

Algorithm: it's a solving problem in program step by step.

the algorithms process going in 3 steps input>process>output.

Characteristics of a Good Algorithm:

Correctness:

Efficiency

Clarity

Finiteness

Generality

### Types of Algorithms

#### 1. Sequential Algorithm (Step-by-step Execution):

find the sum of two num

1. take two input num
2. put them together
3. give back the total logarithm
4.  $\text{sum}(a,b)$
5. return  $a+b$
6. end

#### 2. Iterative Algorithm (Using Loops)

1. set the value=1
2. stat looping was start by 1 and multiply by given num
3. by ending loop, we will count the factorial and return back

#### 3. Recursive Algorithm (Function Calls Itself)

1. if the num =0 or 1, that's mean num =1
2. if the num> 1, we multiball the num by factorial
3. then retuned to get the num 0 or 1

### Algorithms Examples::

#### 1. Find the Largest Number in a List :

1. start
2. read  $y,x$
3. if  $y>x$  print  $y$ , else print  $x$

4. end

2. Count the Number of Vowels in a String:

1.set count 0

2.for each letter in string

if letter "a,e,o,i,e"

count by 1

end

3. Reverse a String :

karem -> input

1.calaculet the number of car->y

2.x=y

3.z=5

4.y-1

5. z+1

6> y=0