Definition of Algorithm

For this assignment I will be using the word “algorithm”, and define the term through the use of parenthetical, sentence and expanded definition. I will introduce the term to an audience with limited scientific background and phrase my definition as such.

Parenthetical Definition

An algorithm (a set procedure used in problem solving) is useful in computer programs to perform tasks in a finite amount of time.

Sentence Definition

An algorithm is a process or set of rules to be followed during calculations or problem solving, particularly in computer programs.

Expanded Definition

What is an algorithm?

An algorithm is a process or set of rules to be followed during calculations or problem solving. An algorithm is typically used in a computer program to solve functions in a finite period of time meaning it must stop at some point. It can also be used in electrical circuits or mechanical devices. The term originated from the Latin translation of the name of an Indian book about the systems of numeration. The name was translated into *Algoritmi de numero Indorum.* The word Algorithm came from the term “Algoritimi” in the translation.

How is an algorithm used?

In computer science and mathematics, algorithms are used to solve problems such as finding the shortest path between two points or the best suitable partner based on a table of preference rankings. Algorithms are written by software programmers to produce a desired output for a given input. Many algorithms may exist to solve the same problem. However, there exists algorithms that are more efficient at finding the solution to the same problem in less time, using fewer resources and taking up less space. Computer scientists strive to find the most optimal algorithm to solve their targeted problem.

How does an algorithm work?

A simple example of an algorithm can be to find the largest number in a list of random numbers in a random order. A step by step procedure can be as follows:

1. A list with no numbers will not have a largest number (This is typically used as a base case).
2. Take the first number in the list and assume that is the largest number.

3. Compare this number to the rest of the numbers in the list.
4. If a number in the list is larger than the number we assumed to be the largest, the new number is now the largest.
5. When we reach the end of the list of numbers, we take the current largest number to be the largest number in the list.

In this example we have given the algorithm a list of random numbers (the input) and we received the largest number in the list (the output). The algorithm terminates when we reach the end of the list. Therefore, we satisfy the condition that the algorithm is finite.

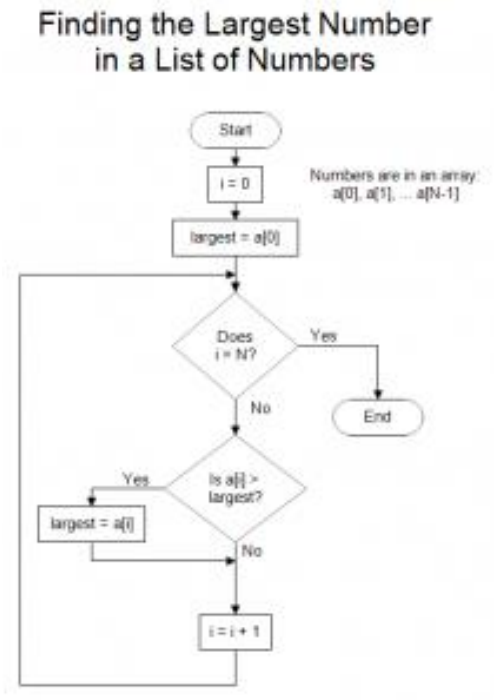

Figure 1 Flow Chart of Find Largest Number Algorithm

Works Cited

"Find the Largest Number in an Unsorted List of Numbers." *Find the Largest Number in an Unsorted List of Numbers*. Web. 27 Sept. 2015.

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