

Introduction to Computer(01103)

Lecture# 25

Topics

- Algorithm
- Flowchart
- Flowchart guidelines
- Flowchart Symbols

Algorithm

- Algorithm is a Problem solving technique.
- An Algorithm is a step-by-step procedure to solve a problem.
- The process of solving a problem becomes simpler and easier with the help of Algorithm.
- It is better to write Algorithm before writing the actual computer program.

Continue...

- ◉ **Algorithms** in **C++**
- ◉ In **C++**, the designation identifies a group of functions that run on a designated range of elements. The **algorithms** are used to solve problems or provide functionality. **Algorithms** work exclusively on values; they don't affect the size or storage of a container

Continue...

- An **algorithm** is a step by step procedure to solve logical and mathematical problems.
- A recipe is a good example of an algorithm because says what must be done, step by step. It takes inputs (ingredients) and produces an output (the completed dish).
- The words 'algorithm' and 'algorism' come from the name of a Persian mathematician called Al-Khwarizmi.

Flowchart

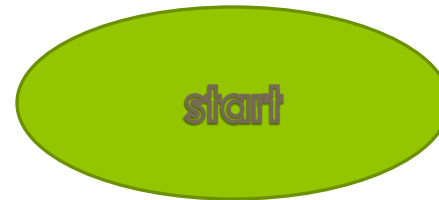
- Flowchart is a graphical representation of any of an Algorithm.
- Flowchart is combination of two words Flow and chart.
- Chart: A chart consist of different symbols to display information about any program.
- Flow: Flow indicates the direction of processing that takes place in the program.

Flowchart Symbols

- Flowchart Symbols

- (1) Oval

- An End or a Beginning
- The oval, or **terminator**,
- is used to represent the start and end of a process.



(2) Rectangle

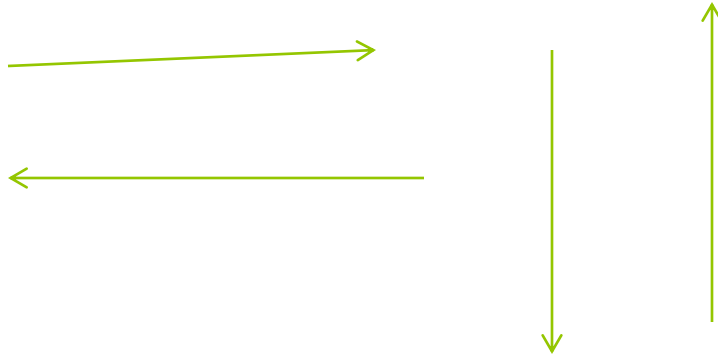
- ◉ (2) Rectangle
- ◉ It represents any step in the process you're diagramming Use rectangles to capture **process steps** like basic tasks or actions in your process



```
sum=a+b;
```


(3) The Arrow

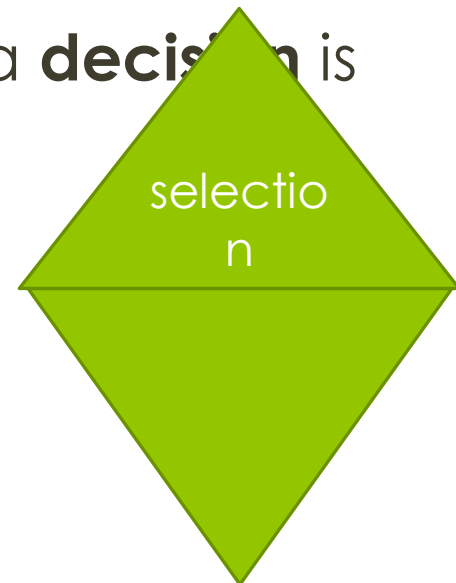
- ◉ (3) The Arrow
- ◉ Indicate Directional Flow



(4) The Diamond

The Diamond

- Indicate a Decision
- The diamond symbolizes that a **decision** is required to move forward.



(5) Input & Output

Input & Output

- Input and output symbols show where and how data is coming in and out throughout your process.
- Parallelogram symbol is used for this purpose.



Input/output

THANK YOU