



SNS COLLEGE OF TECHNOLOGY



Coimbatore-36.

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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**

COURSE NAME : 23CST101– PROBLEM SOLVING & C PROGRAMMING

I YEAR/ I SEMESTER

UNIT – I INTRODUCTION TO PROBLEM SOLVING TECHNIQUES

Topic: Notation (Flow Chart)

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Flow Chart








What is Flow Chart?

- Flow chart is defined as graphical representation of the logic for problem solving.
- The purpose of flowchart is making the logic of the program clear in a visual representation.





Flow Chart

Symbol	Name	Function
	Process	Indicates any type of internal operation inside the Processor or Memory
	input/output	Used for any Input / Output (I/O) operation. Indicates that the computer is to obtain data or output results
	Decision	Used to ask a question that can be answered in a binary format (Yes/No, True/False)
	Connector	Allows the flowchart to be drawn without intersecting lines or without a reverse flow.
	Predefined Process	Used to invoke a subroutine or an Interrupt program.
	Terminal	Indicates the starting or ending of the program, process, or interrupt program
	Flow Lines	Shows direction of flow.



Flow Chart



Rules for drawing a flowchart

- The flowchart should be clear, neat and easy to follow.
- The flowchart must have a logical start and finish.
- Only one flow line should come out from a process symbol.
- Only one flow line should enter a decision symbol.
- two or three flow lines may leave the decision symbol
- Only one flow line is used with a terminal symbol.
- Intersection of flow lines should be avoided.

Advantages of flowchart:

1. Communication
2. Effective analysis
3. Proper documentation
4. Efficient Coding
5. Proper Debugging
6. Efficient Program Maintenance

Disadvantages of flowchart:

1. Complex logic
2. Alterations and Modifications
3. Reproduction
4. Cost



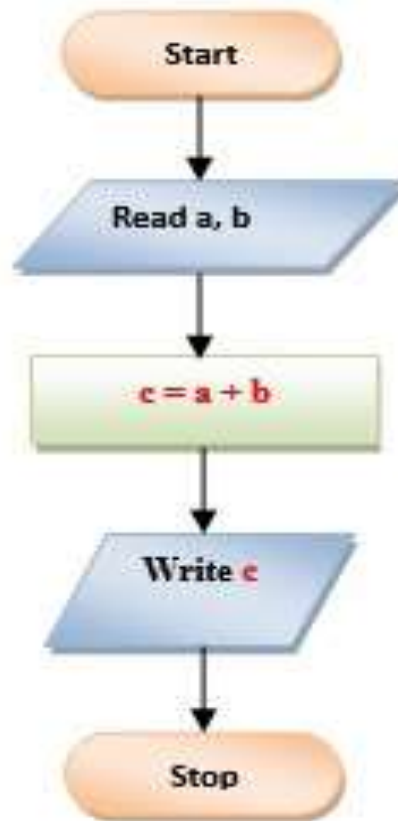
Flow Chart

To find sum of two numbers

Algorithm

1. Start
2. Read a, b
3. $c = a + b$
4. Print or display c
5. Stop

Flowchart



Program

```
#include<stdio.h>

int main()
{
    int a, b, c;

    printf("Enter value of a: ");
    scanf("%d", &a);

    printf("Enter value of b: ");
    scanf("%d", &b);
    c = a+b;

    printf("Sum of given two numbers is: %d", c);

    return 0;
}
```



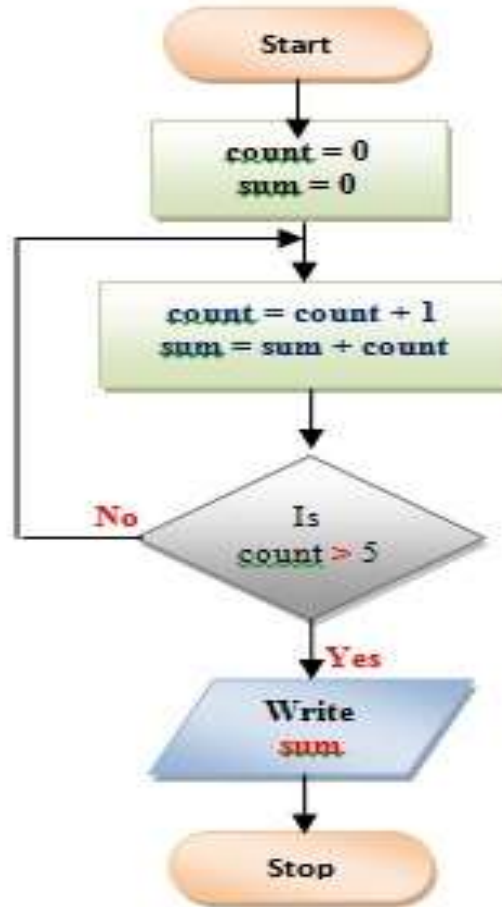
Flow Chart

Find the Sum of First Five Natural Numbers

Algorithm

1. Start
2. Initialize count = 0, sum = 0
3. count = count + 1
4. sum = sum + count
5. Repeat steps 3,4 until count > 5
6. Print sum
7. Stop

Flowchart



Program

```
#include<stdio.h>

int main()
{
    int count, sum;
    sum = 0;

    for (count = 1; count<=5; count++)
    {
        sum = sum +count;
    }

    printf("Sum of 1st 5 numbers is: %d", sum);
    return 0;
}
```



Thank
you

THANK YOU