Pemrograman Dasar

Week 2 : *Flowchart*

Flowchart is a chart with certain symbols that describe the process sequence in detail and the relationship between a process (instruction) with other processes in a program.

Flowcharts use various symbols that contain information about steps or sequence of events. Each of these symbols is related to an arrow to describe the direction of the process flow.

Flowchart is used primarily for communication aids and for documentation.

Benefits of Flowchart

1. As Documentation of Work Procedures in ISO
2. As a guideline for running Operations
3. As a guideline for training new employees
4. As a benchmark
5. As a work map to prevent loss of direction
6. To facilitate decision making

Guidelines for Making Flowcharts

If an analyst and programmer will make a flowchart, there are some guidelines that must be considered, such as:

1. Flowchart is drawn from the top page to the bottom and left to right.
2. The activities described must be carefully defined and this definition must be understood by the reader.
3. When the activity starts and ends must be clearly determined.
4. Each step of the activity must be described using a description of the verb.
5. Every step of the activity must be in the right order.

Common Symbols of Flowchart

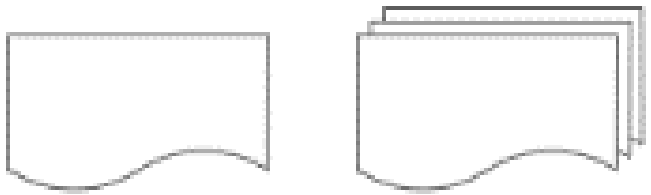
The American National Standards Institute (ANSI) set standards for flowcharts and their symbols in the 1960s. The International Organization for Standardization (ISO) adopted the ANSI symbols in 1970.

ANSI/ISO Shape	Name	Description
	Flowline (Arrowhead)[15]	Shows the process's order of operation. A line coming from one symbol and pointing at another.[14] Arrowheads are added if the flow is not the standard top-to-bottom, left-to right.[15]
	Terminal[14]	Indicates the beginning and ending of a program or sub-process. Represented as a stadium,[14] oval or rounded (fillet) rectangle. They usually contain the word "Start" or "End", or another phrase signaling the start or end of a process, such as "submit inquiry" or "receive product".
	Process[15]	Represents a set of operations that changes value, form, or location of data. Represented as a rectangle.[15]
	Decision[15]	Shows a conditional operation that determines which one of the two paths the program will take.[14] The operation is commonly a yes/no question or true/false test. Represented as a diamond (rhombus).[15]
	Input/Output[15]	Indicates the process of inputting and outputting data,[15] as in entering data or displaying results. Represented as a parallelogram.[14]
	Annotation[14] (Comment)[15]	Indicating additional information about a step the program. Represented as an open rectangle with a dashed or solid line connecting it to the corresponding symbol in the flowchart.[15]
	Predefined Process[14]	Shows named process which is defined elsewhere. Represented as a rectangle with double-struck vertical edges.[14]
	On-page Connector[14]	Pairs of labeled connectors replace long or confusing lines on a flowchart page. Represented by a small circle with a letter inside.[14][18]
	Off-page Connector[14]	A labeled connector for use when the target is on another page. Represented as a home plate-shaped pentagon.[14][18]

The ANSI/ISO standards include symbols beyond the basic shapes.

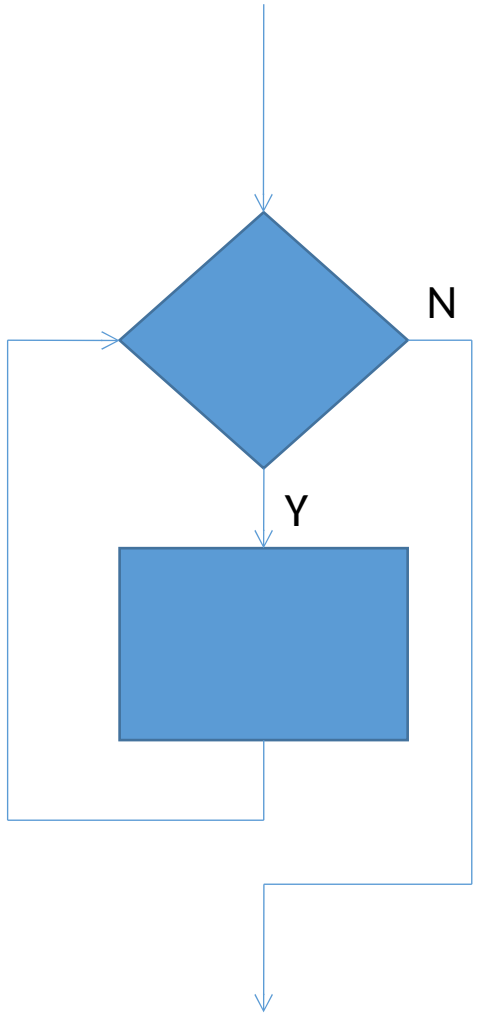
- Data File or Database represented by a cylinder (disk drive).

- Document represented as a rectangle with a wavy base.



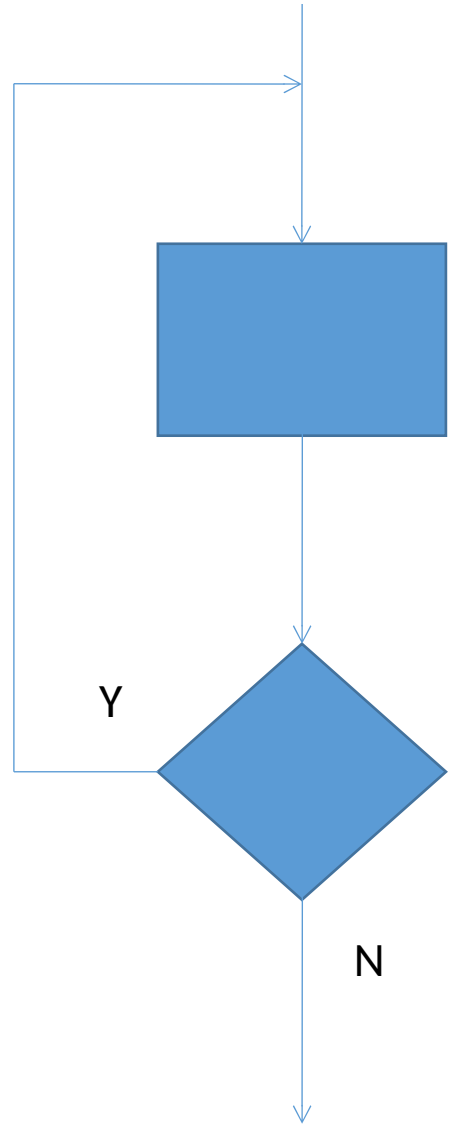
Loop

WHILE … DO … END WHILE



Loop

DO ... WHILE



THANKYOU