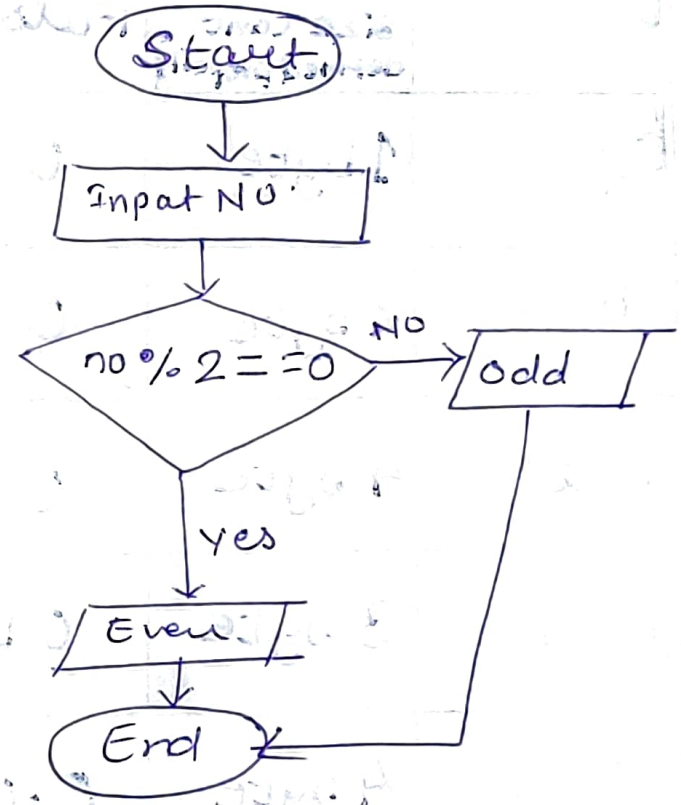
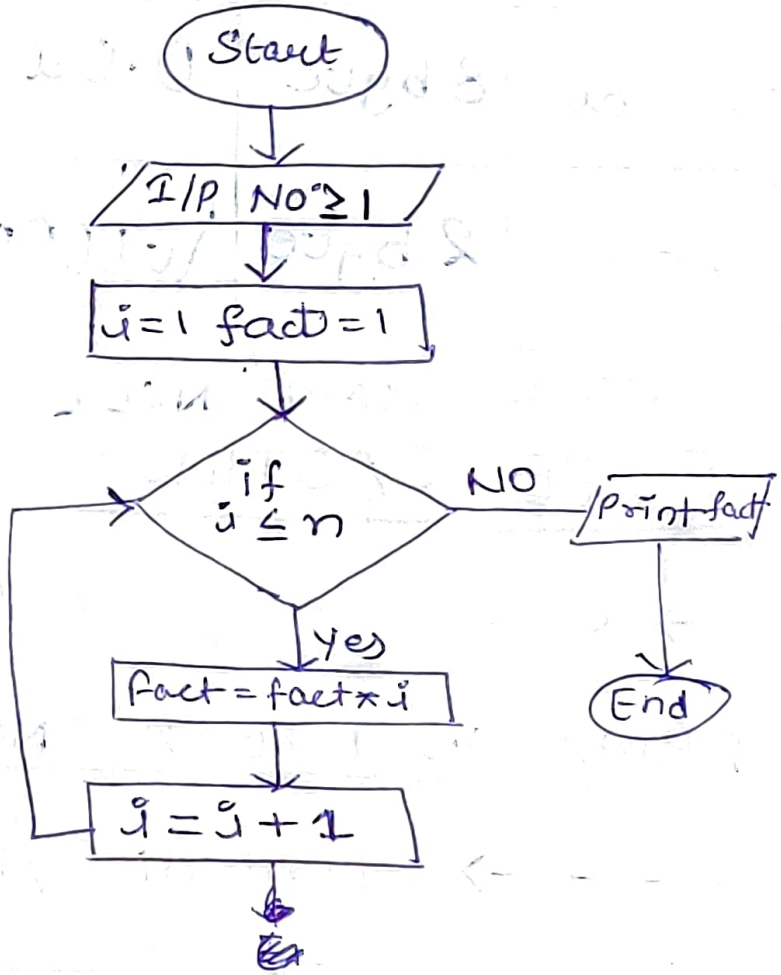
Q1 Check given no. is Even or odd.



Q2 Factorial of a given no.



Q3 Factorial of a no. using recursion.

ALGORITHM:

STEP 1: Start by taking I/P no 'n'.

STEP 2: Call factorial (n)

STEP 3: Print factorial f

STEP 4: STOP

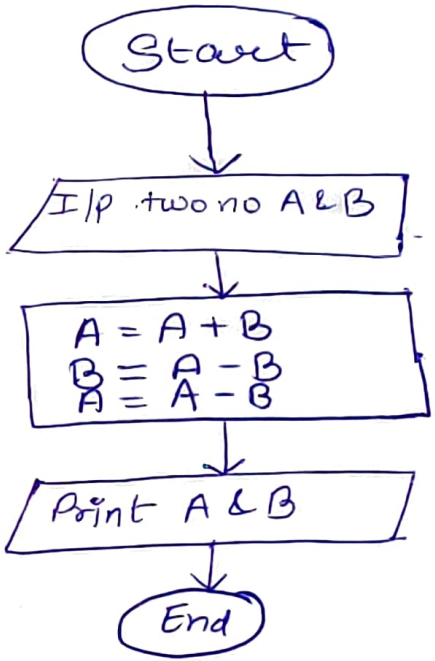
factorial (n)

STEP 1: If n == 1 then return 1

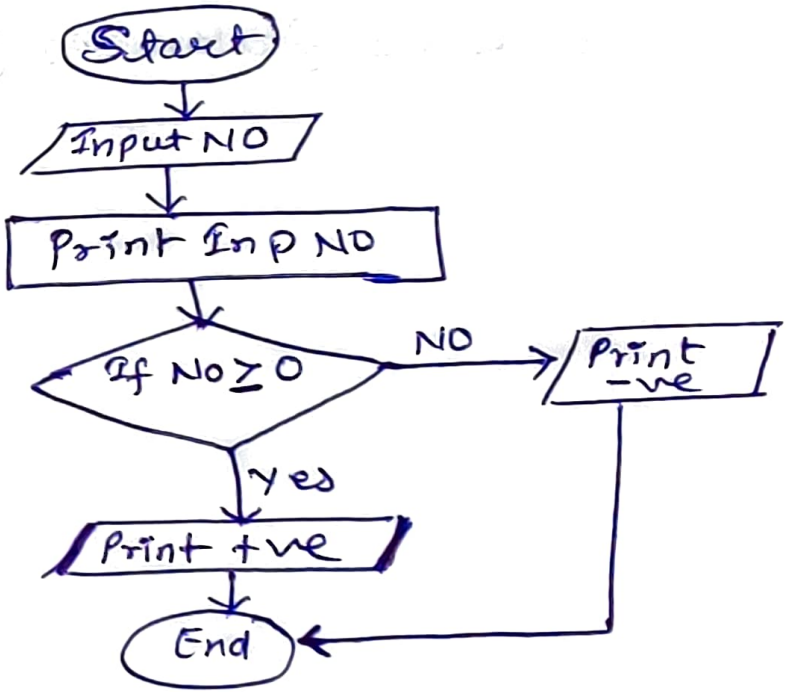
STEP 2: Else f = n * factorial (n-1)

STEP 3: Return f

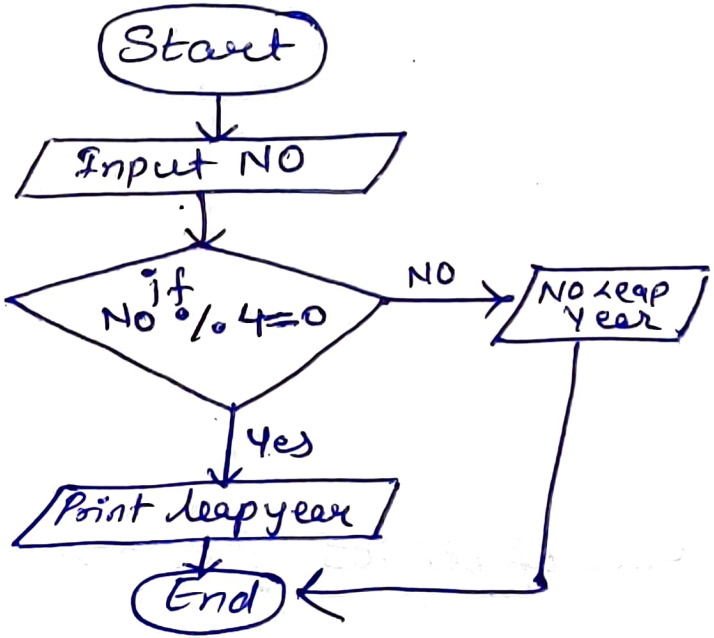
Q4 Swap two no's without using third variable approach?



Q5 Check given no is +ve or -ve?



Q6 Check leap year or NOT ?



Q7 Print 1 to 10 without using Loop ?

End

Q7 Print 1 to 10 without using loop?

STEP 1: Start by declaring int n = 0.

STEP 2: Create function print1to10()

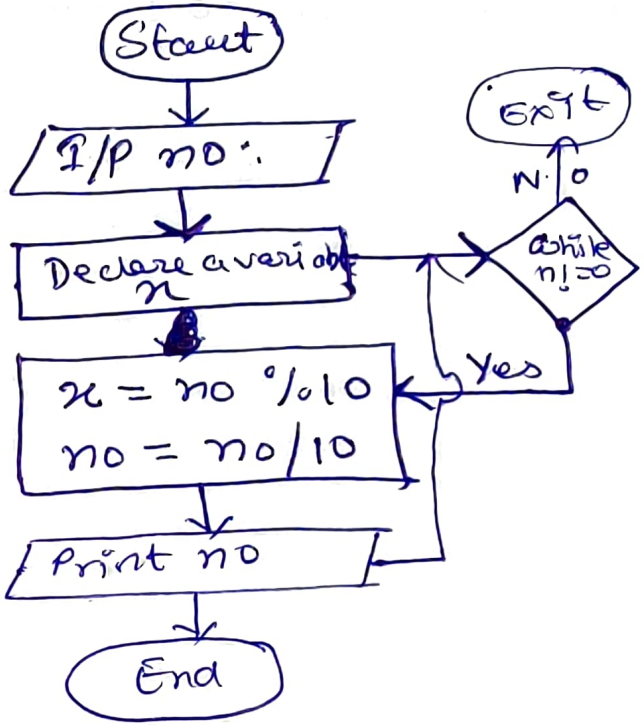
STEP 3: print1to10(int n)

```
{ if(n <=10)
        { System.out.println(n);
          print1to10(n+1); }
}
```

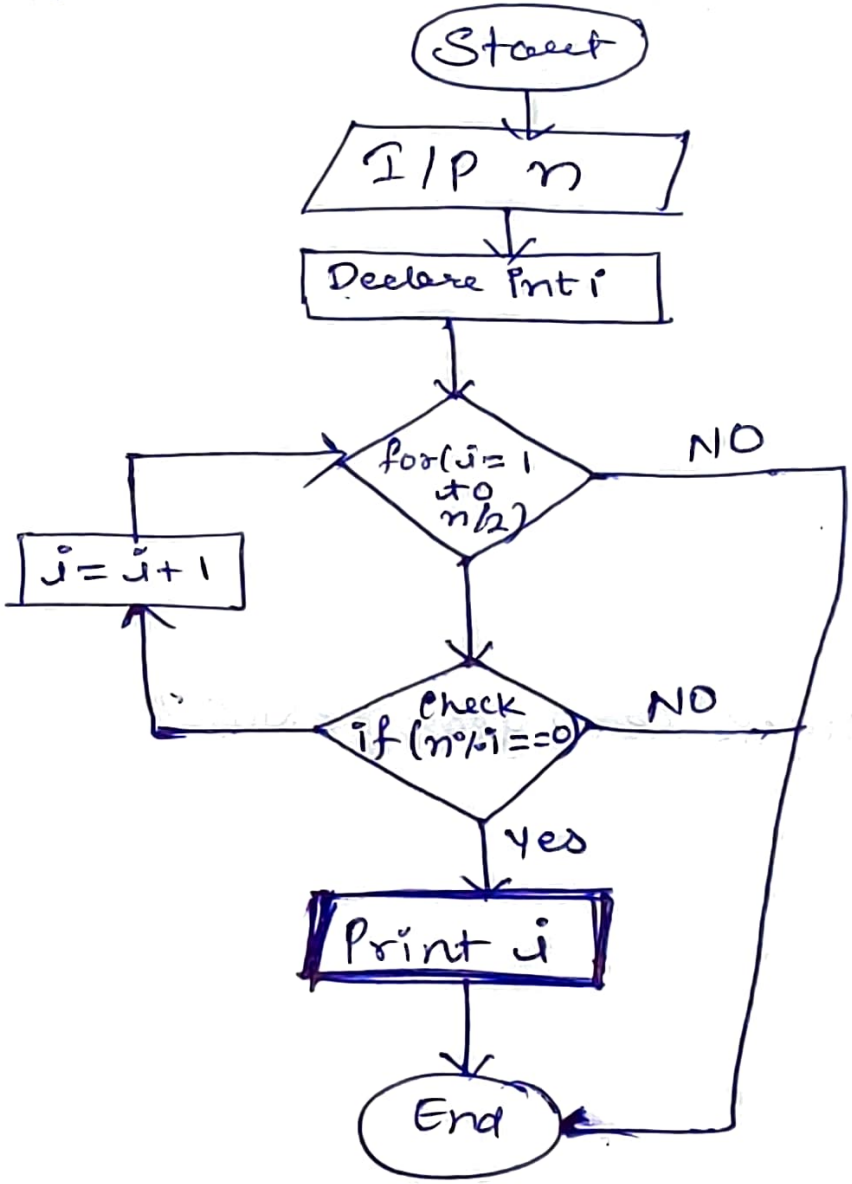
STEP 4: Call function print1to10(1);

STEP 5: Exit

Q8 Print digits of a Given No?



Q9 Print all the factors of given no?



Q10 Sum of digits of a given no ?

STEP 1: Start input a NO and declare a variable Sum.

STEP 2: Declare Sum = 0

STEP 3: Use while loop like while no = 0

STEP 4: Get Remainder by NO % 10

STEP 5: Sum = Sum + Remainder

STEP 6: Divide NO/10

STEP 7: Check to enter loop again if no then print Sum

STEP 8: Exit

Q11 Smallest of 3 no (a, b, c)?

STEP 1: Start by taking i/p 3 no's a, b, c.
STEP 2: Check if (a > b) & if (b > c) print c smallest
STEP 3: Check if (a > b) yes b smaller otherwise a smaller
STEP 4: check if (a > c) if yes c smaller otherwise a smaller
OR
STEP 5: Check if (b > c) if yes c smaller otherwise b smallest
STEP 6: Exit

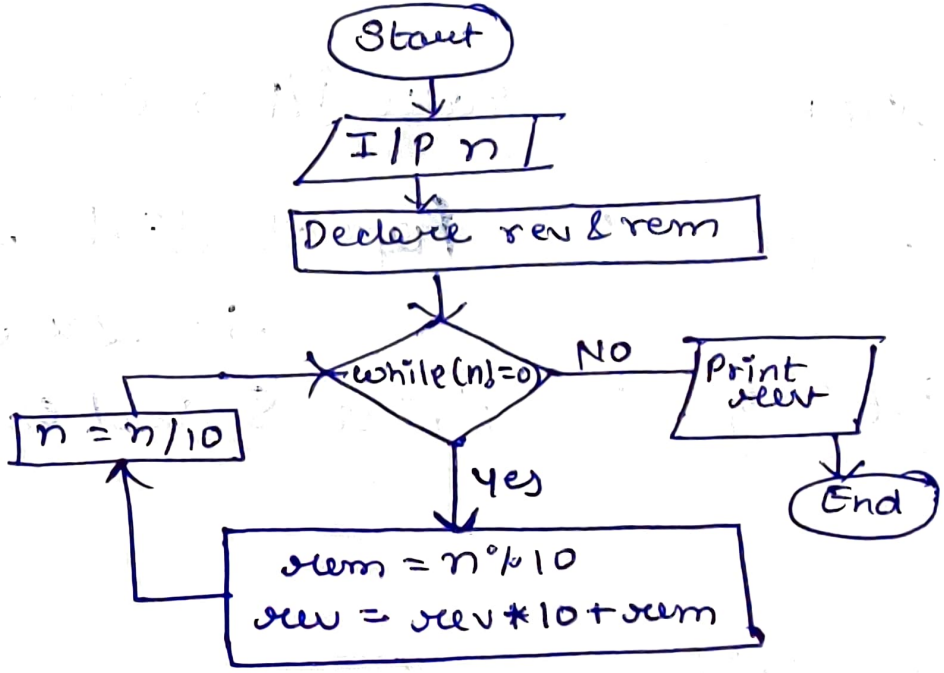
Q12 Add two no's without using arithmetic operators

STEP 1: Take input two no's n1 and n2 declare a variable i

STEP 2: Execute loop :- for(i=0; i<n2; i++)
{ n1++; }

STEP 3: Print sum = n1

Q13 Reverse a no?



Q14 Find GCD of 2 no's ?

↓

HCF

STEP 1 : Start and declare $n1, n2, GCD = 1, i = 1$

STEP 2 : I/p two no's $n1$ and $n2$

STEP 3 : Repeat until $i \leq n_1$ and $i \leq n_2$

→ If $n1 \% i == 0$ & $n2 \% i == 0$

STEP 4 : GCD = i and print GCD

STEP 5 : Exit

Q15 LCM of two no ?

STEP 1 : Initialize lcm, n1, n2

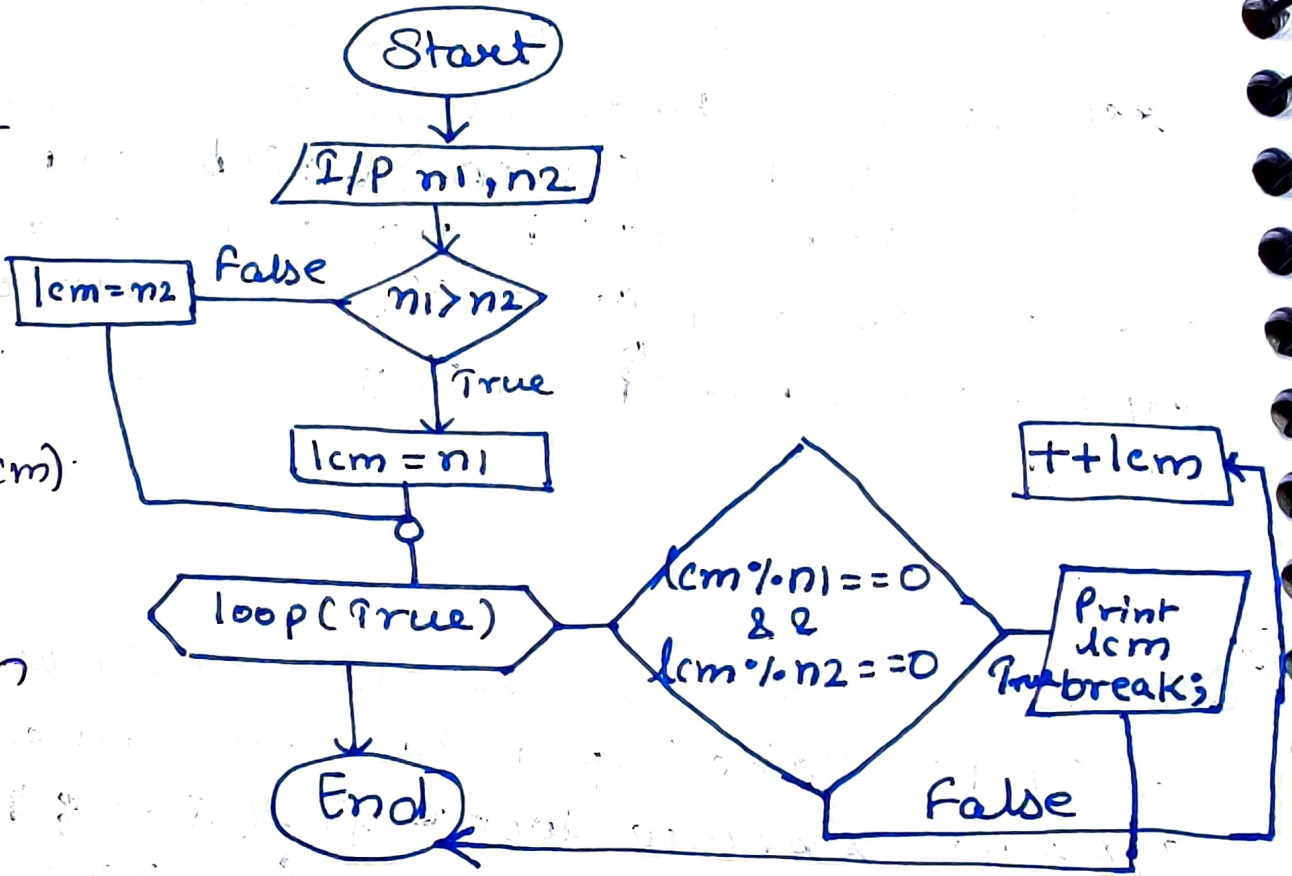
STEP 2 : I/P in n1, n2

STEP 3 : n1>n2 ? n1 : n2;
lcm = Maximum no (n1 or n2)

STEP 4 : If (lcm % n1 & lcm % n2)
then LCM = lcm print(lcm)

STEP 5 : lcm = ++lcm goto Step 4

STEP 6 : Exit the program



Q17 Check whether given no is a Palindrome or NOT.

STEP 1 : Start by taking I/P from user
a no° n

STEP 2 : temp = n ; // Store n into temp

STEP 3 : Reverse the no° and store in rev.

STEP 4 : If (temp == rev) then print
pallindrome
Else print no° is not pallindrome.

STEP 5 : Exit

Q18 Prime factors of a given no.

STEP 1: Start by taking I/P a no from user. and initialise no into 'n' variable.

STEP 2: While n is divisible by 2, print 2 and divide by 2.

STEP3: Now n should be odd. Start a loop from $i = 3$ to $\sqrt{n}$ while i divides n, print i & divide n by i, increment i by 2 and continue.

STEP4: If n is prime no & greater than 2, then n will not become 1 by above two steps. So print n if it is greater than 2.

Q19 Even no Series ?

STEP 1 : Start declare $i=1$ and n, s

STEP 2 : Take i/p n (no of even no series)

STEP 3 : Repeat till $i \leq n$

$s = 2 \times i$

STEP 4 : Print s and exit

Q20 Odd series?

STEP 1 : Start and declare i = 1, n, s

STEP 2 : I/P no n till series required

STEP 3 : Repeat i <= n

→ if (i % 2 == 1)

{ s = 1 x i

i++

}

else i++

STEP 4 : Print s and exit