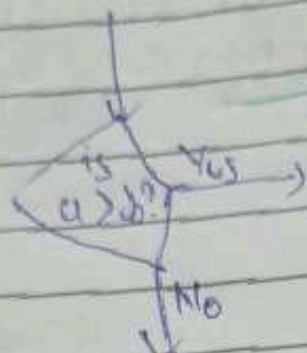


## Conditionals

Recall :



In code is called  
conditional statement

Ex: I/P =  $a, b$   
O/P =  $\begin{cases} a & \text{if } a > b \\ b & \text{otherwise} \end{cases}$

Conditionals like these are solved using  
if statement

if (  
      
      
  

if the condition within  
( ) is true, then  
execute the entire  
code block within  
{ }

Thus,  $\begin{aligned} &\text{if } (a > b) \{ \\ &\quad \text{cout} \ll a \ll \text{endl}; \\ &\} \\ &\text{if } (a \leq b) \{ \\ &\quad \text{cout} \ll b \ll \text{endl}; \\ &\} \end{aligned}$

In the above example, instead of  
checking again for  $b > a$  in the



second if block, we know that if the first if condition does not get fulfilled, then the second block must be executed no matter what. This can be achieved using an if-else block.

If this condition is fulfilled  
else block won't execute  
`if (a > b) {  
cout << a << endl;  
}`

If if block doesn't execute then this else block will execute  
`else {  
cout << b << endl;  
}`

New Concept :-

`cin >> n` → waits for user to give input and assign it to `n` at its address.

Add programs in Lecture 3  
← DSA Code →



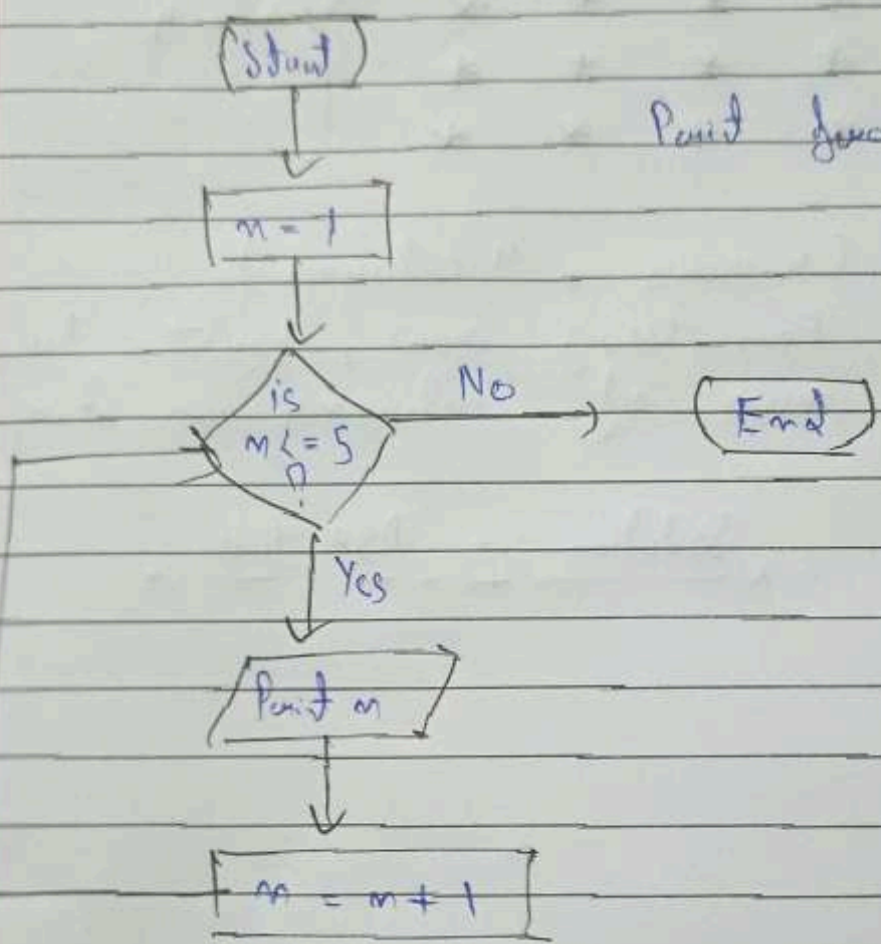
Note: cin ignores Enter (\n), TAB (\t) and space ( ) while taking input. These are called whitespace characters. Use cin.get ( ) to read those whitespace characters.

Using nested if-else :

All program in Lecture 3.  
DSA Call

# Loops

Recall from flowcharts:



Print from 1 to 5

While loop:

while (condition) {  
 //  
 }  
 तक तक ही गुंरा है  
 तक तक ही  
 करते रही

while the condition is true, keep on executing the block.

All example in lecture 3, DSA Code



## Patterning

Ex:

```

* * * *
* * * *
* * * *
* * * *
    
```

$n = 4$

(4 rows, 4 columns)

From every row, print 'row' num of columns one star

## Solution in DSA Code