

Problem Solving Technique:

- Computers cannot think by itself.
- Computers works based on the given input
- proper input needs to be given for proper output
- user understand the problem

Steps involved in problem solving:

- * Understand the problem: objective of the given problem
- * Analyze the problem find different ways to for solving a problem
- * Develop the solution: detailed step by step solution
- * Code and implement: convert the solution to the computer understandable format

Problem Solving Techniques:

- Algorithm
- Flowchart
- Pseudocode

Algorithm:

- * Step by step solution for the given problem
- * For single problem we may have a greater number of algorithms
- * Algorithms are selected based on the space and time factor

Characteristics of Algorithm:

- should be written in high level language like English
- should be clear and unambiguous
- there should be finite number of steps
- should be programming language independent

Flowchart:

- step by step pictorial representation of solution
- logics are shown in the diagram
- check the logics easily

Symbols:

Oval - start and stop

Parallelograms - input and output

rectangle - processing

diamond - decision making

flowlines - indicate the direction, connects the symbol

Rules:

- All symbol must be connected by flowlines
- there should be only one start and stop
 - flow lines are entered on top of the symbol, exit from bottom of the symbol
- for decision symbol exit may be from the bottom or either side of the symbol

Tools:

- Raptor
- scratch

Pseudocode:

- pseudocode is neither an algorithm nor a program
- it consists of English like statements which performs some specific task
- represented in terms of words and phrases
- not follows any syntax
- statements describe actions
- avoid program specific keyword