Coimbatore-35
An Autonomous Institution

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RTMENT OF INFORMATION TECHNOLOGY

ROGRAMMING FOR PROBLEM SOLVING

I YEAR - I SEM

T 1 – Introduction to Problem Solving Techniques

C 6 – Simple Strategies for Developing Algorithms

wo commonly used strategies used in developing algorithm
ation
ursion

ION:

ion is when a loop **repeatedly executes** till the controlling conditi
ion is applied to the set of instructions which we want to get repea
includes "initialization, condition, and execution" of statement
crements and decrements) the control variable.

ce of statements is executed until a specified condition is true is ca
loop
le loop

	Example: Print n natural numbers

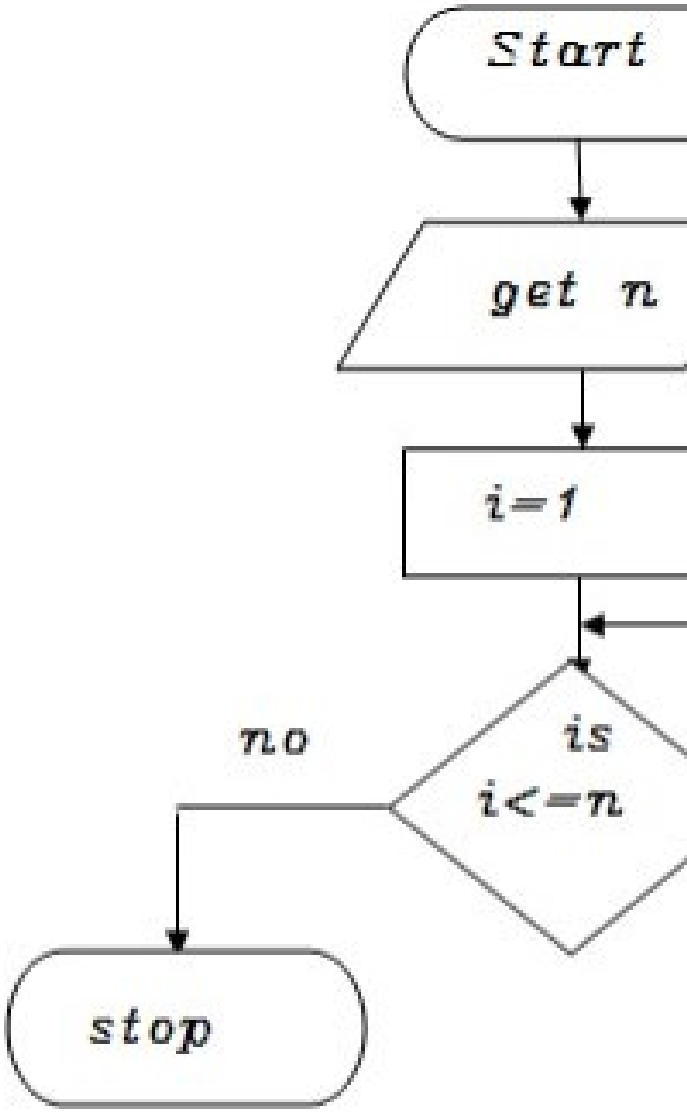
lue) DO	BEGIN
	GET n
	INITIALIZE i=1
	FOR (i<=n)DO
	PRINT i
	i=i+
	1
	ENDFOR

	END

	Example: Print n natural numbers

	BEGIN
	GET n
	INITIALIZE i=1
	WHILE(i<=n) DO
	PRINT i

	i=i+1
	ENDWHILE
	END



s:

ion that calls itself is known as recursion.

on is a process by which a function calls itself repeatedly unt

on has been satisfied.

n for factorial of n numbers using recursion

tion:

Start

Get n

call factorial(n)

print fact

Stop

ion factorial(n):

if(n==1) then fact=1 return fact

else fact=n*factorial(n-1) and return fact

le for factorial using recursion:

n:

l(n)
fact

factorial(n):
1) THEN
ct=1
ETURN fact

ct = n * factorial (n - 1)