

## Lecture – 2 -

### Computer Programming

If you understood what a **computer program** is, then we will say: the act of writing computer programs is called computer programming.

There are hundreds of programming languages, which can be used to write computer programs and following are a few of them –

- Java
- C
- C++
- Python
- PHP
- Perl
- Ruby

A set of instructions that achieve a single outcome are called program or procedure. Many programs functioning together to do a task make a **software**.

For example, a word -processing software enables the user to create, edit and save documents. A web browser enables the user to view and share web pages and multimedia files. There are two categories of software –

- System Software
- Application Software
- Utility Software

## Algorithm

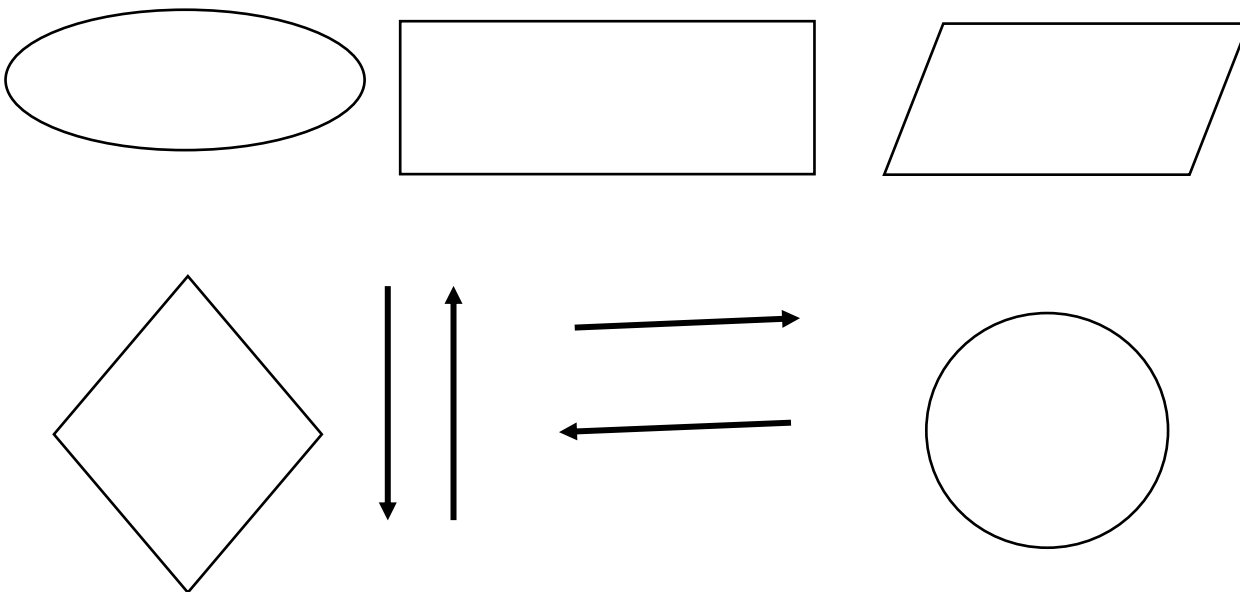
From programming point of view, an **algorithm** is a step-by-step procedure to resolve any problem. An algorithm is an effective method expressed as a finite set of well-defined instructions.

A flowchart is a blueprint that pictorially represents the algorithm and its steps. The steps of a flowchart do not have a specific size and shape rather it is designed in different shapes and sizes (see the image given below).

### **Benefits of Flowchart**

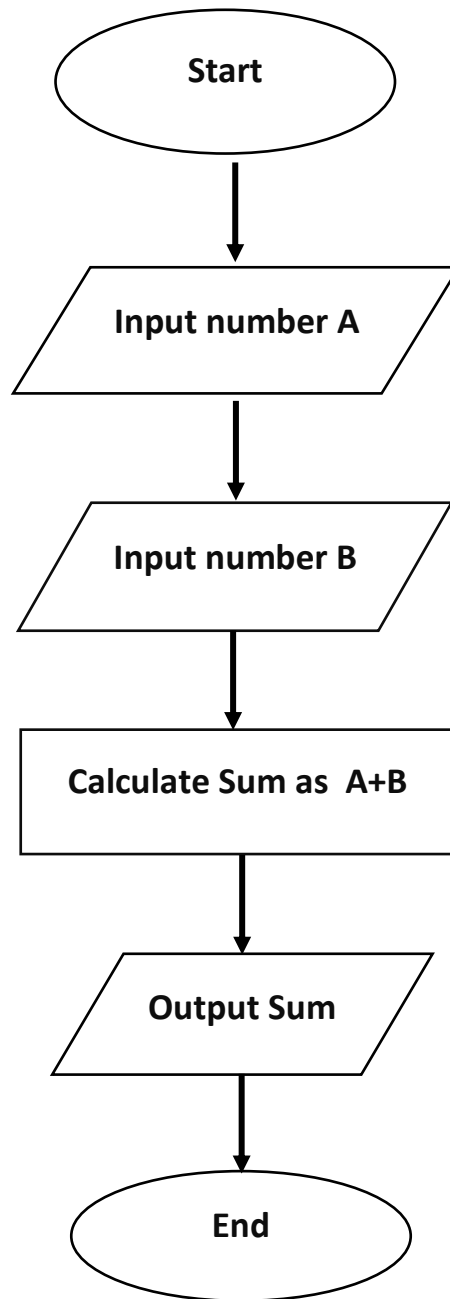
- **Simplify the Logic**
- **Makes Communication Better**
- **Effective Analysis**
- **Useful in Coding**
- **Proper Testing**

### **Flow-Chart Symbols**



## Flowchart Example – Simple Algorithms

A flowchart can also be used in visualizing algorithms, regardless of its complexity. Here is an example that shows how flowchart can be used in showing a simple summation process.



# Flowchart Example – Calculate Profit and Loss

