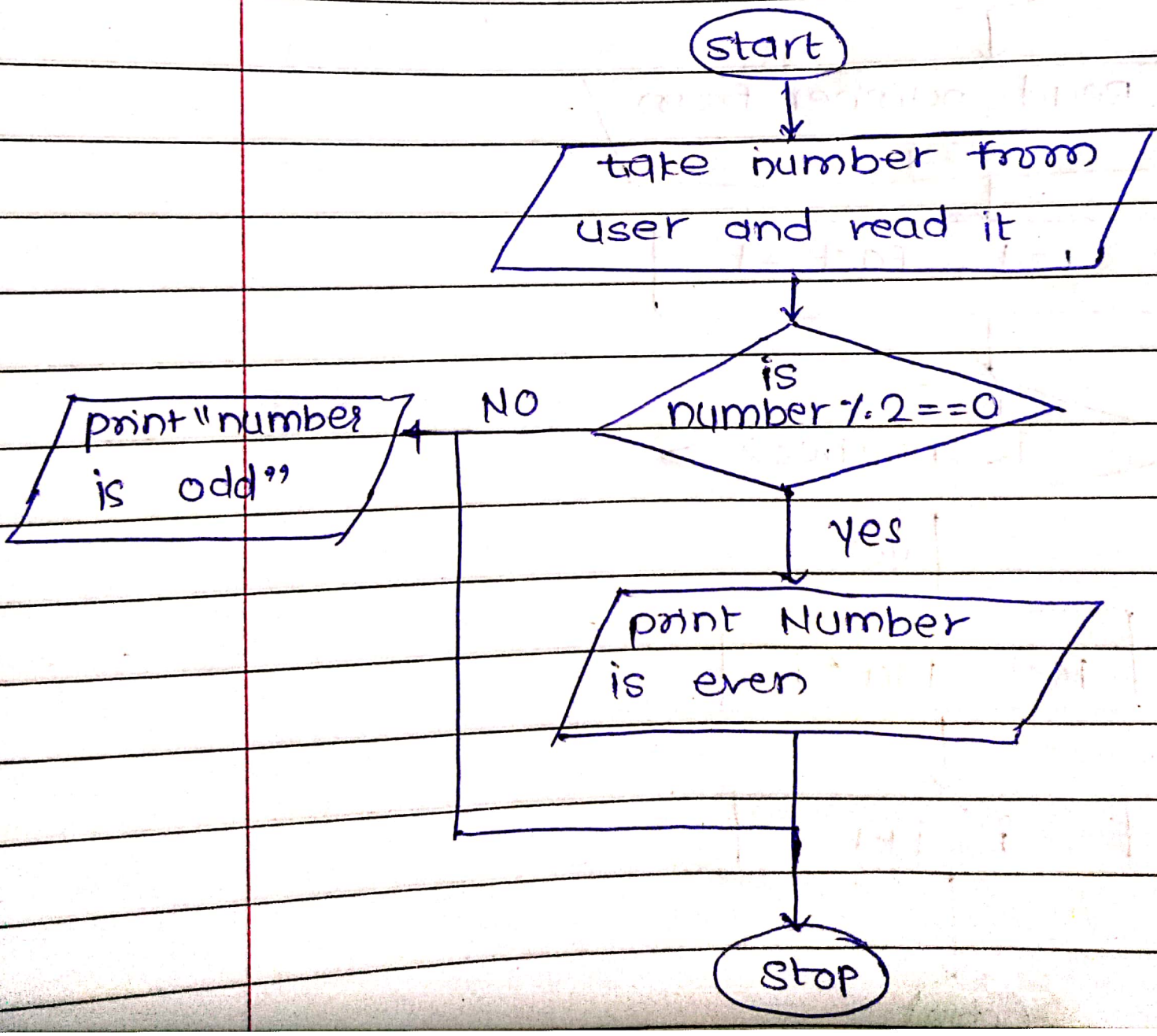
Q1) Even or odd number-

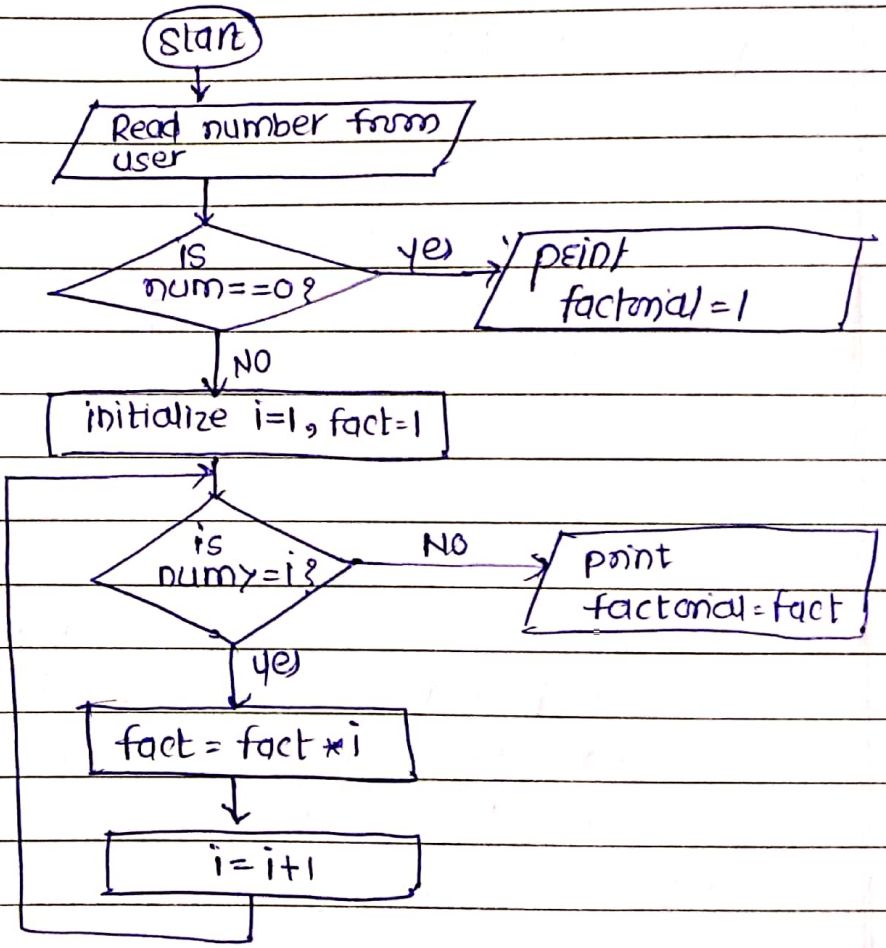


IKON | Page No.
Date / /

Pseudocode →

1) Take number as i/p from user and read it.
2) check whether number % 2 == 0 ?
   if yes then print "Number is even"
   otherwise print "Number is odd"

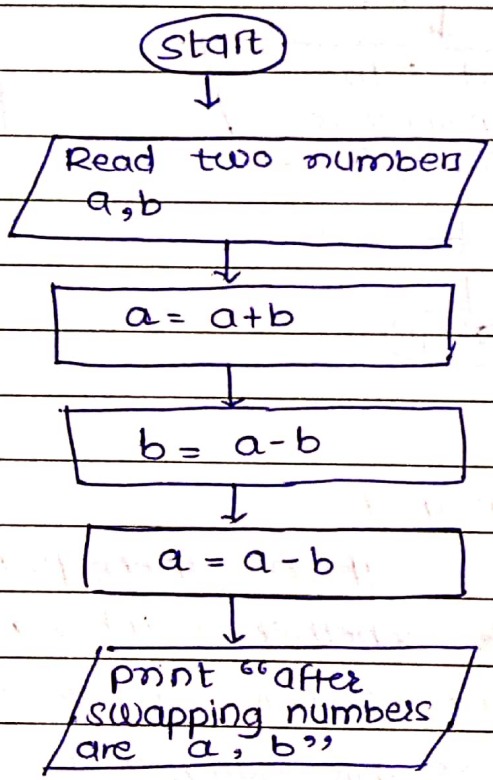
Q2) Factorial of number →



Pseudocode →

1) Read number from user
2) is number ==0 if yes then factorial = 1 will be printed
3) Otherwise, initialize i=1, fact = 1
4) is num>=i ? if yes then perform fact = fact * i
5) ~~the~~ then modify i = i+1
6) repeat the process from ~~step~~ (4). till condition fails
7) when condition fails to satisfy, print factorial = fact

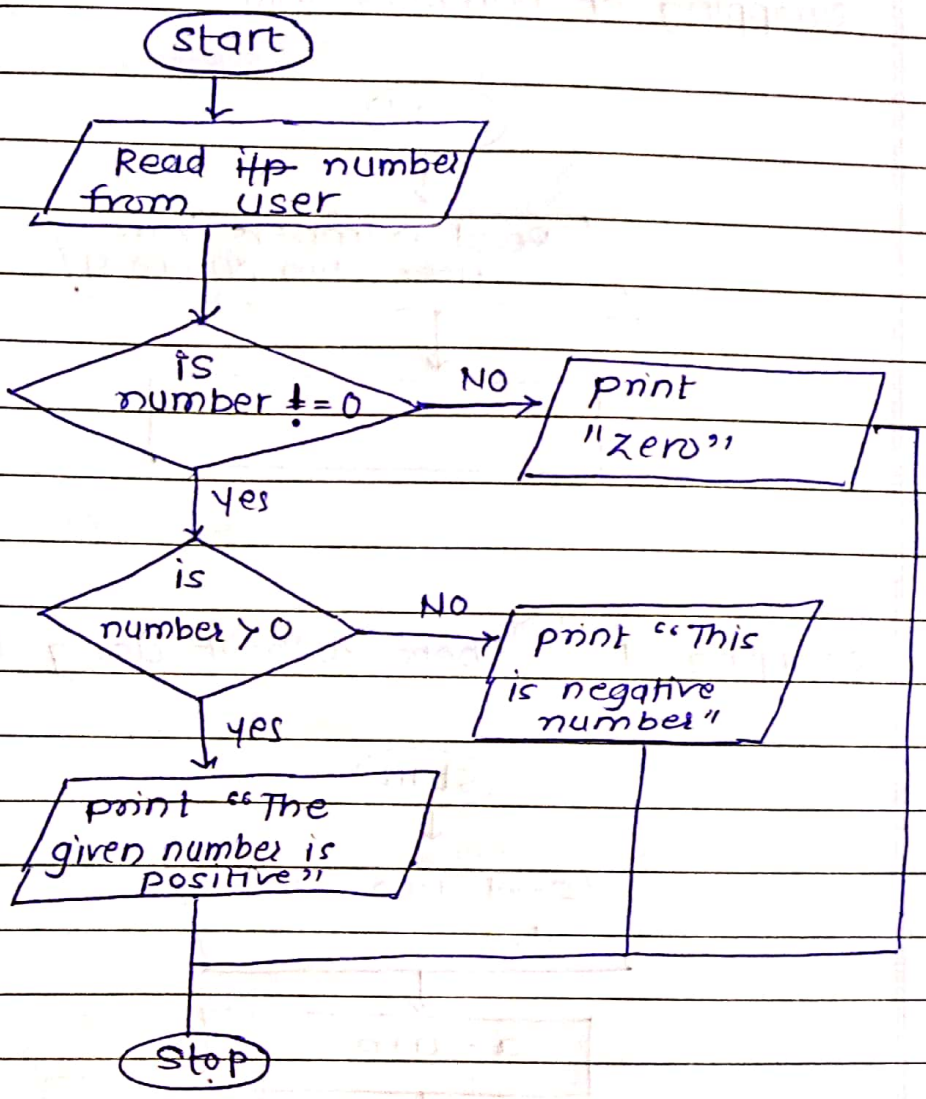
Q 4) Swapping of two numbers without using third variable



Pseudocode ⇒

1) Read two numbers from user a, b.
2) Perform operations → a = a+b
   b = a-b
   a = a-b
3) Print the result.

Q 5/ To check whether number is positive or negative



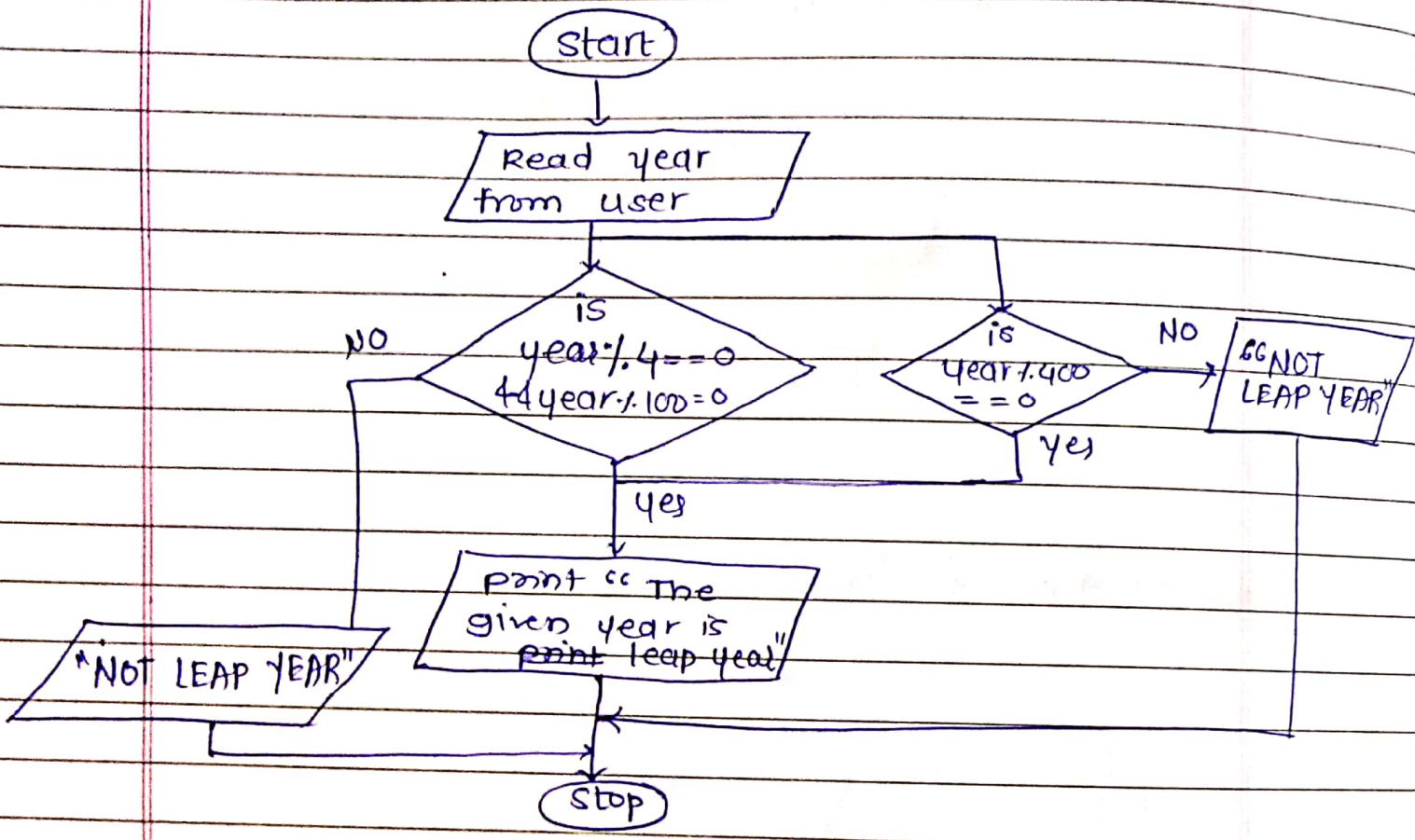
Pseudocode →

1/ Read number from user.

2/ is number != 0 ? if no then print otherwise check whether number > 0

3/ if yes then print " This number is positive number otherwise print " this number is negative number.

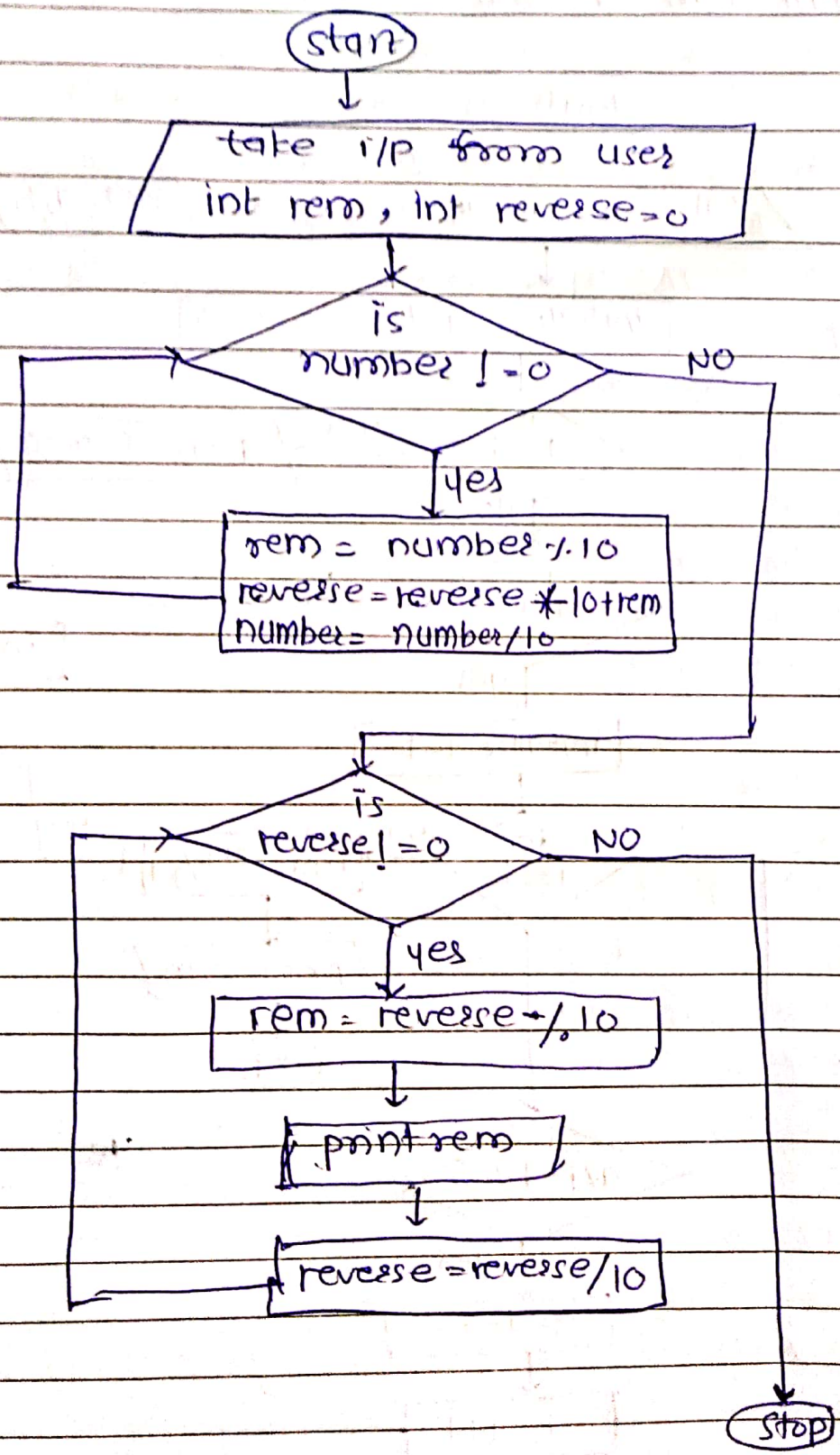
Q6) To check whether ~~number is~~ year is leap year or not.



Pseudocode →

1) Read year from user
2) check if year%.4 ==0 and year%.100==0 ; if yes then print year is "Leap year" Otherwise "NOT Leap year"
3) OR check whether year%.400==0 , if yes then print year is leap year otherwise not a leap year.

Q.8) To print digits of given number



Q 8)

Pseudocode :-

① take input from user, initialize reverse = 0

② Check if number is not equal to zero
if yes then follow step ③
if no then follow step ⑤

③ Calculate rem = number % 10;
reverse = reverse * 10 + rem;
number = number / 10

④ Repeat the process from step ②

⑤ Check if reverse is not equal to zero
if yes then follow step ⑥ if no then stop

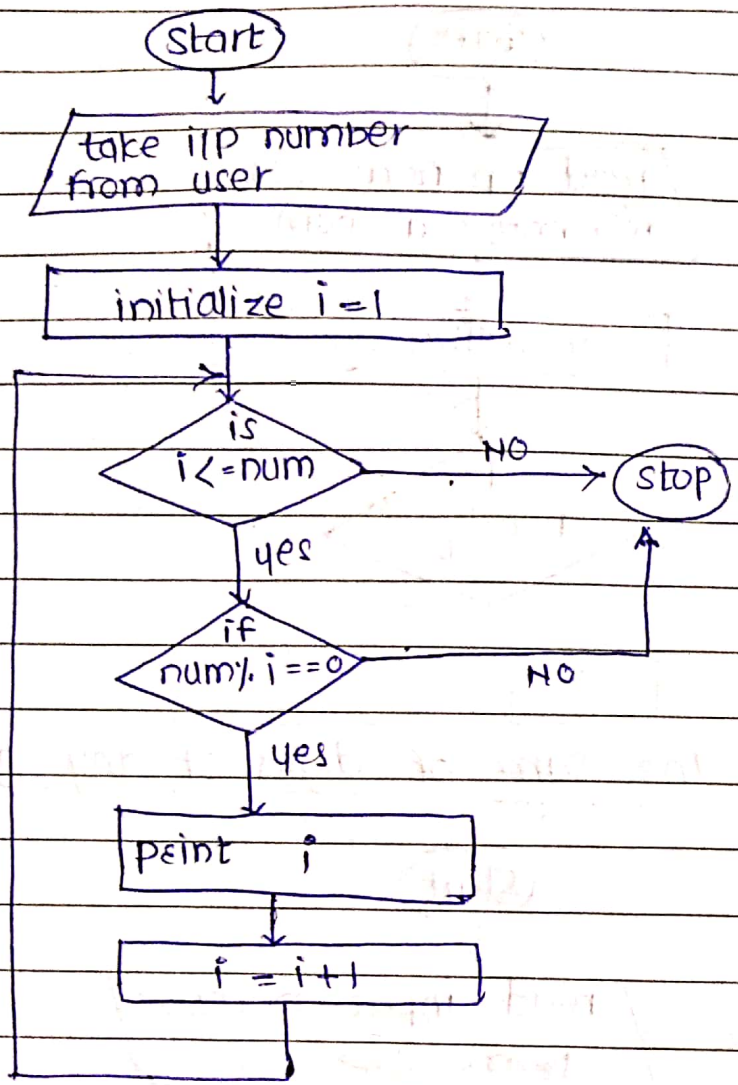
⑥ calculate ~~rem = reverse % 10~~ rem = reverse % 10;

⑦ print rem

⑧ calculate reverse = reverse / 10

⑨ Repeat the process from step ⑤

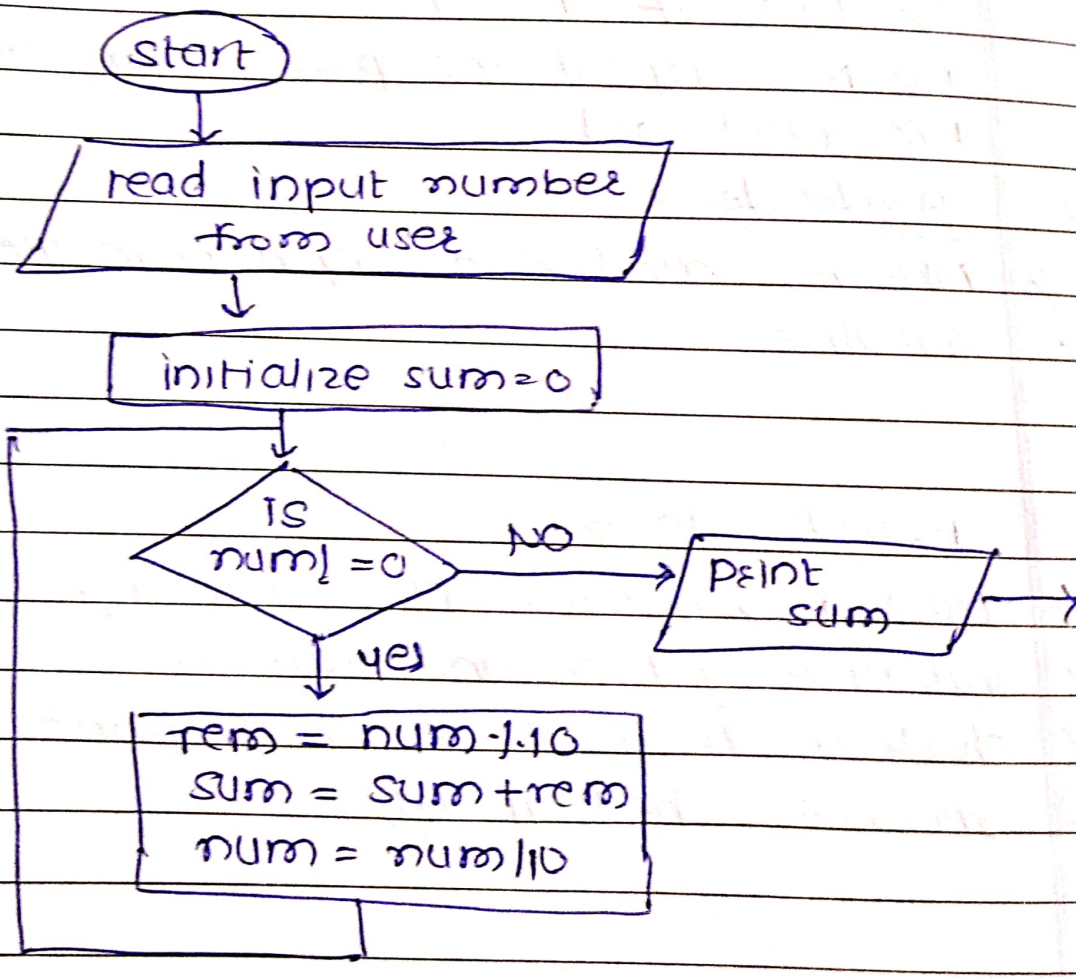
Q 9) To print all factors of given number.



Pseudocode

1) Take input number from user
2) initialize i = 1
3) check if i <= num
4) if yes then check if num % i == 0
5) if yes then print value of i. ~~otherwise stop~~.
6) Now modify i=i+1
7) Repeat process from step (3).
8)

10)



Pseudocode →

1) Read input from user its number.
2) Initialize sum = 0
3) check if sum is not equal to zero.
4) if yes then perform following operations.

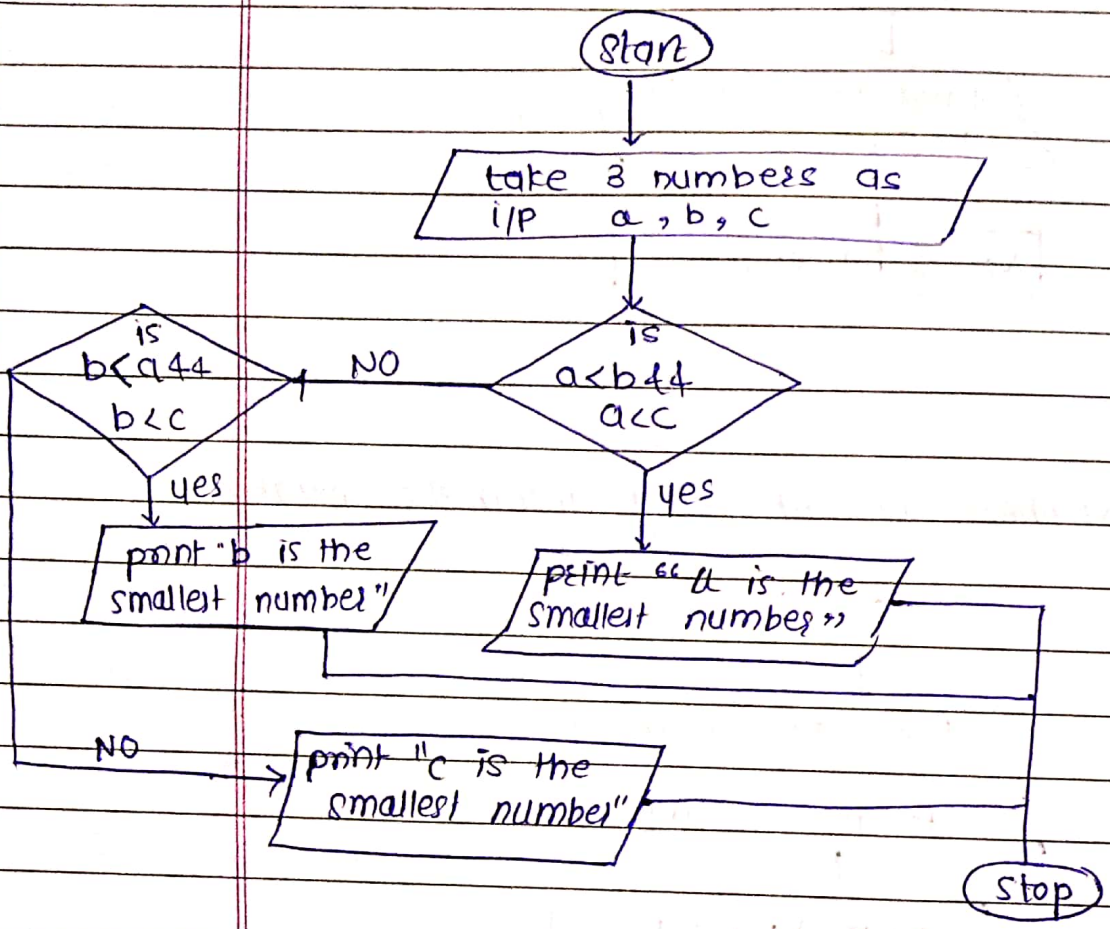
remainder = num %. 10

sum = sum + remainder

num = num / 10

5) Repeat the process from step 3.
6) ~~print sum if num~~.
6) otherwise print sum.

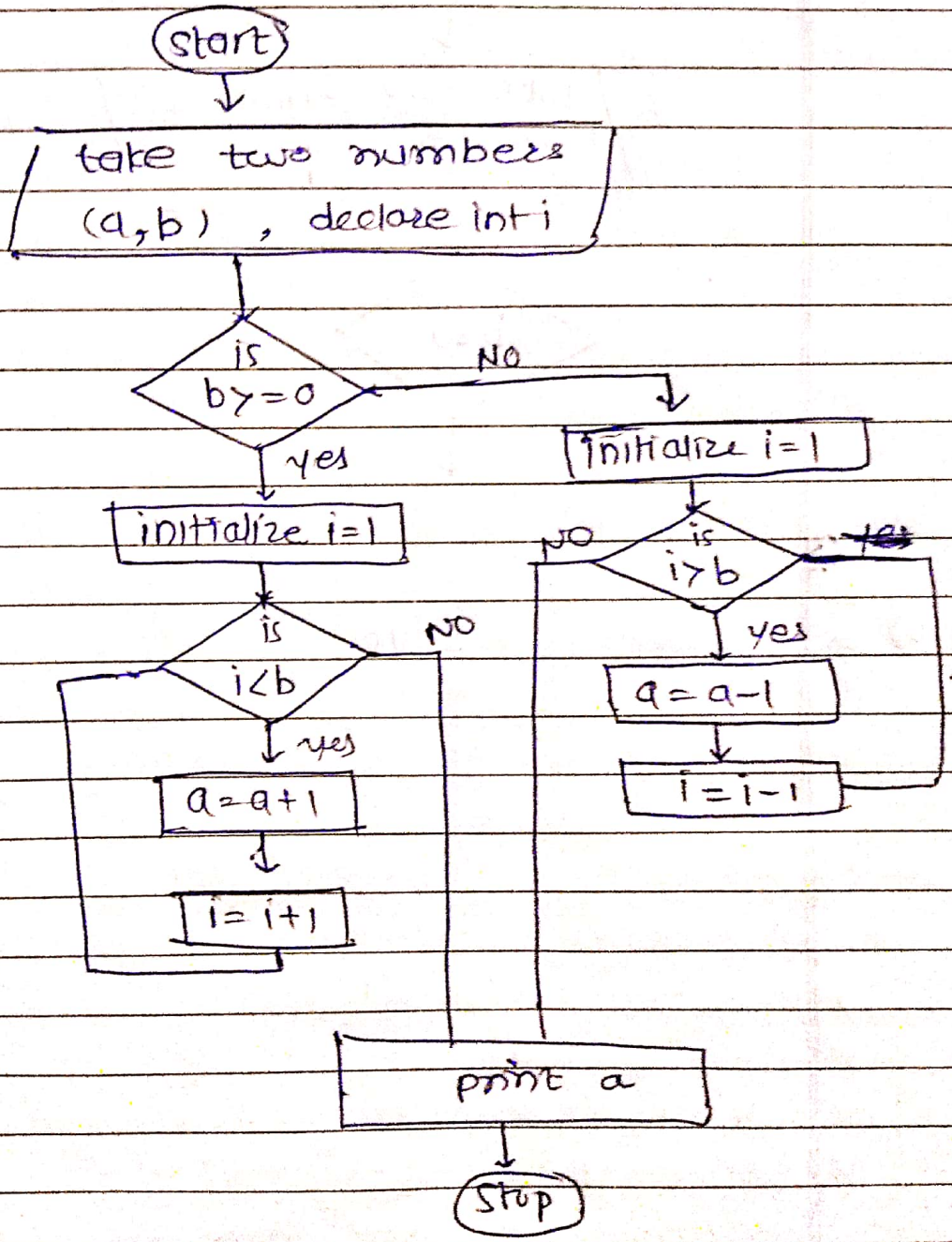
Q 11) To find smallest number among 3 numbers



Pseudocode

1) Take 3 numbers as input from user a, b, c.
2) check if a<b && a<c if yes then print "a is the smallest number"
3) Otherwise check b<a && b<c if yes then print "b is the smallest number"
4) Otherwise print "c is the smallest number"

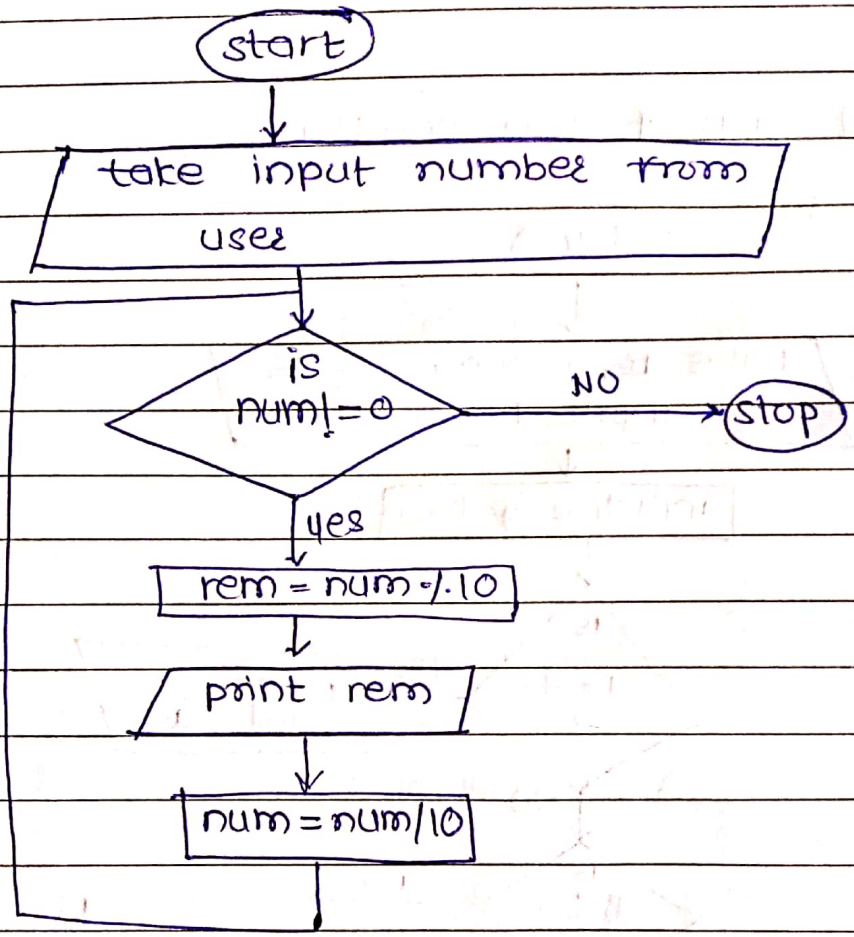
(Q13) Sum of two numbers without arithmetic operator



Pseudocode :-

1) Take two numbers a, b and declare int i
2) check if b>=0, if yes then follow steps from (4)
   if no then follows steps from (8)
3) Initialize i=1
4) check if b>i
5) if yes a=a+1;
   i=i+1
   | if no then jump to step (11)
6) Repeat process from step (4)
7) initialize i=1
8) check if i>b
9) if yes then a=a-1;
   i=i-1
   | if no then jump to step (11)
10) repeat the steps from step (8)
11) Print a

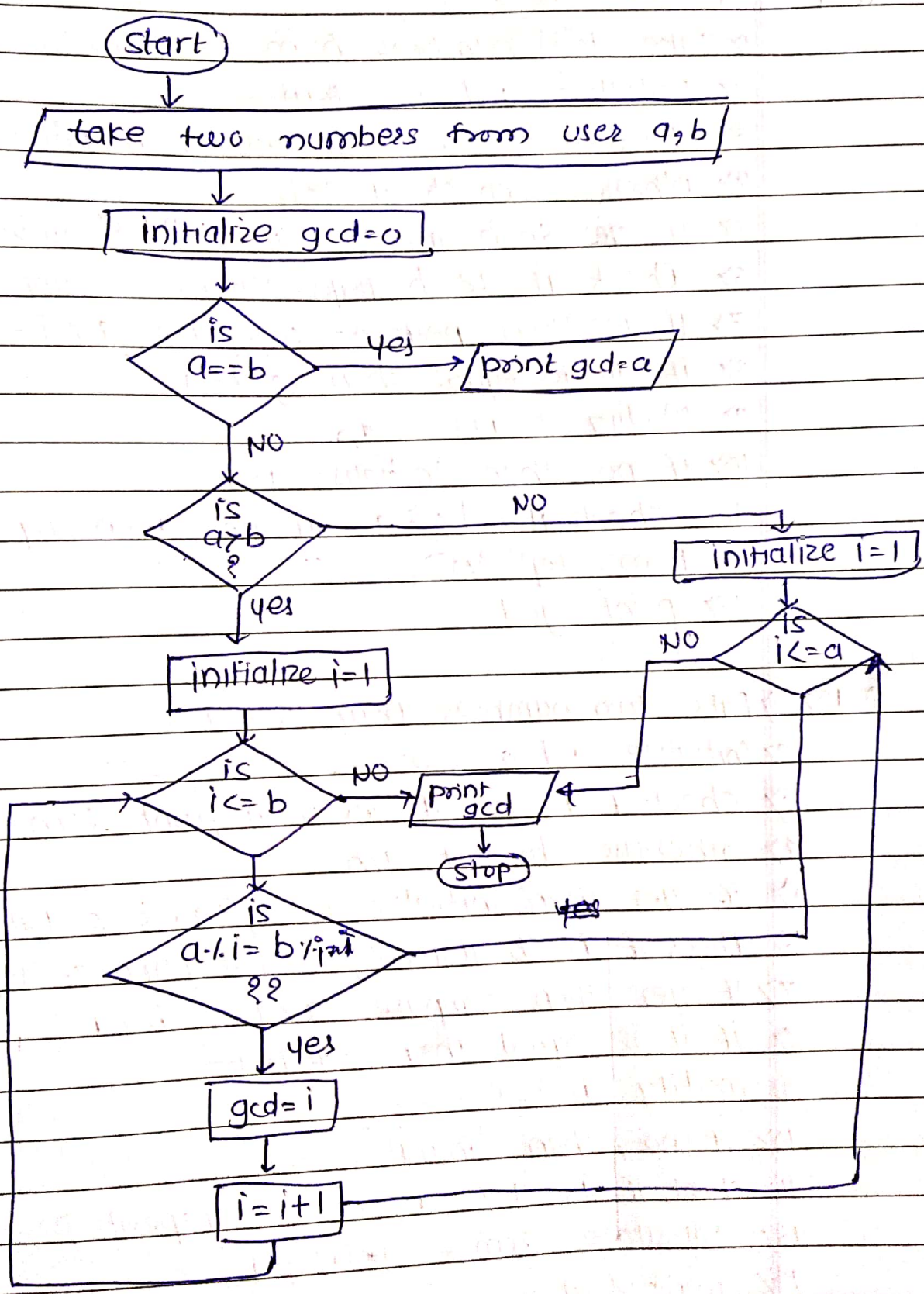
Q·13) To reverse the number



Pseudocode

1) Take input number from user.
2) check if num is not equal to zero.
3) if yes then calculate rem = num %.10 ; otherwise stop
4) print value of rem
5) then calculate num = num /10
6) Repeat the process ~~after step~~ from step 2.

Q.14)

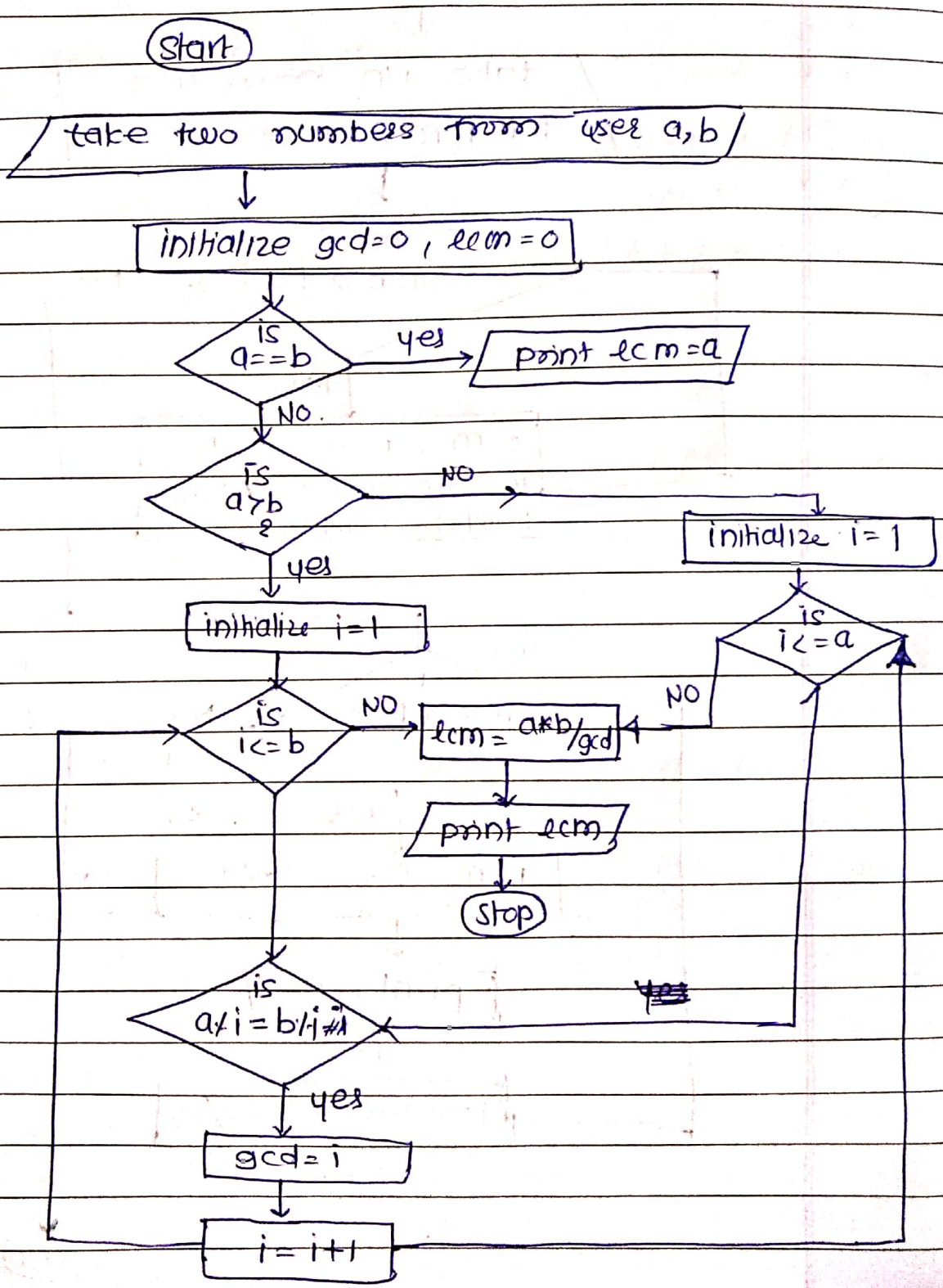


Q. 16) Pseudocode ⇒

1) Take two numbers from user a, b.
2) Initialize gcd = 0, ~~tem = 0~~
3) Check if a == b ; if yes then print gcd = a.
4) Otherwise check if a > b
5) if yes then initialize i = 1 ; otherwise follow step (10)
6) Check if i <= b if yes (7) otherwise jump to step (12)
7) if yes then ~~perform~~ compare a%i == b%i
8) if it is equal then gcd = i.
9) Modify i = i + 1
10) if no, then initialize i = 1.
11) check if i <= a; if yes then repeat process from step (7).
12) print gcd.

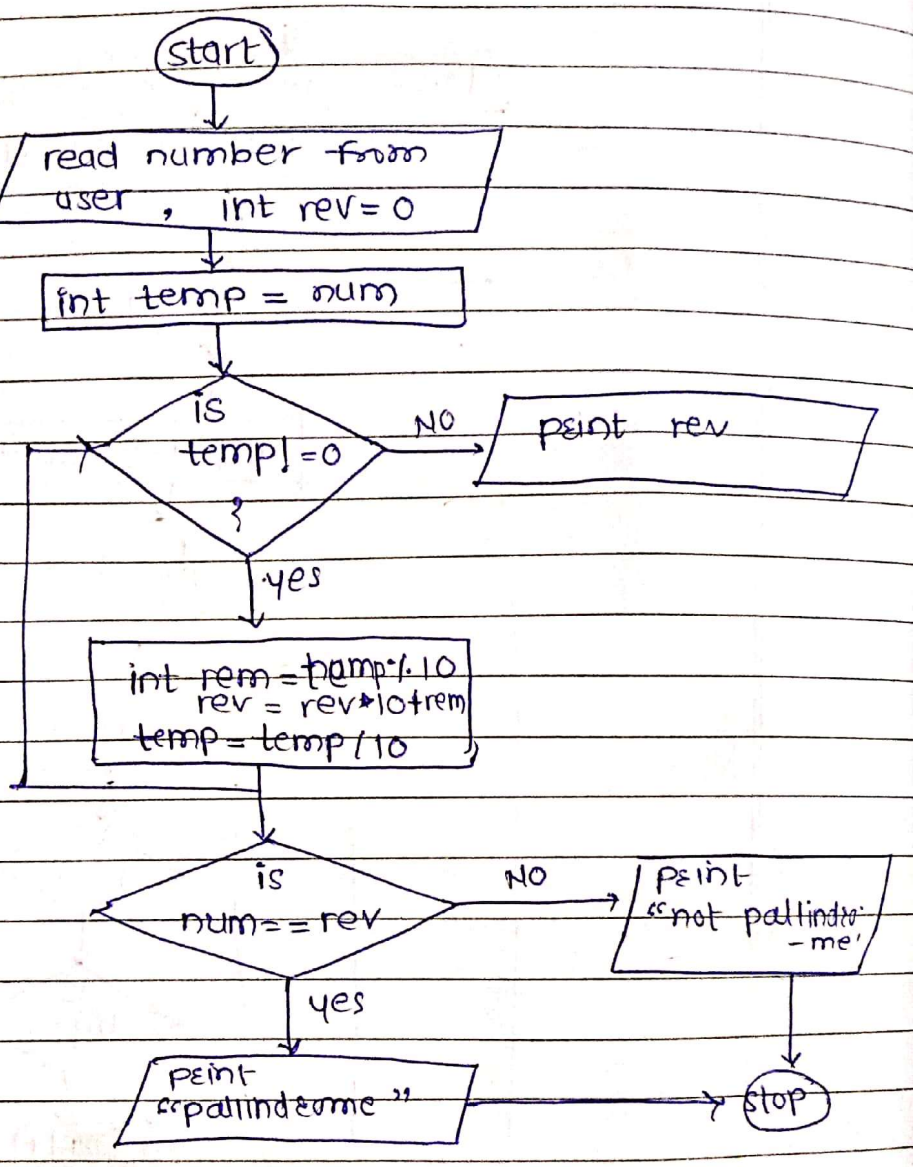
Q. 15)

To print lcm of two numbers



Q. 15) 1) Take two numbers from user a, b
2) Initialize gcd=0, lcm=0.
3) check if a==b; if yes then print lcm = a
4) otherwise check if a>b
5) if yes then initialize i=1, otherwise follow step (10).
6) check if i<=b if yes (7), otherwise jump to step (12)
7) if yes then compare a%i == b%i.
8) if it is equal then gcd=i
9) modify i= i+1
10) if no, then initialize i=1
11) check if i<=a; if yes the repeat process from (7)
12) calculate lcm = a*b/gcd
13) print lcm -

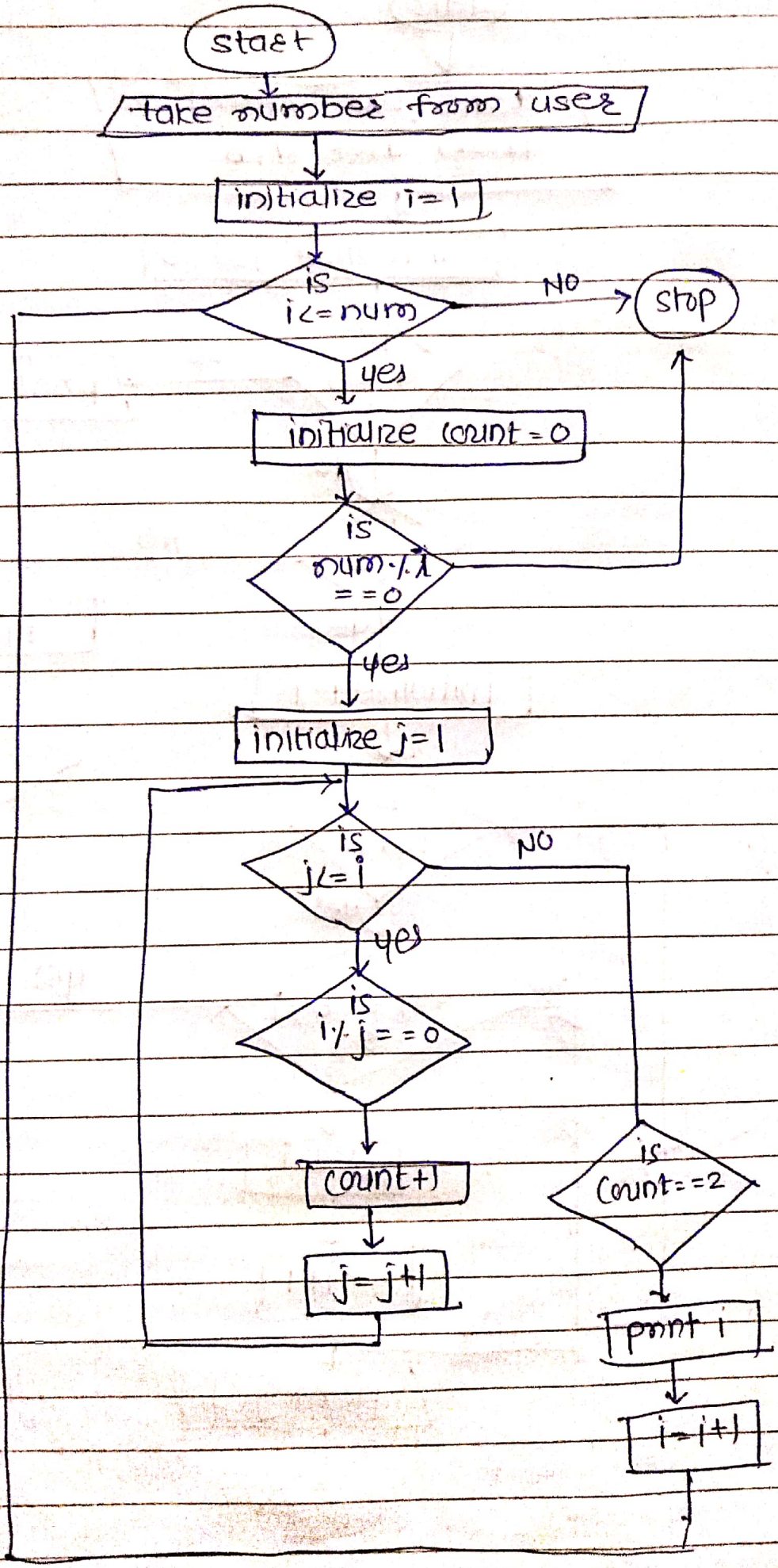
Q.17) To check whether given number is pallindrome or not.



Pseudocode :-

1) Take input as number from user, initialize rev = 0
2) Store value of num into 'temp'
3) Check if temp is not equal to zero.
4) If yes then calculate rem = temp % 10 ; rev = rev * 10 + rem ;
   temp = temp / 10. otherwise, print rev.
5) Repeat process from step 3
6) Check if num == rev ; if yes then print "pallindrome" otherwise "not pallindrome".

Q.18) To print prime factors of given number :



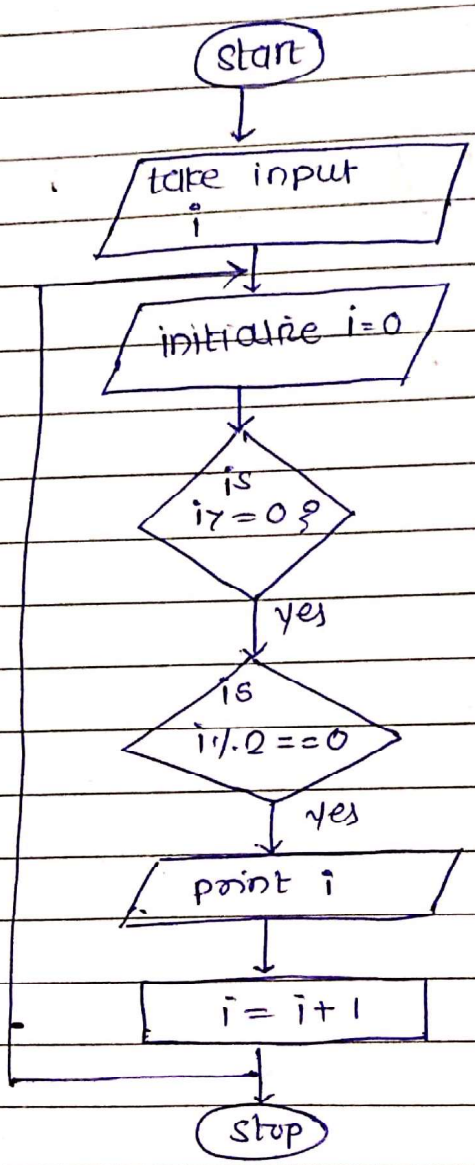
Q.18) Prime factors of given number

Pseudocode

1) Take number from user
2) initialize i=1
3) check if num % i
4) if yes then follow step (5)
   NO then follow stop ~~stop~~
5) ~~Initiaz~~ initialize count = 0
6) check num % i == 0
7) if yes, follow step (8) onward.
   if no, follow stop
8) initialize j=1
9) check if j<=i
10) if yes then follow step (11)
    if no then follow step (13)
11) check i % j == 0
    if yes then count = count + 1
    j = j+1
12) Repeat process from step (9)
13) Check if count == 2, yes then print 'i'
14) i = i+1
15) Repeat the process from step (3)

Date / /
Page

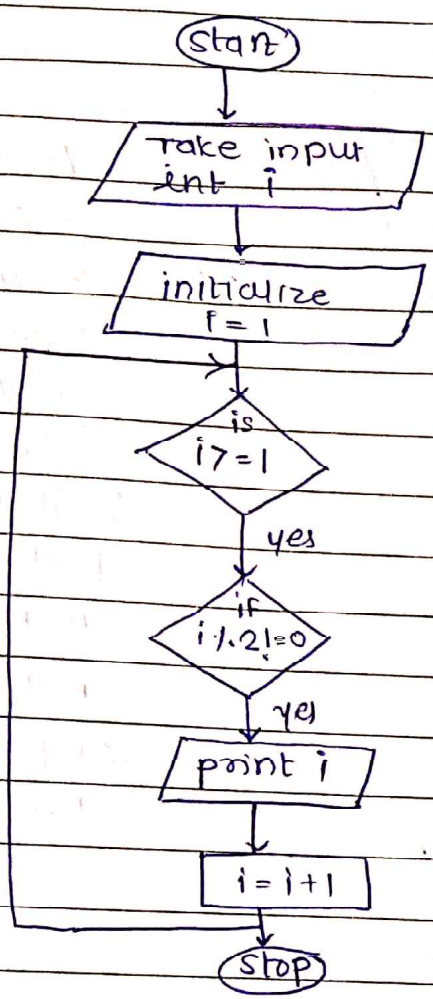
Q 19) To print even series



Pseudocode

1) Take input int i
2) initialize i=0
3) Check if it is greater than or equal to zero
4) if yes then perform i%2 ~~==0~~
if it is zero then print value of i
5) repeat the process from step 3.

Q 20) To print odd series



Pseudo code :-

1) Initialize i=1 after taking input int i
2) is i>=1 ? ~~if yes~~
3) if yes then check i%2 != 0 ?
4) if yes then print i
5) Then modify i = i+1;
6) Repeat the process from step 2