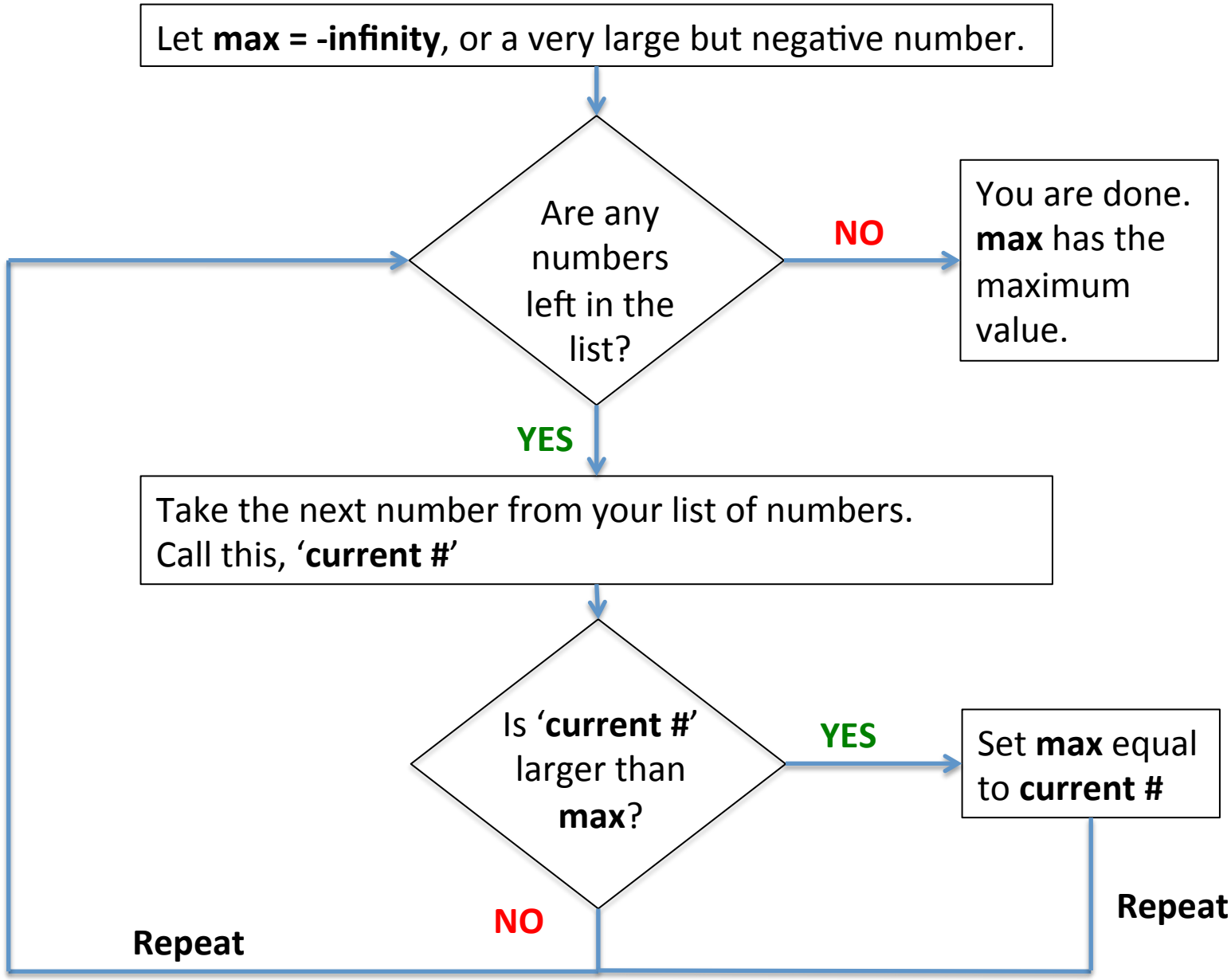
Python 1

- Solution to exercise:

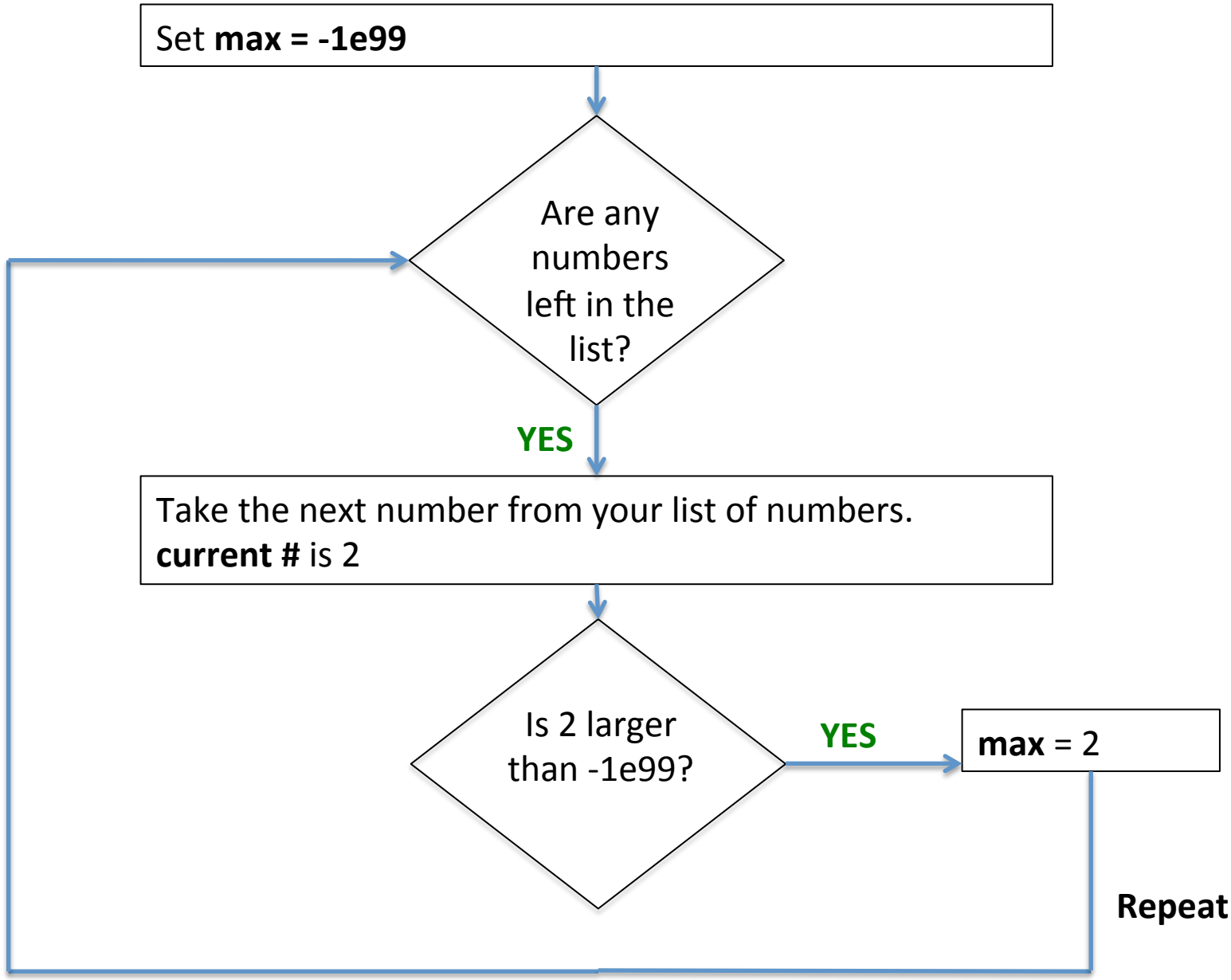
What is the maximum? You are given a list of numbers. Describe (no programming here) how you will determine which of the numbers is the largest. I am looking for step-by-step direction at the very basic level. If your answer is something like "I will sort the numbers ....", you are on the wrong track. I am asking how you will start to sort the numbers to begin with. The answer I am looking is more along these lines: 'Take the first two numbers. Compare the first two numbers, etc.'

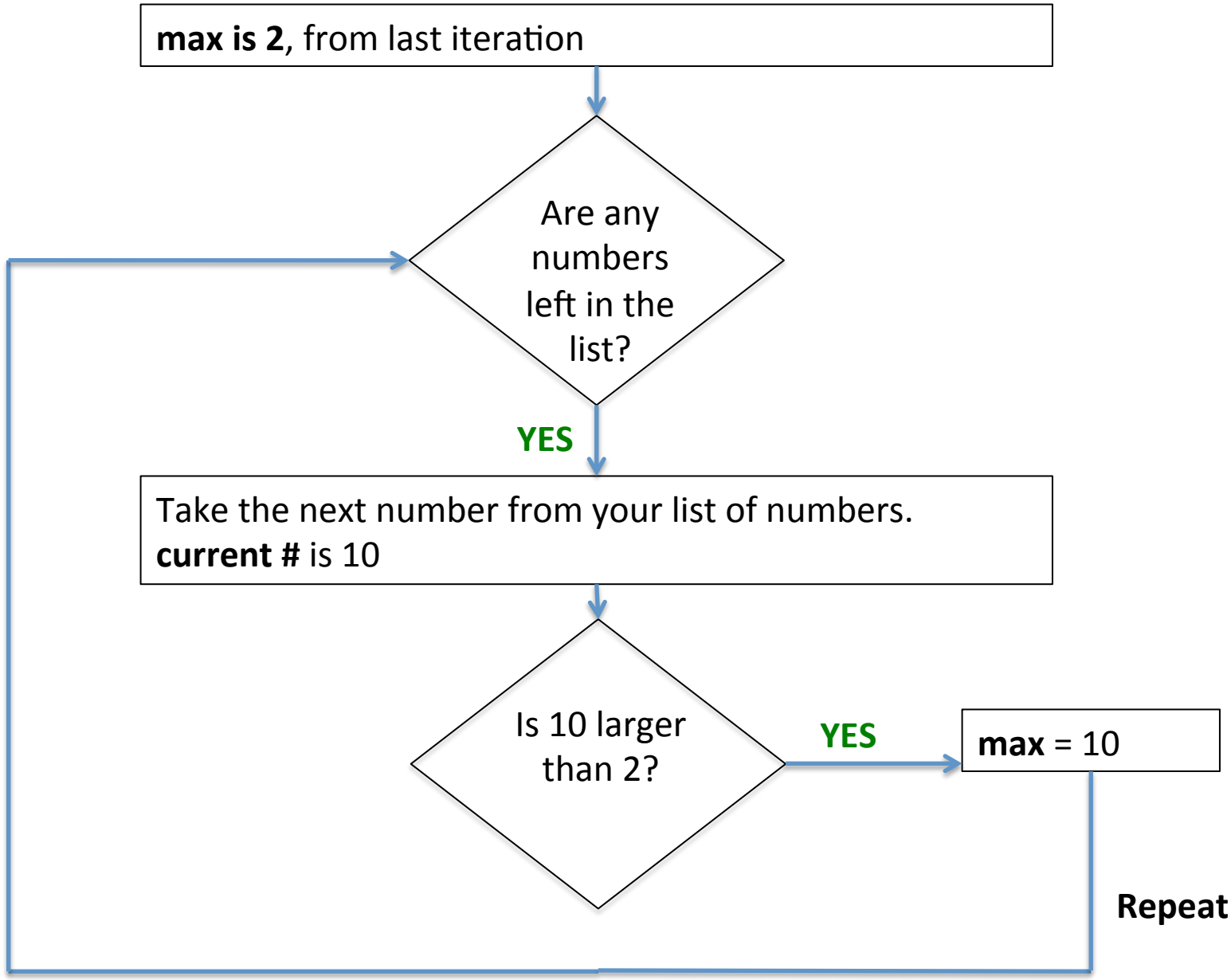

Let **max = -infinity**, or a very large but negative number.
Are any numbers left in the list?
NO
You are done. **max** has the maximum value.
YES
Take the next number from your list of numbers. Call this, '**current #**'
Is '**current #**' larger than **max**?
YES
Set **max** equal to **current #**
NO
Repeat
Repeat

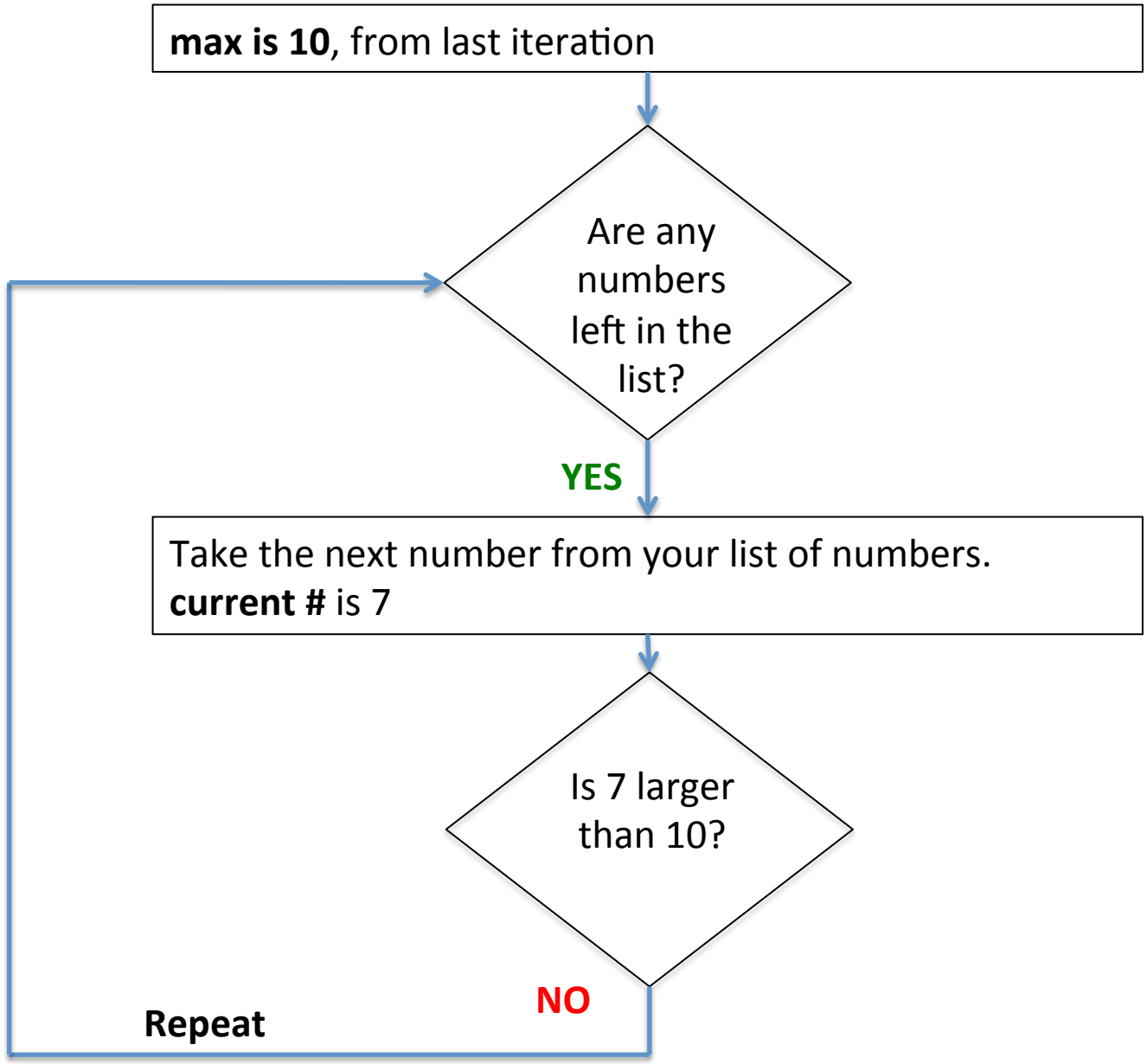
Working Example

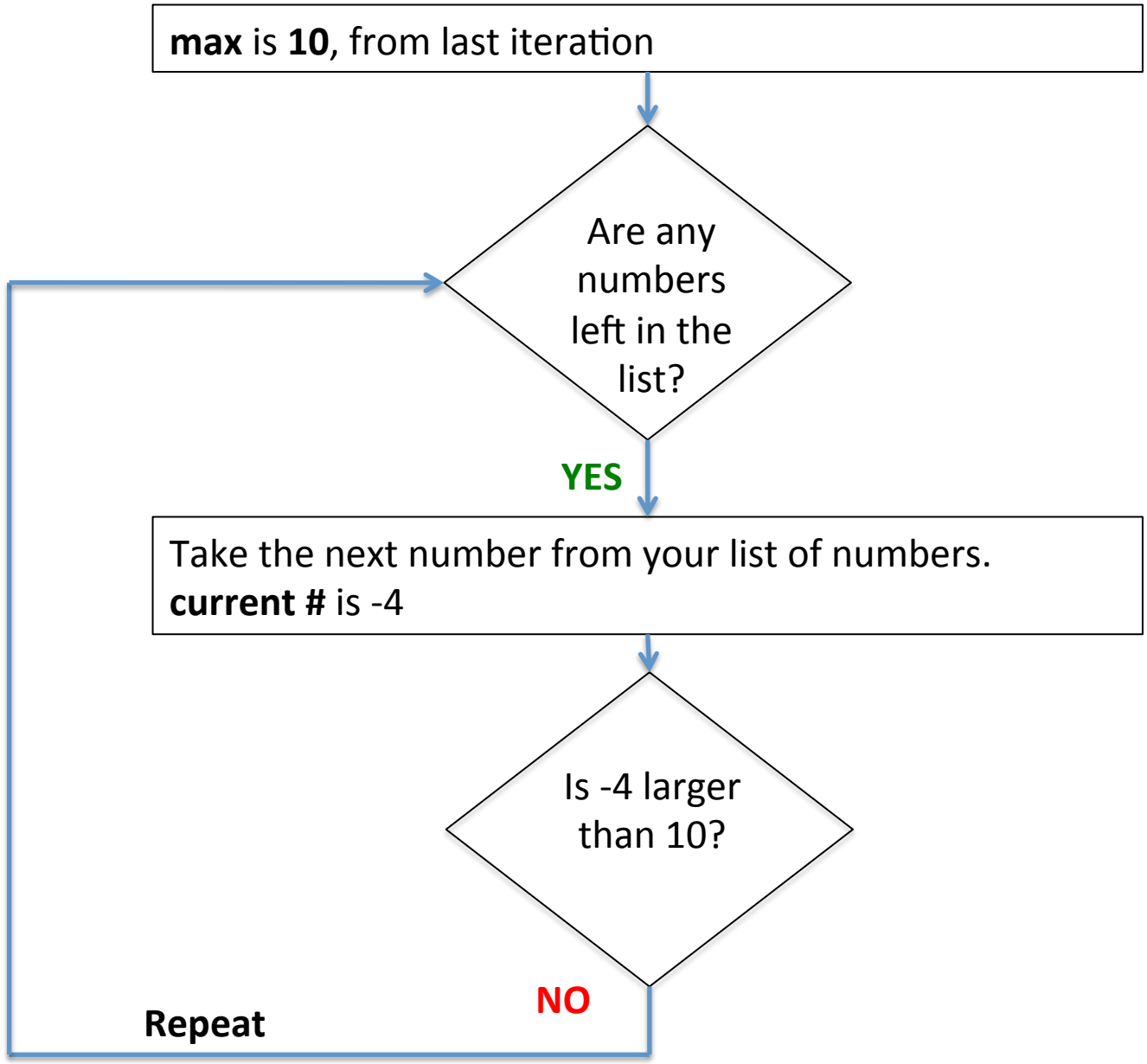
- Find the maximum of this list:

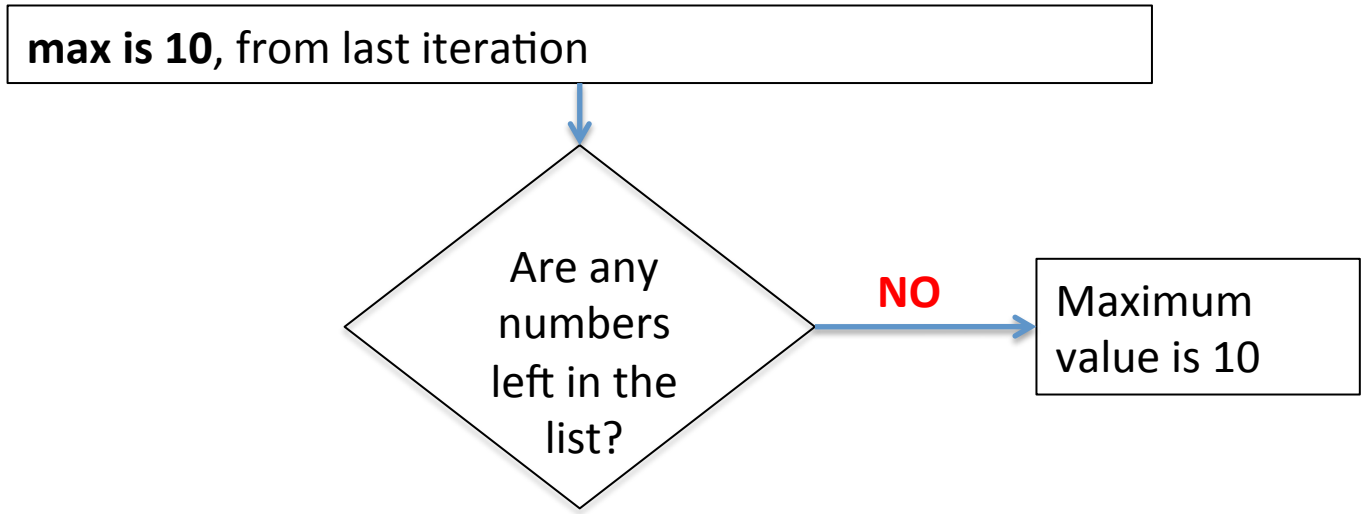
2, 10, 7, -4


Set **max = -1e99**
Are any numbers left in the list?
YES
Take the next number from your list of numbers.
current # is 2
Is 2 larger than -1e99?
YES
max = 2
Repeat


max is 2, from last iteration
Are any numbers left in the list?
YES
Take the next number from your list of numbers.
current # is 10
Is 10 larger than 2?
YES
max = 10
Repeat


max is 10, from last iteration
Are any numbers left in the list?
YES
Take the next number from your list of numbers.
current # is 7
Is 7 larger than 10?
NO
Repeat


max is **10**, from last iteration
Are any numbers left in the list?
YES
Take the next number from your list of numbers.
current # is -4
Is -4 larger than 10?
NO
Repeat


max is 10, from last iteration
Are any numbers left in the list?
NO
Maximum value is 10