

DESIGN AND ANALYSIS OF ALGORITHMS

LECTURE-1

Algorithm Introduction:-

This is a step by step process of performing some action.

Input list



A step by step method
for solving a problem
or doing a task



output list

Common Terms:-

1. Variables:- specific location in computer memory that is used to store only one value.
2. datatype:- set of variables takes its values.
3. Statements:- lines of code

Properties:-

1. Input: Algorithm uses values from a specific set.
2. Output:- For each i/p the algorithm produces values from a specific task.
3. Precision:- Steps are precisely defined.
4. Correctness:- i/p is defined for that output is correct.
5. fitness:- o/p after finite no. of steps for each i/p

6. Determination:- Result should be guaranteed.

7. Generality :- Procedure apply to all problems not a special subset.

→ Algorithm can be expressed in different notations.

→ natural language

→ Pseudo code

→ flow chart

→ programming language