

Introduction to C++Significance & Compilation

Introduction to the Programming World.

How to Cook Maggi

→ Paani garam,

→ Maggi daal dengre

→ 2 min Wait.

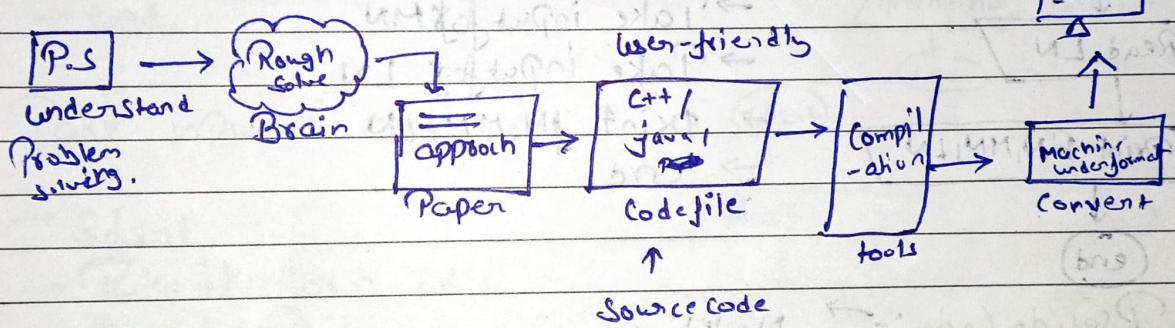
→ Masala daal dengre

→ 2 min wait

→ Plate me daal dengre.

How to approach a Problem? through Process

- Let's first understand the Problem → Step by step a problem.
- Analysis problem → Check input value / constraint / requirement
- Logic building / approach / algorithm

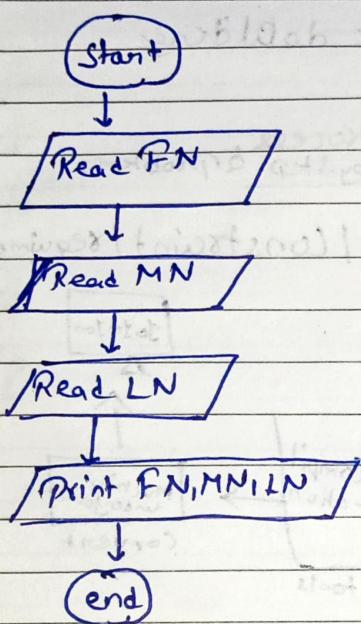
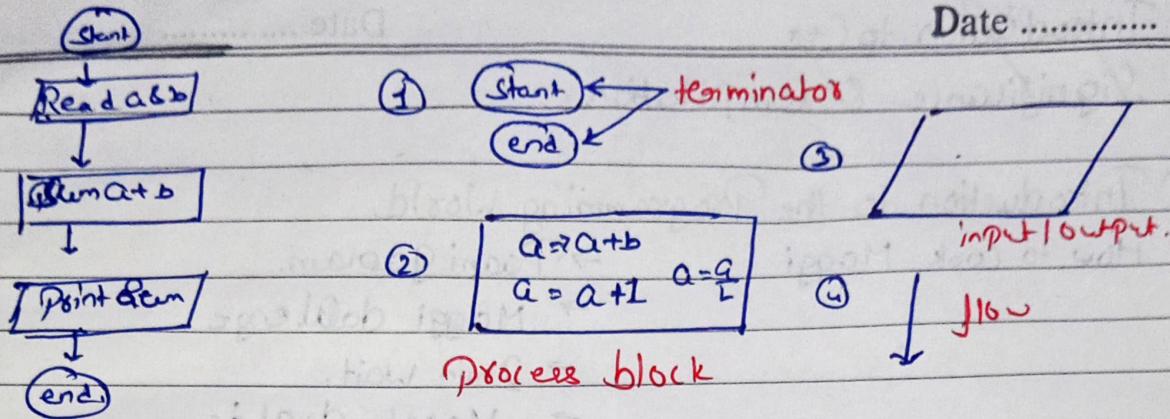


Using Computer to solve a Problem?

P.L → Compil P.L → Compiler → Machine understand
 format converted

Flowchart & its Components:-

A flowchart is a diagrammatic representation that illustrates the sequence of operation to be performed to arrive at a solution to a problem. it uses various symbols such as arrows, rectangle, & diamond to represent different type of actions or steps in a process.



Pseudo Code.

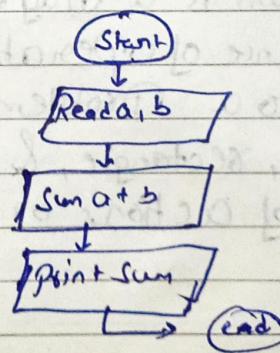
- Start.
- Take input for FN
- Take input for MN
- Take input for LN
- print FN,MN,LN
- end.

Pseudo Code:- Nakli + code.

Pseudo code is a notational system that resembles a simplified version of a programming language, used for writing the algorithmic steps of a program in a human readable form. It helps programming plan & discuss algorithms without worrying about syntax details of actual P.L.

✓ Point Sum of a & b.

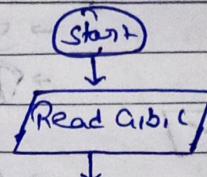
- Start
- take ip for a & b
- calculated sum $\Rightarrow a+b$
- Print Sum
- end



Print Avg of a,b,&c.

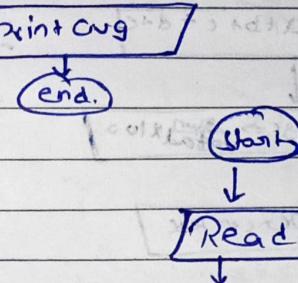
- Start
- take i/p for a,b,&c
- Calculate Avg $\Rightarrow \frac{a+b+c}{3}$
- Print Avg.
- end.

Date



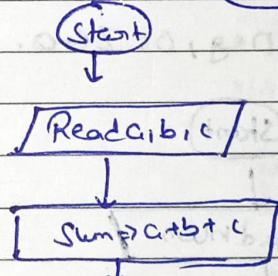
Print half of a.

- Start
- take i/p for a
- Calculate half a/2
- Print half
- end



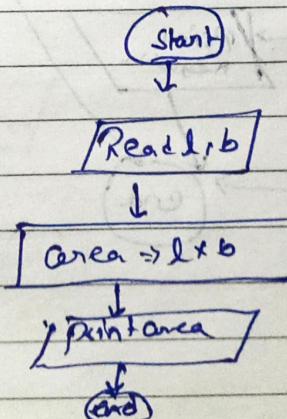
Take input & add 3 no.

- Start
- Take i/p for a,b,&c
- Calculate Sum $a+b+c$
- Print Sum
- end.



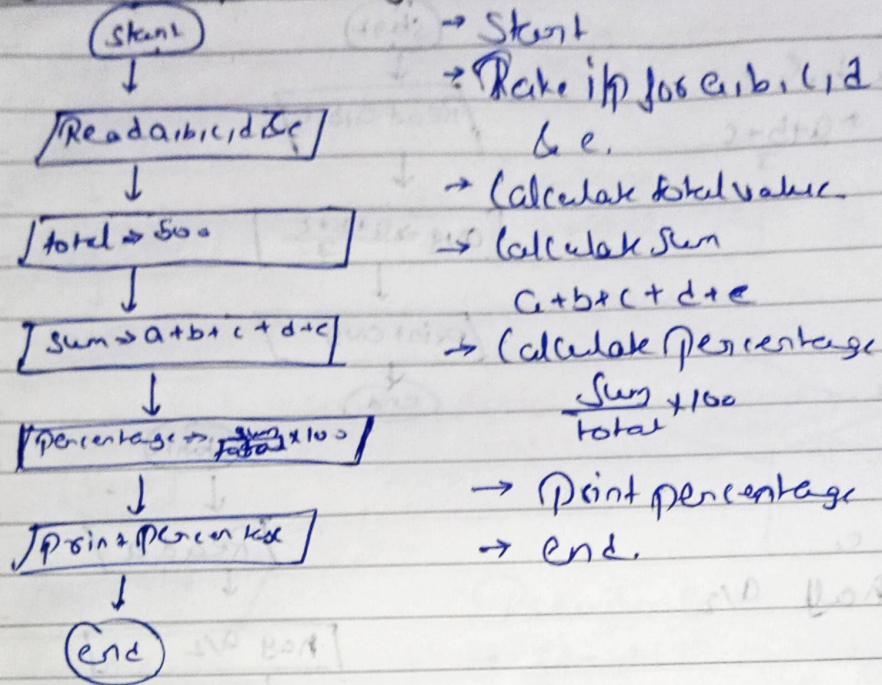
Area of rectangle.

- Start
- Take i/p for l & b
- calculate area $l \times b$
- Print Area
- end



Date

Calculate Percentage



User

Erg \rightarrow 98

Phy \rightarrow 95

Chem \rightarrow 95

Math \rightarrow 95

IP \rightarrow 99

94.5

→ Start

→ Take input for a, b, c, d, e

& e.

→ Calculate total value.

→ calculate sum

$$a+b+c+d+e$$

→ calculate Percentage

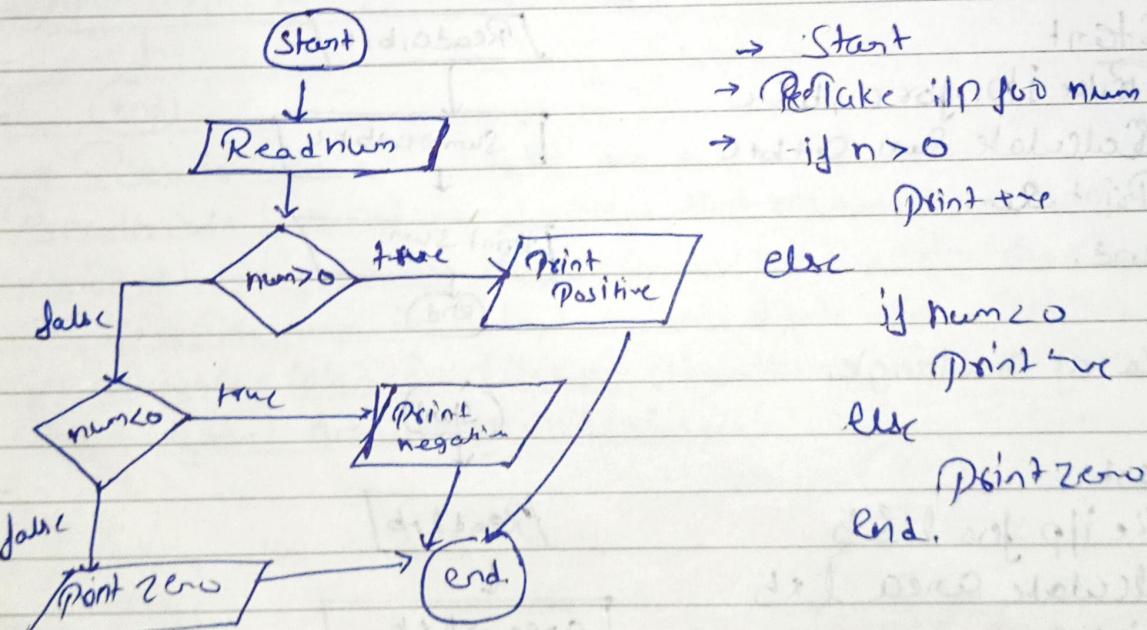
$$\frac{\text{Sum} + 100}{\text{Total}}$$

→ Print percentage

→ End.

Condition Question.

Check Pos, neg, or zero.



→ Start

→ Read take input for num

→ if n > 0

Print +>

else

if num < 0

Print ->

else

Print + zero

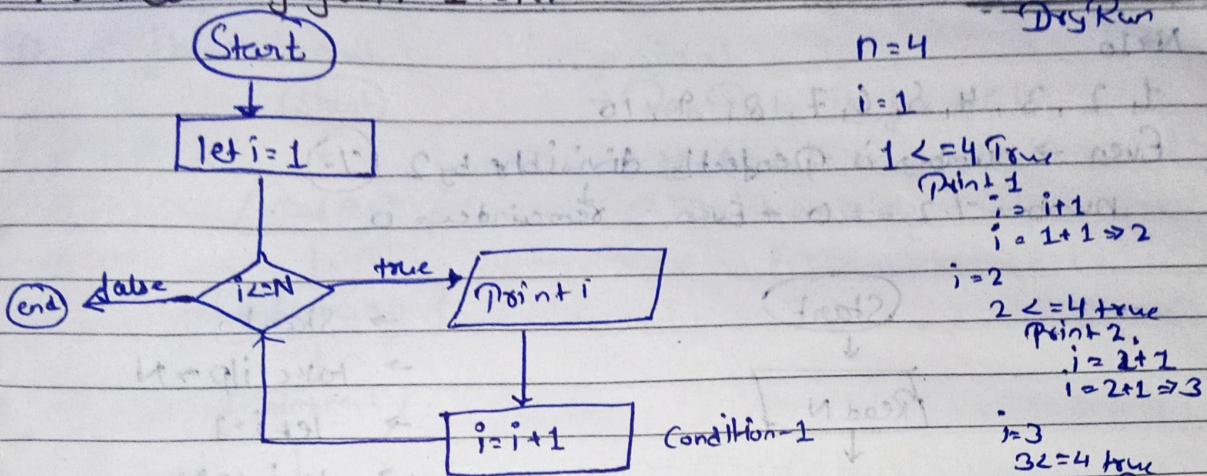
End.

Looping.

Print Counting from 1 to N.

Date

Dry Run



→ Start

→ Take input for $i \leq N$ if $i \leq N$ true

Point i

 $i = i + 1$
repeat ①

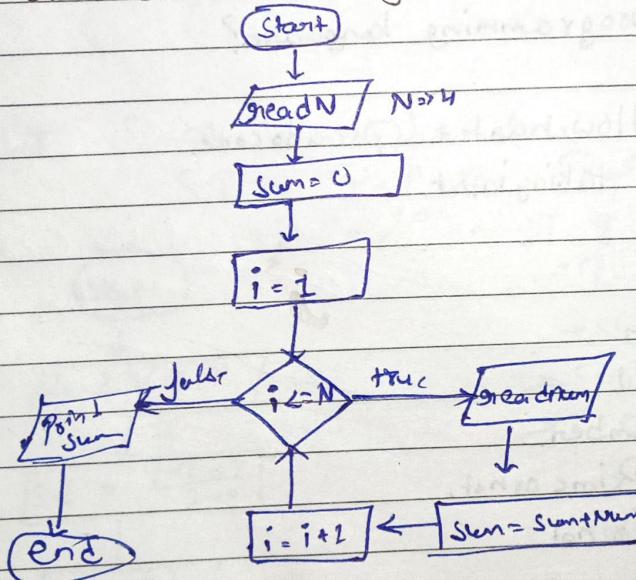
else

 $i \leq N$ False

Point False

end.

Add N Numbers from User.



Dry Run.

 $N=4$, sum = 0, $i=1$ $1 \leq 4 \rightarrow T$ num $\rightarrow 10 \rightarrow 10$ sum $\rightarrow 0 + 10 = 10$ $i=2 \leq 4 \rightarrow T$ num $\rightarrow 15 \rightarrow 15$ sum $\rightarrow 10 + 15 = 25$ $i=3 \leq 4 \rightarrow T$ num $\rightarrow 20 \rightarrow 20$ sum $\rightarrow 25 + 20 = 45$ $i=4 \leq 4 \rightarrow T$ num $\rightarrow 60 \rightarrow 60$ sum $\rightarrow 45 + 60 = 95$ $i=5 \leq 4 \rightarrow F$

Date

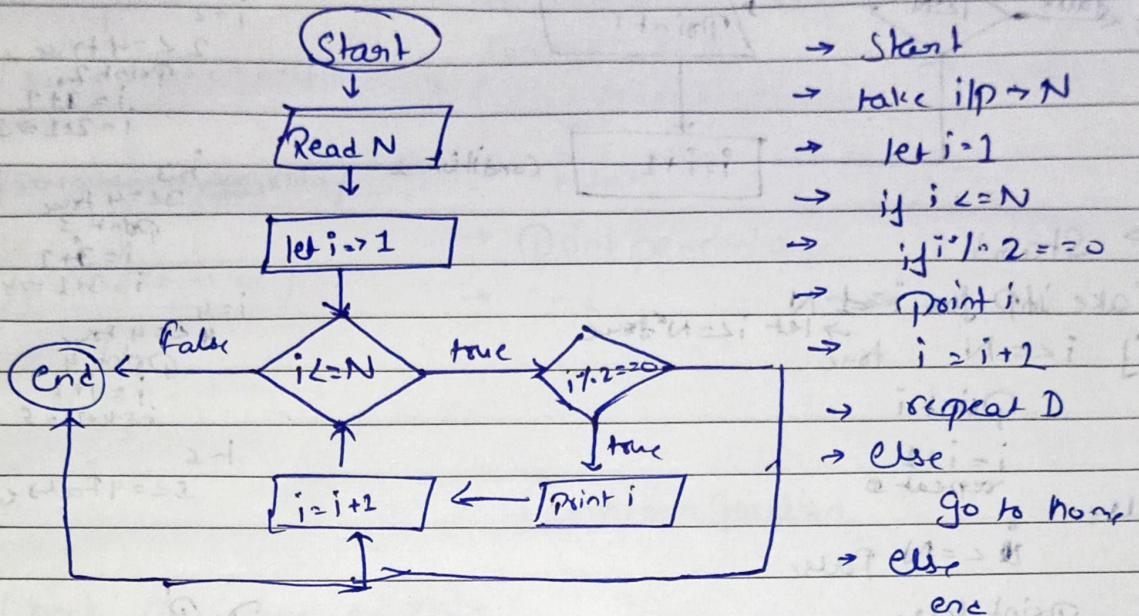
~~Print 1 to N, but only Even Numbers.~~

$N \geq 10$

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Even \rightarrow number is perfectly divisible by 2

Number $\div 2 = 0 \rightarrow$ Even, remainder = 0



Homework

Q1 What is the heck is a Programming language?

Assignments:

flowchart + Pseudo code.

- ✓ Multiple 2 number after taking input
- ✓ Perimeter of triangle
- ✓ Find Simple interest.
- ✓ Find Compound interest.
- ✓ Print Counting from N to 1
- ✓ Find Factorial of a Number.
- ✓ Check if a number is Prime or not.
- ✓ Check Valid Triangle or not
- ✓ Print Mat of 2 no.