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Q(1) Algorithm to determine no is even or odd

step - 1 - Read number

step - 2 - Remainder = number % 2

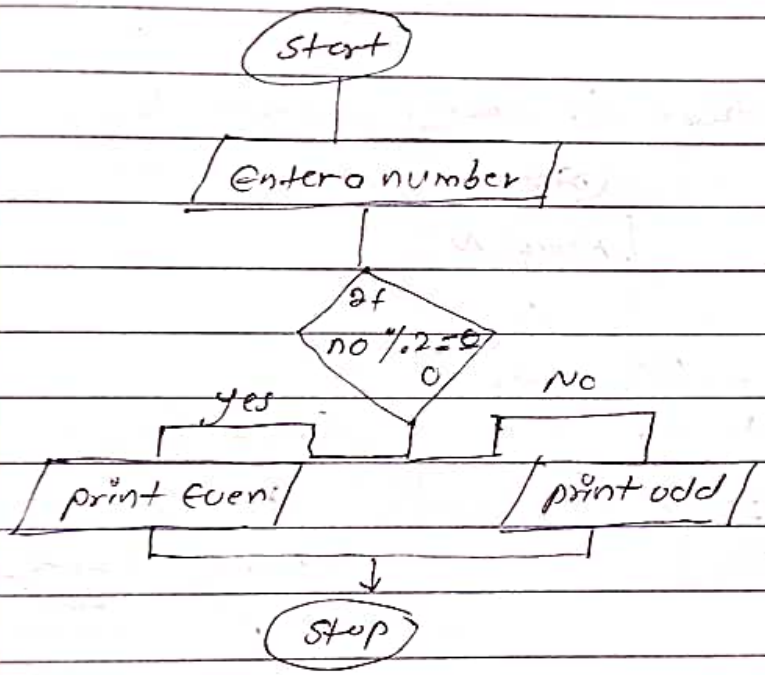
step - 3 - If remainder == 0

write "Even number"

Else

write "odd number"

step - 4 - End of program.



Q.(2) Algorithm to find factorial of a number.

step 1 - Start

step 2 - Read number n.

step 2 - Initialise variables i = 1, fact = 1

step 3 - If i <= n go to step 4 otherwise goto 7

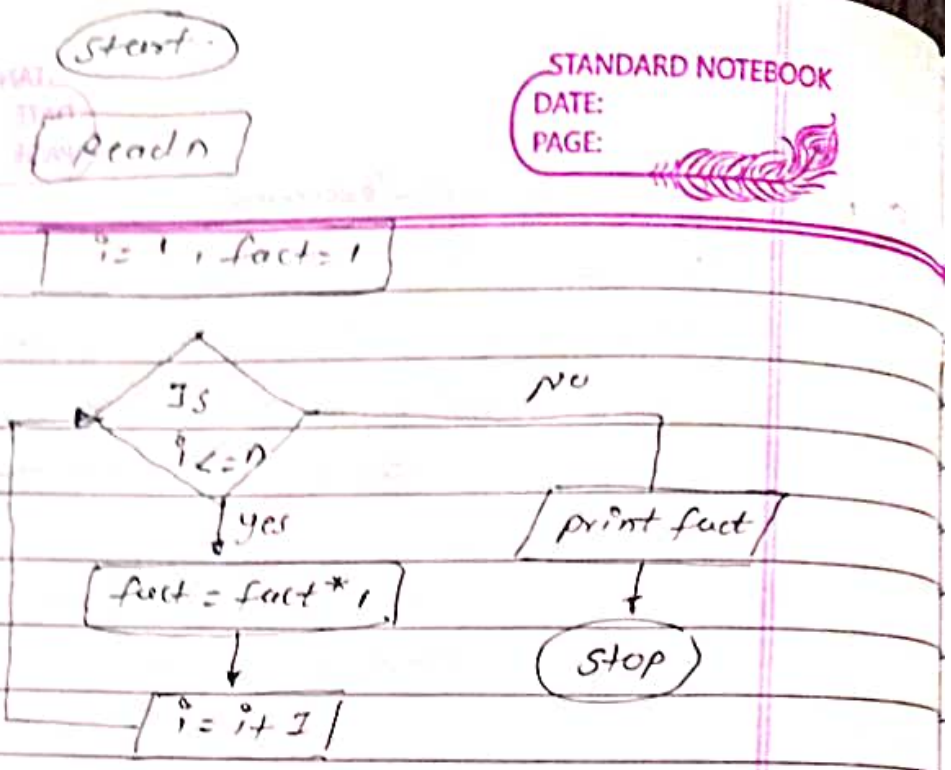
step 4 - calculate fact = fact * i.

step 5 - Increment the i by 1 (i = i+1) and goto step 3.

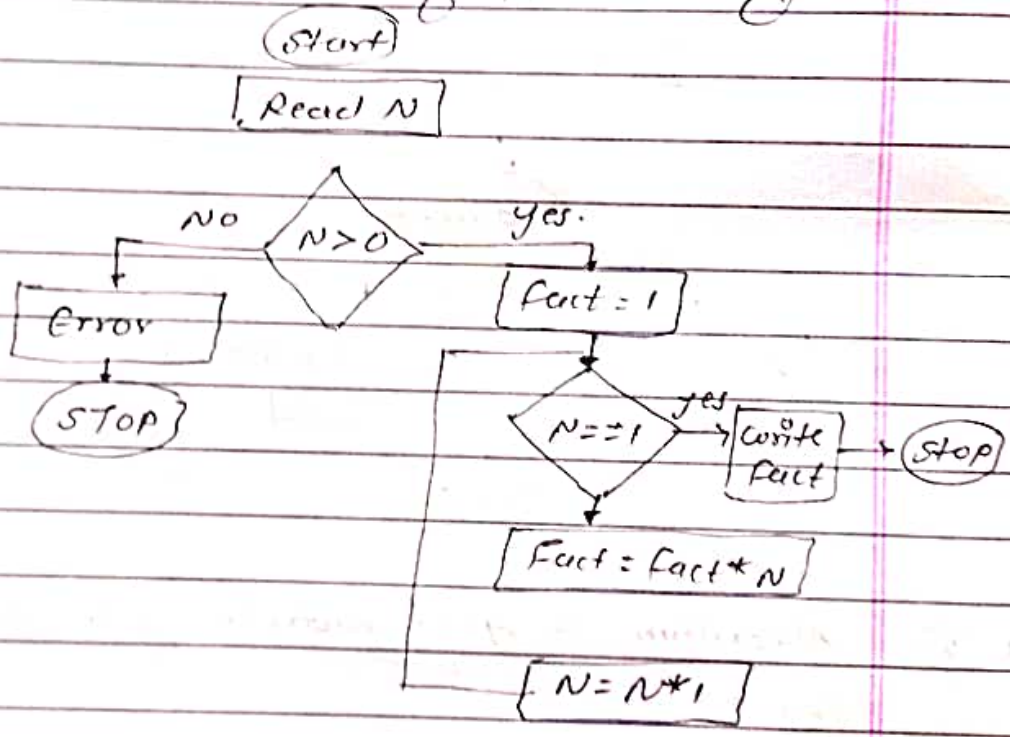
Step 6 - print fact.

step 7 - Stop.

Q(2) Flow chart for factorial



Q.3 Flowchart for finding factorial using recursion



Q(4) Swap two numbers without using third variable.

Step 1 - Start.

Step 2 - Enter x, y.

Step 3 - print x, y.

Step 4 - x = x + y

Step 5 - y = x - y

Step 6 - x = x - y.

Step 7 - print x, y Step 8 - End.

Q.5) Algorithm to check if a number is positive or negative

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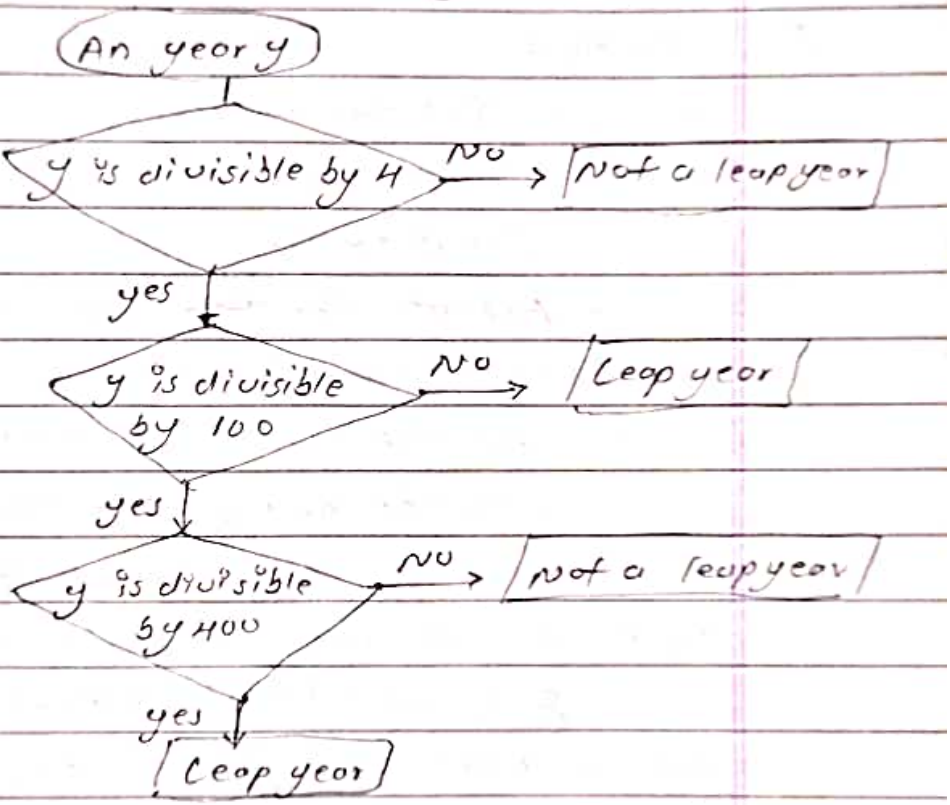
Step 1 - n is an input number

Step 2 - If n > 0, then return positive else

Step 3 - If n = 0, then return Neither positive nor negative else.

Step 4 - Return Negative.

Q.6) To determine a year is leap year or not



Q.7) Algorithm to print 1 to 10 without using loop

Step 1 - Start.

Step 2 - N = 1

Step 3 - Output N.

Step 4 - Increment N by 1.

Step 5 - N = N+1

Step 6 - If the value of $N \leq 10$ then goto step 2 otherwise goto step 5

Step 7 - stop.

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Q.(9) Step 1 - Declare a variable n and i as integer.
Step 2 - Read the number n.
Step 3 - for i=1 to n/2 and increment i by 1.
Step 4 - check if (n%i==0)
Step 5 - print i

Q.(10) Algorithm for sum of the digits of a given number.
Step 1 - Get the number.
Step 2 - Declare a variable to store the sum and set it to 0.
Step 3 - Repeat the next two steps till the number is not 0.
Step 4 - Get the rightmost digit of the number with the help of remainder % operator by dividing it by 10 and add it to sum.
Step 5 - Divide the number by 10 with the help of operator '/' to remove rightmost digit
Step 6 - print or return the sum.

default value of boolean is false.
and True/false is the range of boolean.

Default value of char datatype is \u0000
Default value of string is null
String can display alphabets as well as digits also

package : import java.util.*;

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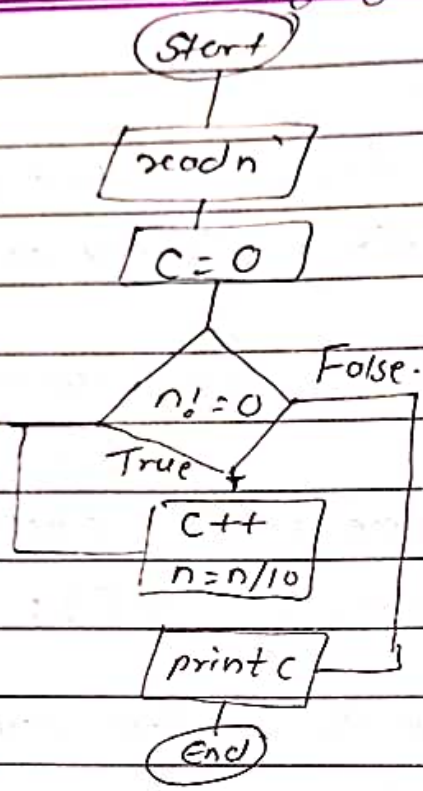
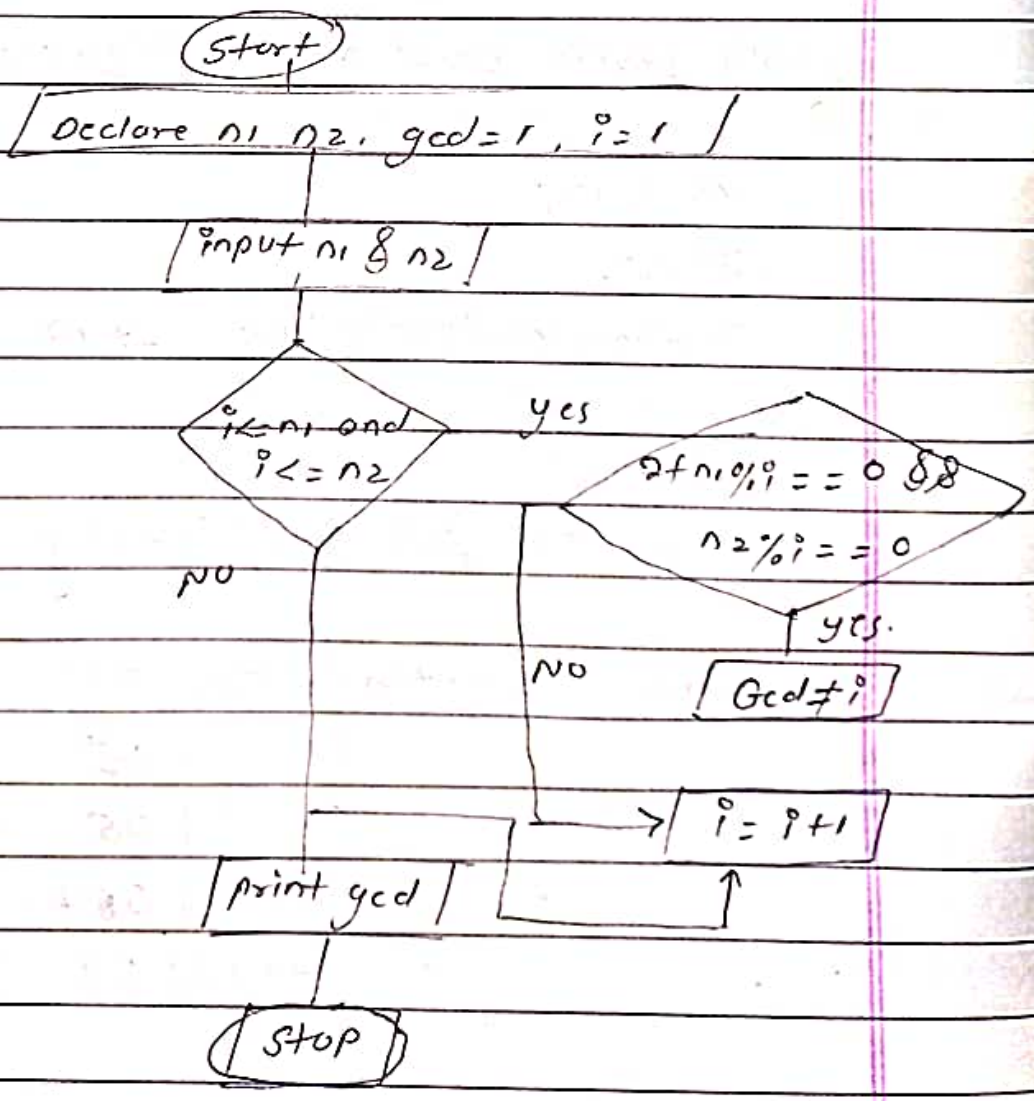
print the digits of a given number

Q (8)



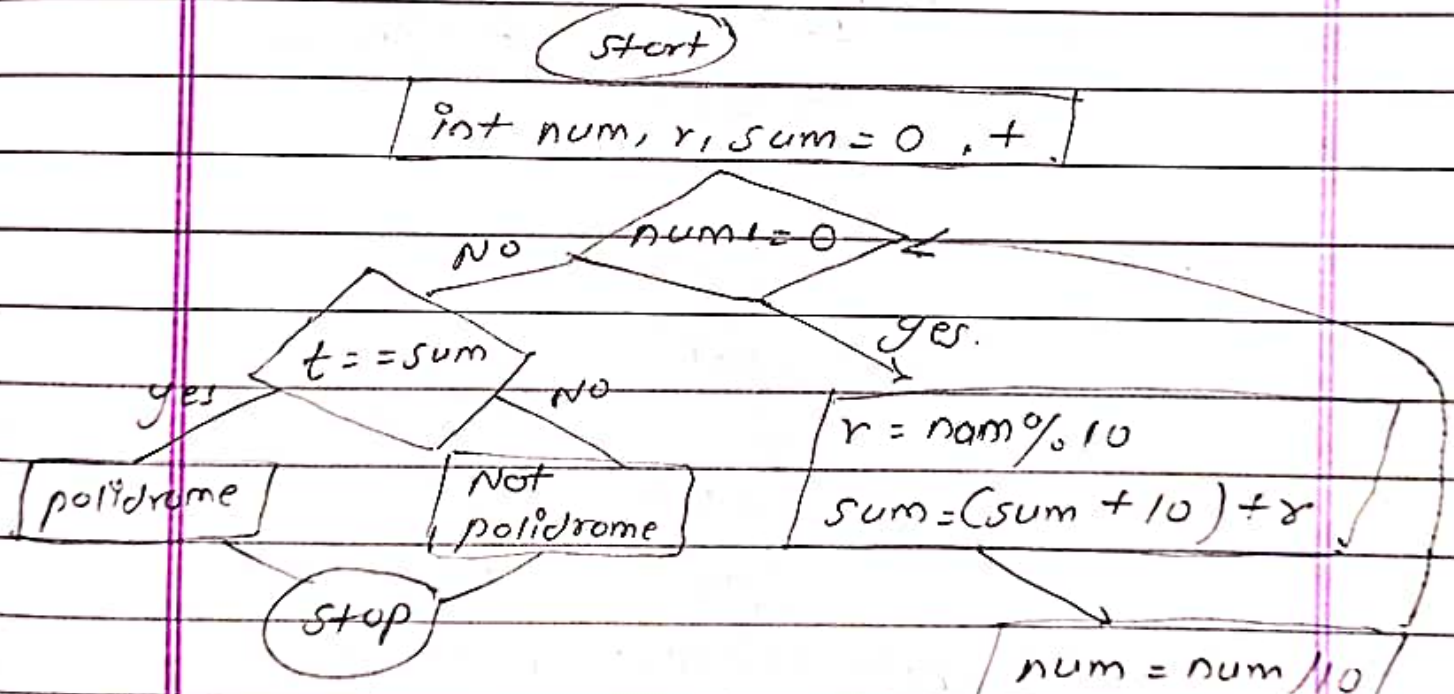
(12)



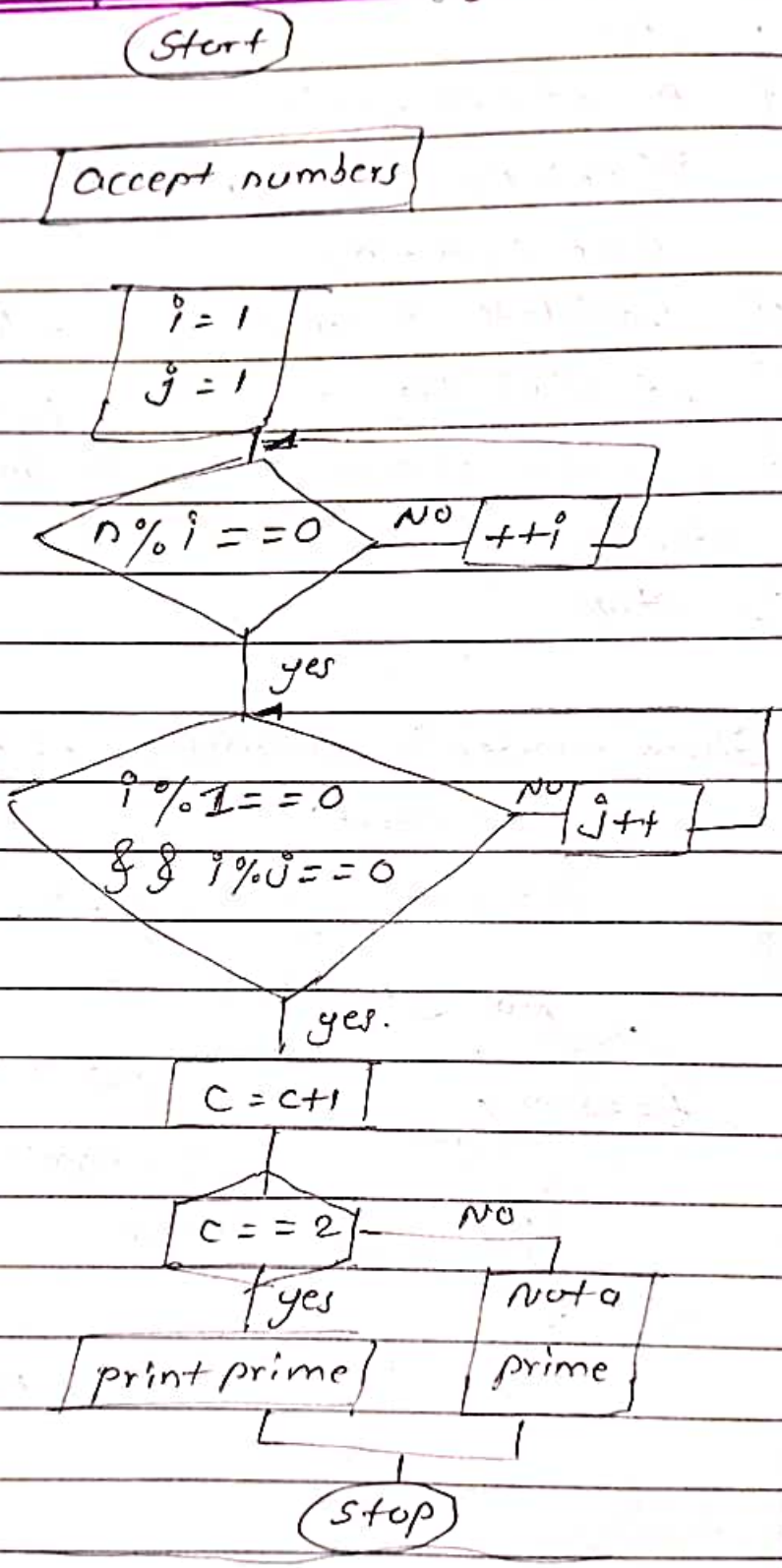
Q.(15) LCM of two given number

1. Start.
2. Accept two numbers.
3. If $n_1 > n_2$ LCM = n_1
   else LCM = n_2.
4. validate LCM is divisible by both n_1 & n_2
5. If divisible print LCM of two numbers.
6. else the value of LCM is increased and goto step (4).
7. stop.

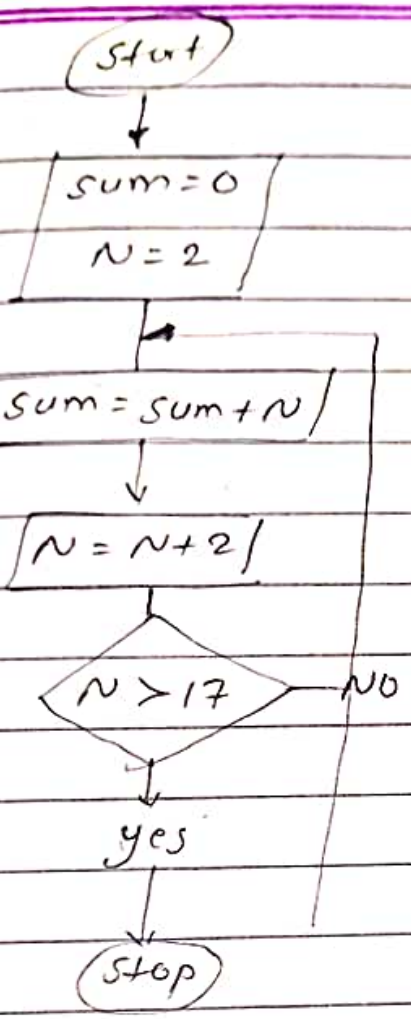
(17) Given number is polidrome or NOT.



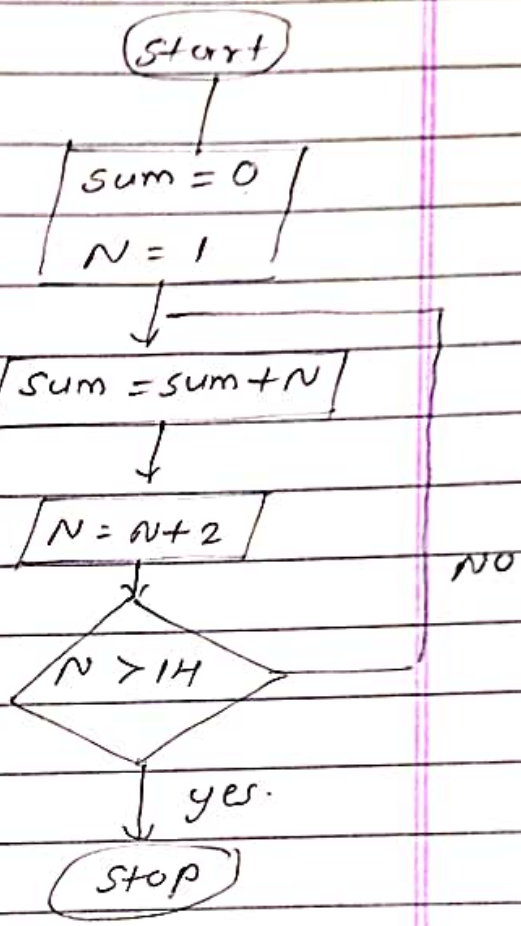
Q (18) print all the prime factors of given number.



Q.(19) Even number from particular range.
2, 4, 6, 8, ... 16



Q.(20) print odd number series from particular range
1, 3, 5, 7, 9, 11, 13



Start

Q

Input -

enter the marks of phy, chem, Bio, maths

avg = (P+C+B+M)/4

if avg < 40 — Fail / pass

Result

End.

Q

make a list of keywords and seperate it.

Literals: -

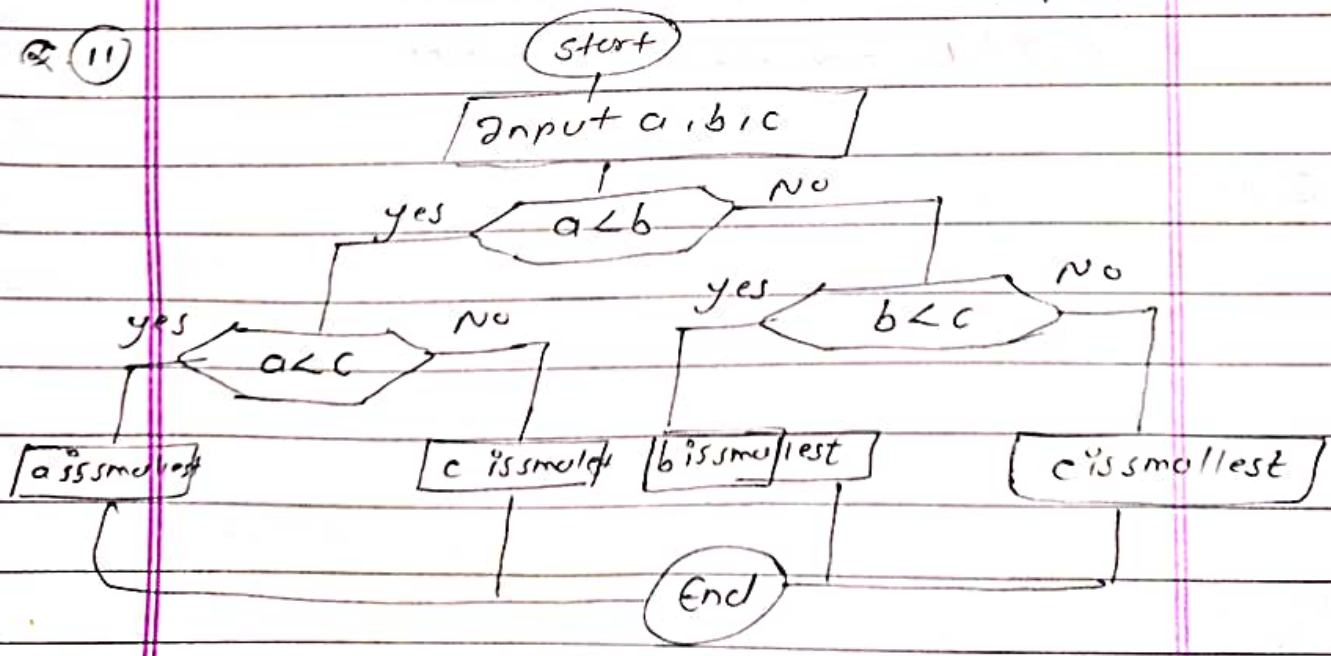
H.W. Chart for datatypes for Java.

Data types → primitive data type.

Data type	size	default value	range

compare 3 No

Q (11)



% → This sign shows remainder.

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Q (12) Algorithm add two no's without using plus operator.

x = 3, y = 4.

Algorithm:

Step 1: x++; y--;

Step 2: repeat step 1 until y becomes 0:

Q (13) Algorithm & flow chart to reverse the given no.

Step (1) START.

(2) Accept number

(3) sum = 0.

(4) remainder = num % 10

sum = sum × 10 + rem.

num = num / 10

(5) if (num ≠ 0) then

goto step (4)

otherwise goto step (6)

(6) Display reversed no i.e. sum.

(7) Stop.

423 % 10 → 3 - remainder

423 / 10 → 42 - Quotient.