

Programming and Problem Solving through C Language

O Level / A Level

Chapter -2 : Flowcharts for Problem Solving

FLOWCHART



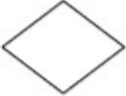



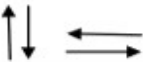
The flowchart is a diagram which visually presents the flow of data through processing systems. This means by seeing a flow chart one can know the operations performed and the sequence of these operations in a system. Algorithms are nothing but sequence of steps for solving problems. So a flow chart can be used for representing an algorithm.

A flowchart, will describe the operations (and in what sequence) are required to solve a given problem. You can see a flow chart as a blueprint of a design you have made for solving a problem.

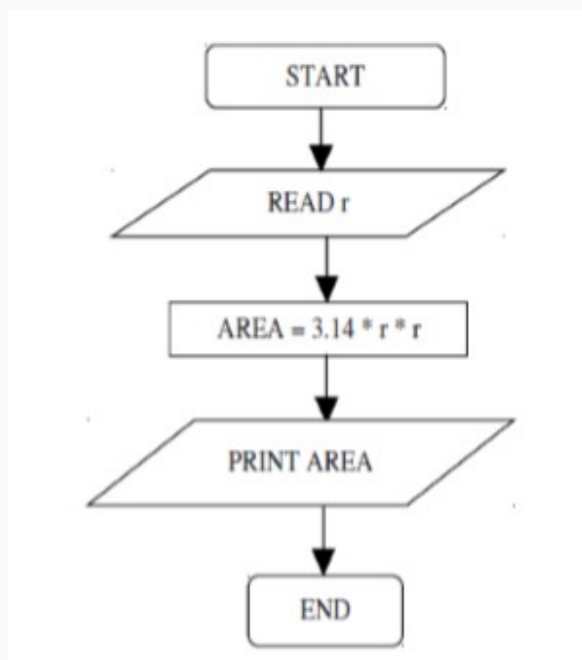
Flowchart Symbols

There are 6 basic symbols commonly used in flowcharting of assembly language Programs:

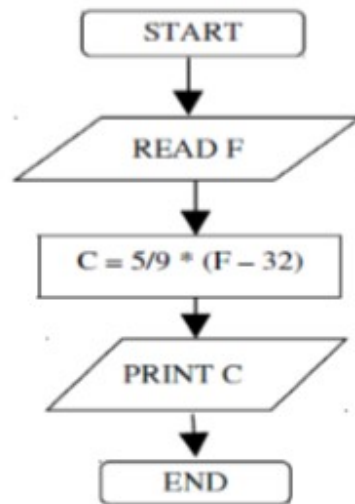
- Terminal,
- Process,
- input/output,
- Decision,
- Connector and
- Predefined Process.

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.

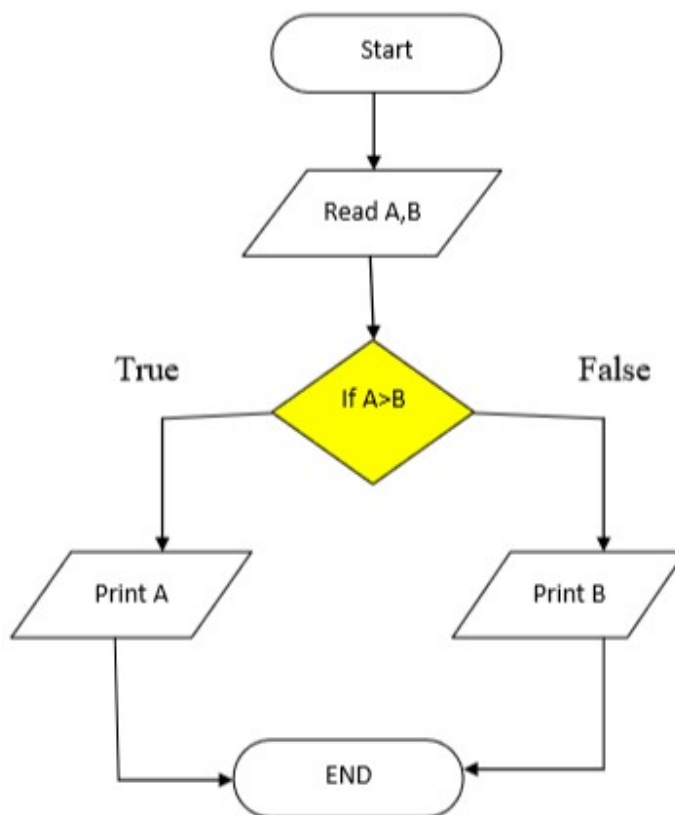
Problem 1 : Flowchart to calculate the area of circle.



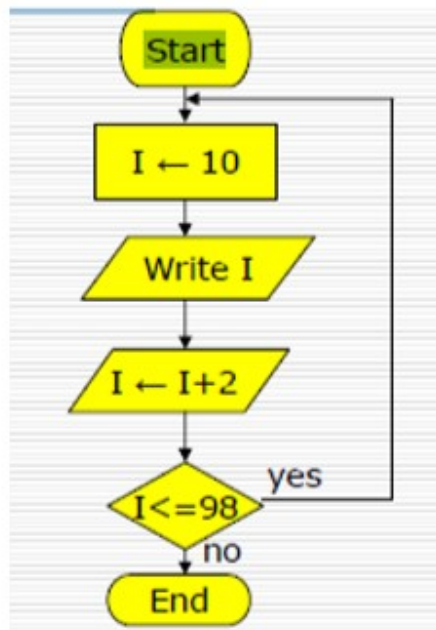
Problem 2: Convert temperature Fahrenheit to Celsius.



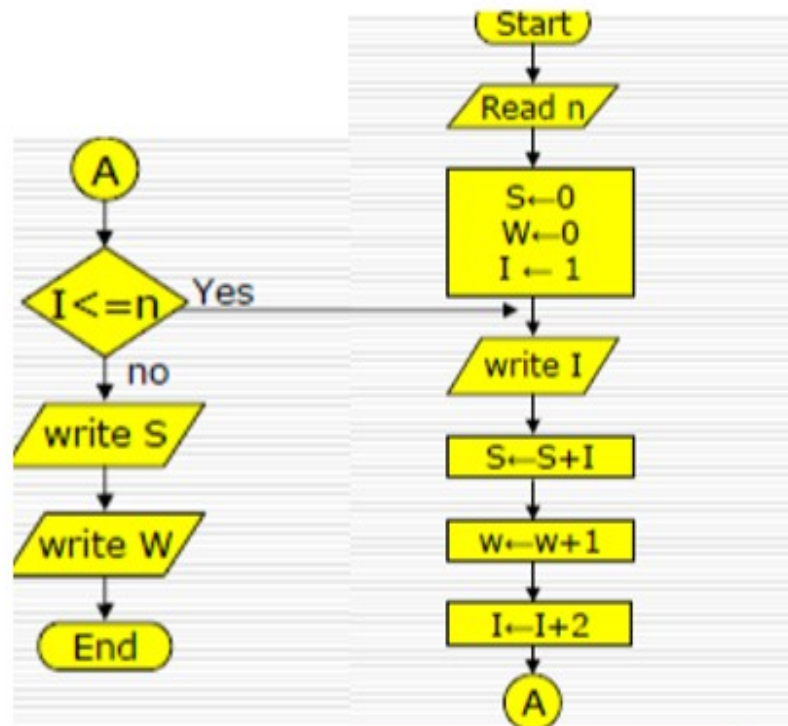
Problem 3: Flowchart to find the greatest from 2 numbers.



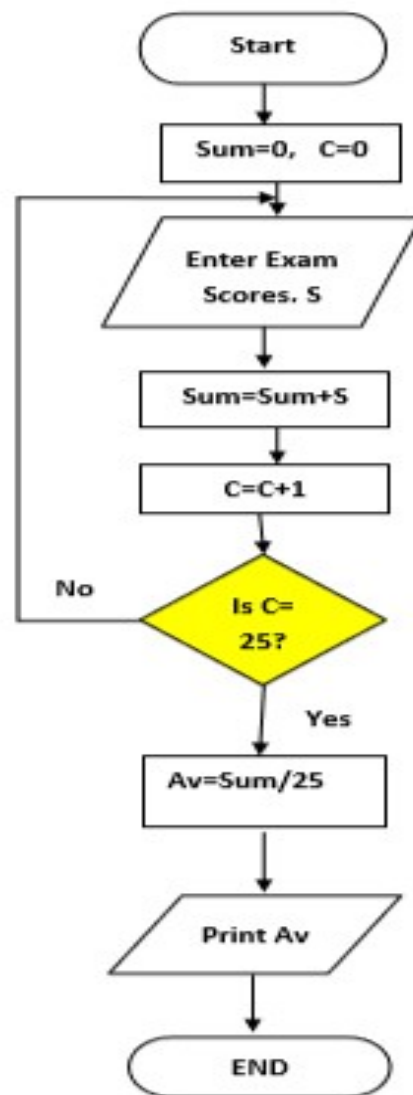
Problem 4: Flowchart to print the Even numbers between 9 and 100.



Problem 5: Flowchart for printing odd numbers less than a given number. It should also calculate their sum and count.



Problem 6 : Flowchart for the calculate the average from 25 exam scores.



Assignments

1. Draw a flowchart to find the sum of first 100 natural numbers.
2. Draw a flow chart to find the largest of 3 numbers.
3. Draw a flowchart for check a given number is prime or not.