

Extreme Values

The **largest (or smallest)** value in a collection is called an **extreme value**. Here is the algorithm for finding the largest in an array:

```
largest <- first
For each remaining element
  If element > largest Then
    largest <- element
Return largest
```

The algorithm for finding the **smallest** is similar. What if there is no first element? Then there is no largest or smallest element; **it is an error condition**.

For many algorithms, you not only want to know the largest (or smallest) value, but **where it is located**, either as an index or as a pointer. [Click this link to look at both.](#) We'll discuss the two functions in this example in the next section.



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