**The Max/Min Algorithm**

The **Max/Min algorithm** finds the maximum and/or minimum value in a list. The algorithm is pretty simple:

1. Take a list of values
2. Remember the first element as the current maximum (or minimum) value
3. Loop through the rest of the list, beginning with the second element
4. Is the element bigger (or smaller) than the current maximum (or minimum)? If yes, we have a new current maximum value (or minimum value).
5. Repeat step 4 until you finish the list
6. Output the maximum value (or minimum value).

Exercices

1. Given the following list, write a program that determines the highest value in the list. The first two lines of code are given:

numbers = [3, 4, 6, -3, 4, -12, 8, 15, -12, 14, 15, 2, 7]

max = numbers[0] # the first number is the biggest so far…

1. Write a program that determines the **lowest** value in the same list as question 1.
2. Suppose you have two lists to store students’ names and marks. Write a program that prints the name and mark of the top student (highest grade) in the array. You do not need any user input.
3. Write a program that determines the length of the longest word in this sentence (the answer is six):

sentence = "The cat jumped over the fox."

1. Write a program that outputs the longest word in the sentence above (The answer is “jumped”).