Flow Charts (Presentation of Algorithm)

A graphic representation of an algorithm is called a 'flow-chart'. A flow chart constitutes a schematic and pictorial representation of the sequence of steps, which are to be executed in solving a problem.
A flow-chart consists of some boxes linked by arrows. In each box, some instruction to be carried out is mentioned. Arrows on the lines connecting the boxes indicate the direction, in which we should proceed.
The boxes are of different shapes. Each particular shape is associated with a specific type of instruction as shown in fig.

Flow-chart conventions:
While drawing a flow-chart, the following conventions are observed.
(i) The general direction of flow is from left to right and from top to bottom.
(ii) Only one flow-line should leave a process symbol.
(iii) Only one flow line should enter a decision box and atleast two lines must leave it.

(iv) A flow line that goes in upward direction, completes and iteration (or repetition) or a loop.

Basic operations and flow-charts:

The three basic operations are:
(1) Sequence
(2) Selection
(3) Iteration

The selection of a flow-chart corresponding to an iteration, or the Repeat-Until construct or the While-Do construct gives rise to a cycle, usually called a loop. There are two types of loops:

(i) When an operation is repeated, a fixed number of times, whatever the value of the variables involved may be, then the corresponding section of the flow diagrams gives rise to a fixed loop.

(ii) When the number of times an iteration is to be carried out depends upon the values of the variables, then the corresponding section of the flow diagrams gives rise to variable loop. This loop is also known as backward jump.