* Input one number word (ex: “1458756”) in the console
* Print the sum of numbers which are **before** the first number 7.
* If there is not number 7, print the sum of all numbers.

For the session, we will use black boxes:

Une image contenant texte, Police, blanc, capture d’écran

Description générée automatiquement

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

|  |  |
| --- | --- |
| **Input** | **Output** |
| 148756 | 13 (13 = 1 + 4 + 8) |
| 426850 | 25 (25 = 4 + 2 + 6 + 8 + 5 + 0) |
| 159753 | 15(15=1+5+9) |
| 369874 | 26(26=3+6+9+8) |
| 489632 | 32(32=4+8+9+6+3+2) |

1. Choose a structure to solve this problem.

Une image contenant texte, capture d’écran, diagramme, Police

Description générée automatiquement

1. Complete the structure you chose with the missing treatments.
2. Find the bug on this code and test it

word = input()

pos = 0

sum = 0

while pos < len(word) or word[pos] < 7:

sum += int(word[pos])

pos += 1

print(sum)

1. Implement another version using a FOR loop, and test it

* Input one number word (ex: “1458756”) in the console
* Print the sum of numbers which are **after** the first number 7.
* If there is not number 7, print 0

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

|  |  |
| --- | --- |
| **Input** | **Output** |
| 148756 | 11 |
| 426850 | 0 |
| 159753 | 8 |
| 369874 | 4 |

1. Analyze **the symbols** you need to solve this problem.

|  |  |  |
| --- | --- | --- |
| Element | Do you need it? | For what? |
| Action |  |  |
| Decision |  |  |
| Repeat |  |  |
| Input / Output |  |  |

1. Change the code of exercise 1 (Q2) to solve this similar problem.

* Input a **text** in the console.
* Count the number of times the "ab" pattern appears in a string.

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

|  |  |
| --- | --- |
| **Input** | **Output** |
| abcdvqzaxb | 1 |
| abacab | 1 |
| bababacab | 3 |
| abdvcbaac | 1 |
| acb | 0 |
| abcabcabc | 1 |
| bcacbab | 0 |

1. Analyse the problem and propose a flowchart.
2. Execute flowchart and complete the execution table.

|  |  |  |
| --- | --- | --- |
| STEP | …. | … |
| 1 |  |  |
| 2 |  |  |
| … |  |  |

1. Discuss, in a group of 3, your choice.