**FlowCharts**

* Diagramatical representation of step by step solution to given problem
* Allow you to break down any process into smaller steps and display them in a visually pleasing way

Program -> Solution Analysis -> Code -> Test

**Components Of FlowChart**

It is used to start and terminate the flowchart

It is used to initialize variable and print variable i.e I/O

It is used to process the data.

It is used to take decision

Q1 Find twice of a number

Read N

Result=N\*2

Print N

Q2. Find Simple Interest of a P,R,T

Read P,R,T

SI=P\*R\*T

Print SI

Q3 Find number is odd or even

Read N

N%2==0

yes No

Print “Odd”

Print “Even”

Q4 Find the largest of 3 no.

Read A,B,C

A>B

Yes No

B>C

A>C

Print C

Print B

Print A

yes No No yes

Q5 Print 1-N values

Since here print command is repetitive -> so need to use Loop something like this

Read N

I=1

Is I <=N

No yes

Print I

I=I+1

Q6 Find the sum of 1-N numbers

Since here print command is repetitive -> so need to use Loop something like this

Read N

I=1

Result=0

Is I <=N

No yes

Print Result

Result = Result + I

I=I+1

Q7 Read N numbers and find sum of all

Read N

I=1

Result=0

Is I <=N

No yes

Read A

Print Result

Result = Result + A

I=I+1

Q8 Read N numbers and find largest among all

Read N,A

//Read N

I=1

Result=A

Is I <N

//Result =-3982748939

No yes //I<=N

Read A

Print Result

Is Result<=A

Yes

No

I=I+1

Result=A

Here first we are initializing -> now for optimizing (as there could be a situation where user may enter number less than our initialized value ) what we do here -> take one value=> assign to result and then compare for other n-1 value => this could be best solution

Q9 Read N , find prime or not

Read N

I=2

Is I <N

No yes

Is N%I==0

Yes

No

I=I+1

Print “Not A Prime Number”

Print ”Prime Number ”

Why do we use Flow Charts?

Why do we use Pseudo Code?

It is used to communicate code logic between various programming languages

######################################################################

Example :-

Q :- Read N, print 1-N

I=1

While I<=N do

Print I

I=I+1

End

Print “Hello ”

Exit

######################################################################

Q Read N, find sum of 1-N numbers

I=1

Sum=0

While I<=N do

Sum=Sum + I

End

Print Sum

Exit

#########################################################################

**Patterns**

**Q**1. Read N , Print matrix of N\*N with each value “\*”

Read N

I=1,

While i<=N do

j=1

While j<=N do

Print “\*”

J++

End

(print “\n” ) Go to new line

I++

End

Exit

Answer

4

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Q print pattern

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Read N

I=1

While I<=N do

J=1

While J<=I do

Print “\*”

J++

End

Print “\n”

I++

End

exit