# EXERCISE 1

- Enter a number (n1) on the console.
- Enter a number (n2) on the console.
- Compare the two number:
  - If n2 is greater than n1 print the sum of the two numbers.
  - Otherwise print -1.

**Q1:** What will be the **result** for these outputs?

| Input | Output |
|-------|--------|
| > 3<br>> 8 | 8 (8 = 3 + 5) |
| > 5<br>> 5 | -1 |
| > 10<br>> 8 | |
| > 0<br>> 5 | |
| > 1<br>> 3 | |

**Q2:** **Analyze the symbols** you need to solve this problem.

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

**Q3:** From the following code, draw the corresponding flowchart.

```
n1 = int(input())
n2 = int(input())
sum = -1
if n2 > n1:
    sum = n1 + n2
print(sum)
```

**Q4:** Solve this poll of question on hackerrank:

https://www.hackerrank.com/work/tests/1404754/questions

# EXERCISE 2

- Check if string contains only "A".

**Q1:** What will be the **result** for these outputs?

| Input | Output |
|---|---|
| BBBB | False |
| AA | True |
| BBBBA | |
| AABC | |
| AAAAAAA | |
| AAAD | |

**Q2:** Fill up the gap of the following flowchart.
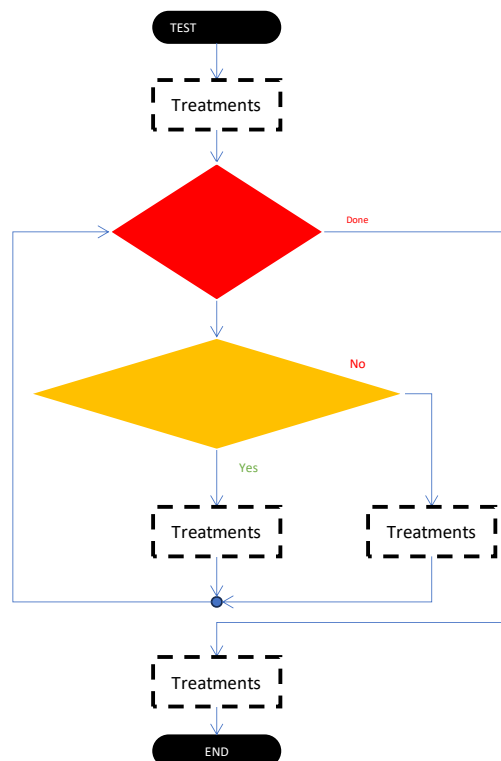
**Q3:** Implement it in Python.

**Q4:** Execute it and fill up the following result table.

| Input | Output |
|---|---|
| BBBAB | |
| AAAAAA | |
| ABABBBA | |
| AABCA | |

# EXERCISE 3

- Enter a number again and again until there is no "end" string.
- Print the even number in the console.

**Q1:** What will be the **result** for these outputs?

| Input | Output |
|---|---|
| > 5<br>> 3<br>> 2<br>> 10<br>> end | 2:10 |
| > 5<br>> 4<br>> 8<br>> 16<br>> end | 4:8:16 |
| > 2<br>> 6<br>> 4<br>> 7<br>> end | |
| > 5<br>> 3<br>> 7<br>> 1<br>> end | |
| > 1<br>> 2<br>> 3<br>> end | |

**Q2:** Create a flowchart by using the condition (while) block.

**Q3:** Implement it in Python.

**Q4:** Is it possible to adapt your solution by using the repeat block? If so, do it.

# EXERCISE 4

- Input text in the console
- Print index of the LAST pattern "KK" (first K letter)
- If no "KK", write -1

**Q1:** What will be the **result** for these outputs?

| Input | Output |
|-------|--------|
| DDKDDDKE | -1 |
| DDKKDDKKD | 6 |
| K | |
| AAKAKK | |
| XXKKXXKX | |
| KKAAK | |

**Q2:** What is wrong with this code?

```
text = input()
result = -1
for index in range(len(text)):
    letter = text[index]
    if letter == "K" and and text[index + 1] == "K":
        result = index
print(result)
```

**Q3:** To find the bug, test this code and check if the output is correct.

| INPUT | OUTPUT |
|-------|--------|
| KK | |
| KKK | |
| AAKKAK | |

**Q4:** Write the correct code.

# EXERCISE 5

- Enter 2 numbers using a string, as follows: "number1; number2".
- Number1 and number2 shall be composed of 2 digits (example "45")
- Between number1 and number2, the character ";" shall be entered.
- If format is good
  - o Display the sum of these 2 numbers.
  - o Otherwise display: "WRONG FORMAT"

**Q1:** What will be the **result** for these outputs?

| Input | Output |
|---|---|
| 12;13 | 25 |
| Ronan | WRONG FORMAT |
| 12;1 | WRONG FORMAT |
| 10;20 | |
| 12/14 | |
| 15;16;18 | |

**Q2:** Do you need extra variables?

**Q3:** What is the information we need to keep?

**Q4:** Solve this problem and try your code with the previous inputs.