Exercise1

* Input a text in the console.
* Check if the text contains only sorted digits (from lowest to highest values)
* If so, write SORTED, otherwise write NOT SORTED

1. What will be the **result** for these outputs?

|  |  |
| --- | --- |
| **Input** | **Output** |
| 489 | SORTED |
| 4762 | NOT SORTED |
| 12 | SORTED |
| 1268 | SORTED |
| 1896 | NOT SHORTED |
| 1536 | NOT SHORTED |
| 2789 | SHORTED |

1. How many parts can you divide the problem into? Individual work.

1 variable (text) to store inpt

2 result to store shorted

3 use for loop

4 check condition text[i-1] < text[i]

5 put the result=not shorted

6 print(result)

1. Implement your code. Team (3 students) work.

text = input()

result=shorted

for i in range (len(text)-1):

if text[i+1]<text[i]:

result="NOT SORTED"

print(result)

1. Execute it in a table of execution. Team (3 students) work.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Step | result | text | i | Len[text] | if |
| 1 | shorted |  |  |  |  |
| 2 |  | Input() |  |  |  |
| 3 |  |  | 0 | Len(text)-1 |  |
| 4 |  |  |  |  | Text[i+1]<text[i] |
| 5 | Not shorted |  |  |  |  |
| 6 | print |  |  |  |  |

Exercise2

* Input a text in the console.
* Control that the text is owning only "abc" pattern.
  + Print “OK” if so
  + Otherwise, print “WRONG”

1. What will be the **result** for these outputs?

|  |  |
| --- | --- |
| **Input** | **Output** |
| abcd | WRONG |
| abcabc | OK |
| abc | OK |
| aabc | OK |
| abbc | WRONG |
| abcabcab | WRONG |
| abcdefg | WRONG |

1. Create your flowchart structure with black boxes.

* Each student has to create his own.
* Share the result in group of 3.

1 use variable to store input Ex: text=input()

2 put the result =0

3 put count =0

4 use for loop and len(text) to count the text that you input

5 put count +=1

6 check condition if index >1

7 check condition again if text[i]==c and text[i-1]==b and text[i-2]==a

8 print Ok

9 Otherwise print Wrong

1. Implement it in Python. In group of 3.

text=input()

result=0

count=0

for i in range(len(text)):

    count+=1

    if i>1:

        if text[i]=="c" and text[i-1]=="b" and text[i-2]=="a":

            result="Ok"

        else:

            result="wrong"

print(result)

1. Fill up the execution table. In group of 3.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Step | result | Count=0 | i | Len(text) | if |
| 1 | 0 |  |  |  |  |
| 2 |  | 0 |  |  |  |
| 3 |  |  | 0 |  |  |
| 4 |  | +=1 |  |  |  |
| 5 |  |  |  |  | i>1 |
| 6 |  |  |  |  | Tex[i]==c and text[i-1]==b and text[i-2]==a |
| 7 | OK |  |  |  |  |
| 8 |  |  |  |  | else |
| 9 | Wrong |  |  |  |  |

1. Present your flowchart structure to the class. In group of 3.

result

count

Len(text)

Text== c, b, a

Ok

Wrong

Print

Exercise3

* Input a text in the console.
* Check that the text:
  + Has only *y*, between square brackets (need open AND close brackets).
  + Otherwise has *x*
* If the text is correct
  + Print “OK”
  + Otherwise, print “WRONG”

1. What will be the **result** for these outputs? Individual work

|  |  |
| --- | --- |
| **Input** | **Output** |
| xxx[yyy]xxx | Ok |
| [yyy]xxx | OK |
| xxx[yyy | WRONG |
| xxxy | WRONG |
| [yy] | OK |
| xxx[yxyy]xxx | WRONG |
| xxxxx | WRONG |

1. Which main instruction can solve the problem? What will it be used for? Group of 3 students.
2. Create a code to solve this problem. Group of 3 students.

Text=input()

isWrong=””

result=’’

for I in range (len(text)):

if text[i]==’x’:

result=”OK”

elif+1< len(text) and text[i]==”[“ and text[i+1]==’y’:

result=’OK’

elif i+1< len(text) and text[i]==’y’ and text[i=1]==’]’ or text[i+1]==’y’ and I !=0 and text[i-1] != ‘x’:

result=’OK’

elif text[i]==’]’ and text[i-1]==’y’:

result=’OK’

else:

isWrong=True

if isWrong==True

print(“Wrong”)

else:

print(result)

1. Present your solution to the class. Group of 3 students.