**Algorithm**

There are some top algorithm in data structure, every programmer should know –

1. Binary Search Algorithm
2. Sort Algorithm
3. Hashing

**Binary Search Algorithm:**

Binary search is a fast search algorithm with run-time complexity of Ο(log n). This search algorithm works on the principle of divide and conquer. For this algorithm to work properly, the data collection should be in the sorted form.

**Pseudocode:**

Procedure binary\_search

A ← sorted array

n ← size of array

x ← value to be searched

Set lowerBound = 1

Set upperBound = n

while x not found

if upperBound < lowerBound

EXIT: x does not exists.

set midPoint = lowerBound + ( upperBound - lowerBound ) / 2

if A[midPoint] < x

set lowerBound = midPoint + 1

if A[midPoint] > x

set upperBound = midPoint - 1

if A[midPoint] = x

EXIT: x found at location midPoint

end while

end procedure