ④ $\text{list} = []$, $c = 0$
- ⑤ for i in range ($0, n$)
 store element in item.
 append item to list[]
- ⑥ print list
- ⑦ for i in list
 for j in i
 check $j == 'a'$ or $j == 'A'$
 if ($j == 'a'$ or $j == 'A'$)
 $c = c + 1$
 else
 continue
- ⑧ print total number A
- ⑨ stop.

Program

```
lps1 = []
c = 0
n = int(input("Enter the size of the lps1"))
print("Enter first names")
for i in range(0, n):
    item = input()
    lps1.append(item)
print("lps1 is : ", lps1)
for i in lps1:
    for j in i:
        if(j == 'a' or j == 'A'):
            c = c + 1
print("Total number of 'a' or 'A' : ", c)
```

Output

Enter the size of lps1 3

Enter firstnames

Ammu

Jisha

Amal

lps1 is : ['Ammu', 'Jisha', 'Amal']

Total number of 'a' or 'A' : 4.

- 4) Enter 2 lists of integers . check
a) whether 1st are of same length
b) whether 1st sums to same value
c) whether any value occurs in both.

Algorithms:

- ① start
- ② $lsl_a = [], lsl_b = [], n_1, n_2$
- ③ enter size of -1000 $lsl's$
- ④ enter elements for -1000 $lsl's$.
- ⑤ q_item_1 append to lsl_a
- ⑥ q_item_2 append to lsl_b
- ⑦ find length of lsl_a and lsl_b .
- ⑧ if $length_a = length_b$:
print equal length.
- ⑨ else :
print not equal
- ⑩ find sum of elements of -1000 $lsl's$.
- ⑪ if $sum_a = sum_b$
print equal sum
- ⑫ else
print not equal sum
- ⑬ check both $lsl's$ for common values
- ⑭ print common values
- ⑮ stop

Programs

IPST-a = []

IPST-b = []

n1 = INT(input("Enter the size of first list :"))

print("Enter integers")

for i in range(0, n1):

i-item1 = INT(input())

IPST-a.append(i-item1)

n2 = INT(input("Enter the size of second list :"))

print("Enter integers")

for i in range(0, n2):

i-item2 = INT(input())

IPST-b.append(i-item2)

print("First list = ", IPST-a)

print("Second list = ", IPST-b)

length-a = len(IPST-a)

length-b = len(IPST-b)

if length-b == length-a:

print("equal length")

else

print("not equal length")

total-a = sum(IPST-a)

print("sum of elements of first list = ", total-a)

$$\text{total_b} = \text{sum}(\text{list_b})$$

print("sum of elements of
second")

$$\text{list_b} = \text{list_a} - \text{list_a}$$

if ($\text{total_a} == \text{total_b}$):

print("equal sum")

else:

print("not equal sum")

common = any(check in list_b for check in list_a)

print("common value !!", common)

print("common values are =", set(list_b))

intersection(set(list_a)))

Output

Enter the first 19st size : 3

Enter integers

2

4

6

Enter the second 19st size : 4

Enter integers

1

2

3

4

First 19st = [2, 4, 6]

Second 19st = [1, 2, 3, 4]

not equal length

Sum of elements of first 19st = 12

Sum of elements of second 19st = 10

Not equal sum

common values !! True

Common values are = {2, 4}

5) Get a string from an input string where all occurrence of first character replaced with '\$' except first character.

Algorithm:

- ① start
- ② Enter a word
- ③ pass a value str1 to function.
assign str1[0] = char.
- ④ replace char with '\$'
- ⑤ return str1
- ⑥ print
- ⑦ stop

Program:

```
input = input("Enter a word")
def change - char(str1):
    char = str1[0]
    str1 = str1.replace(char, '$')
    str1 = char + str1[1:]
    return str1
print(change - char(input))
```

Occepte

Enter a wood poppy

pussy