

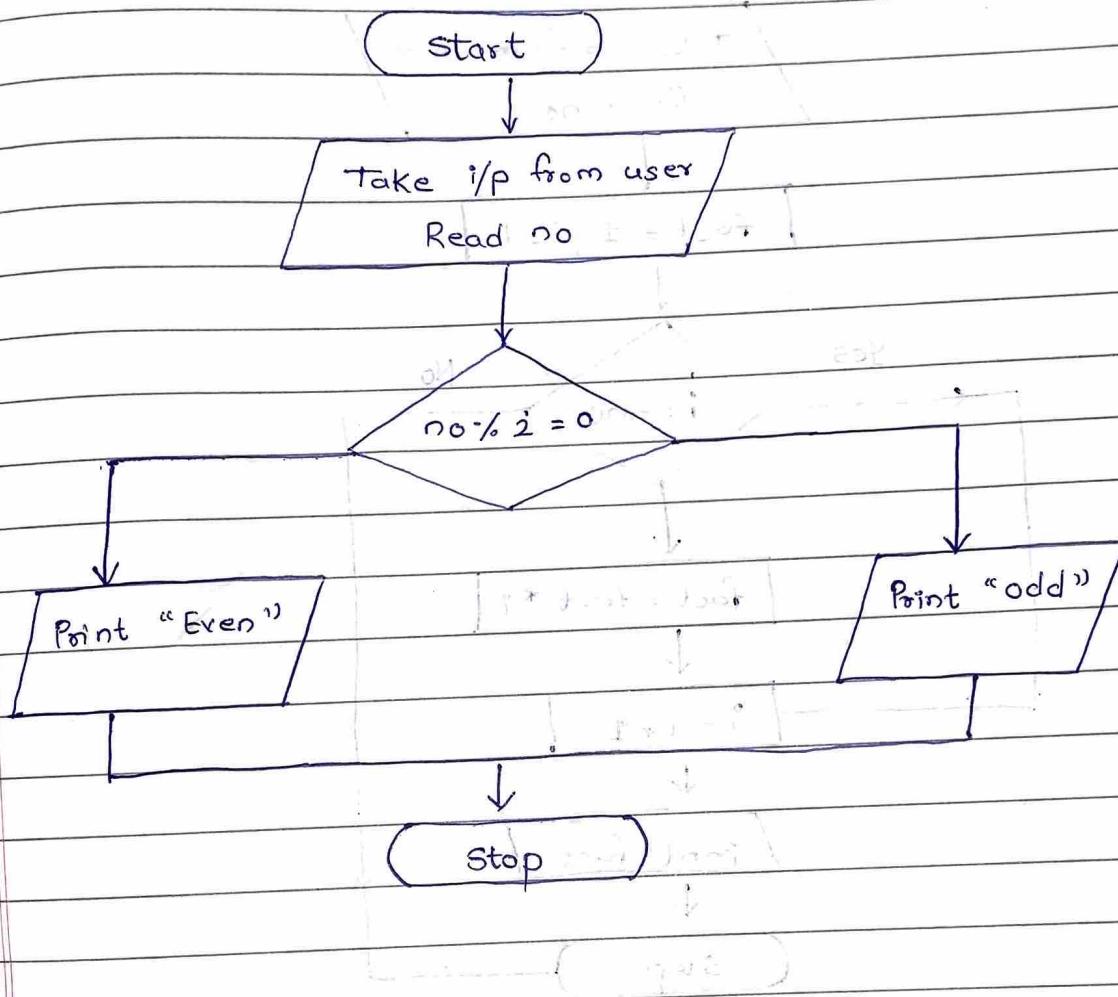
# Assignment NO 1

classmate

Date \_\_\_\_\_

Page \_\_\_\_\_

01 Even / odd

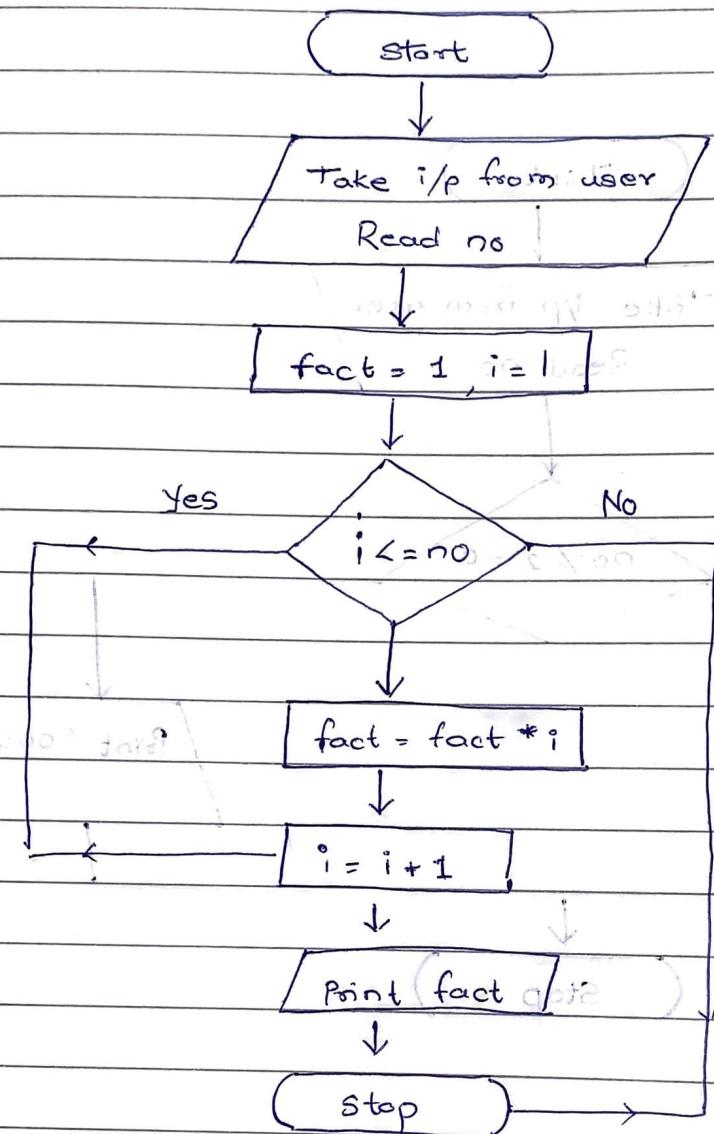


## 2. Factorial

Algorithm -> Start  
> Read n  
> if ( $n \neq 2 = 0$ ) then print else print odd  
> Stop

## Factorial

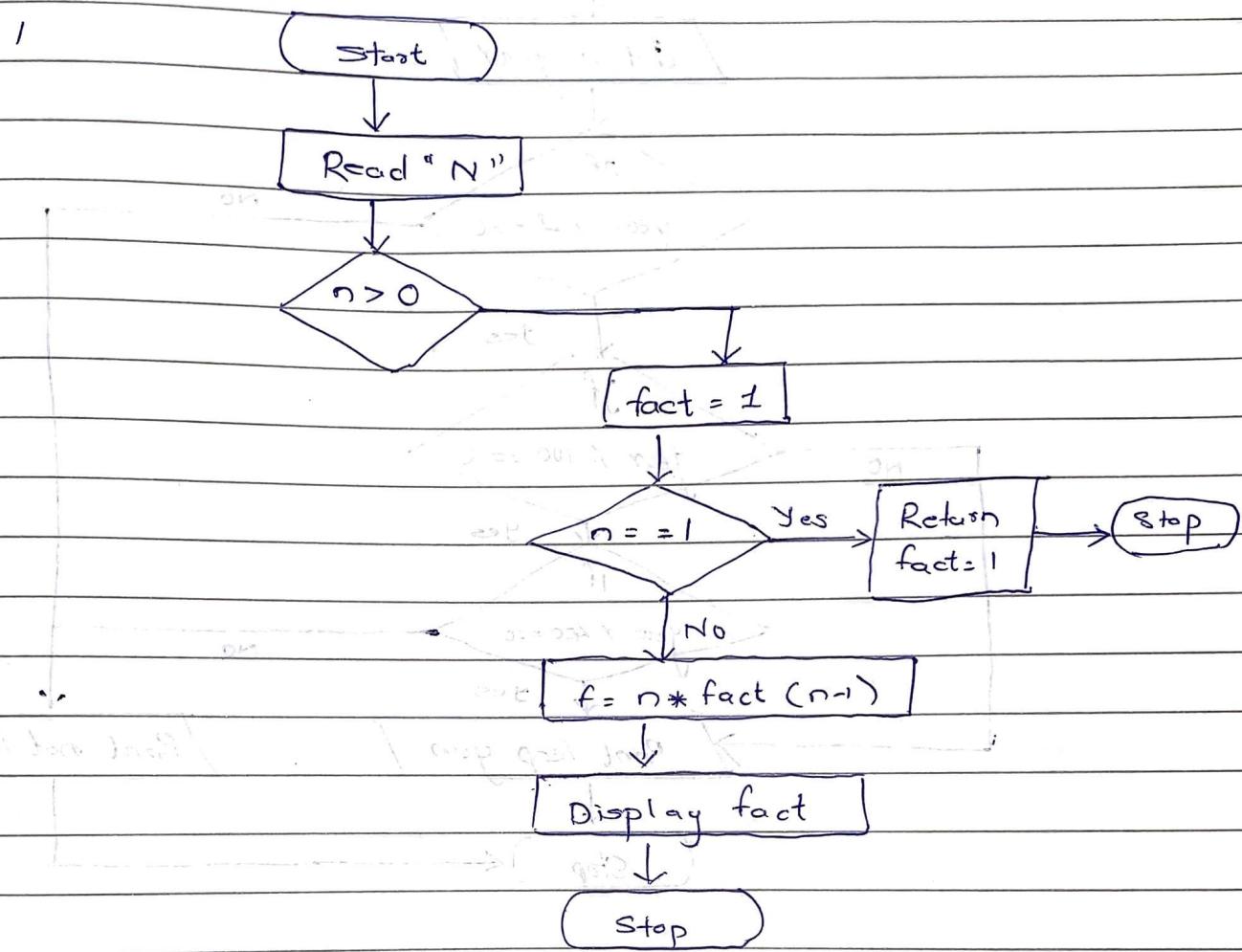
2



## Algorithm

- ① Start
- ② Read Number 'n'
- ③ Set fact = 1, i=1
- ④ if  $i \leq n$  is true then display fact
- ⑤ else  $i \leq n$  is false then display fact = 1;
- ⑥ Stop

③ Factorial without recursion

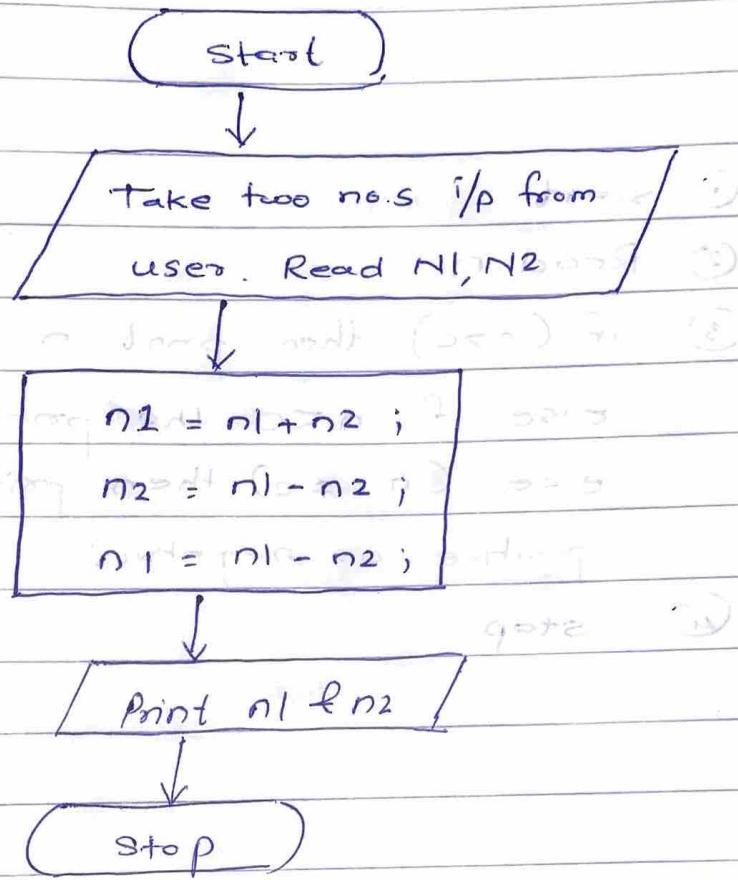


Algorithm

- ① start
- ② Read number of "N"
- ③ if  $n \neq 1$  then return
- else  $f = n * factorial(n-1)$
- Display fact
- ⑤ stop

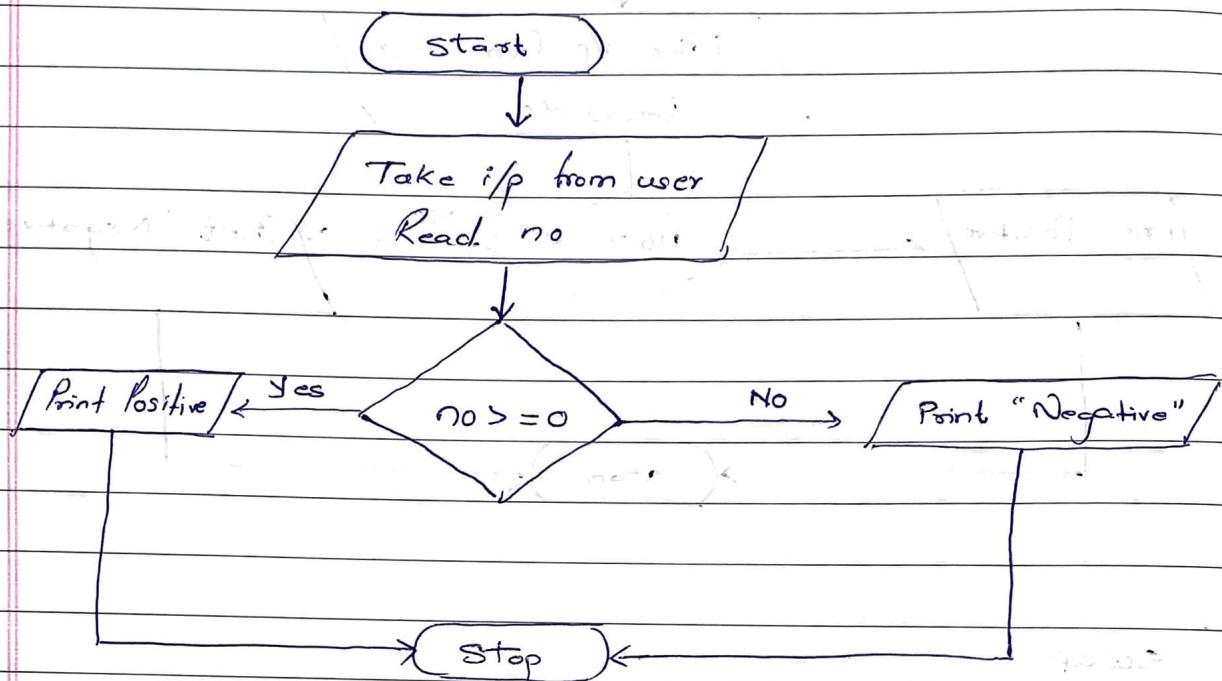
4

swap



- Algorithm =
- i) start
  - ii) Enter a, b
  - iii) Print a, b
  - iv)  $a = a + b ; b = a - b ; a = a - b ;$
  - v) Print a, b
  - vi) Stop

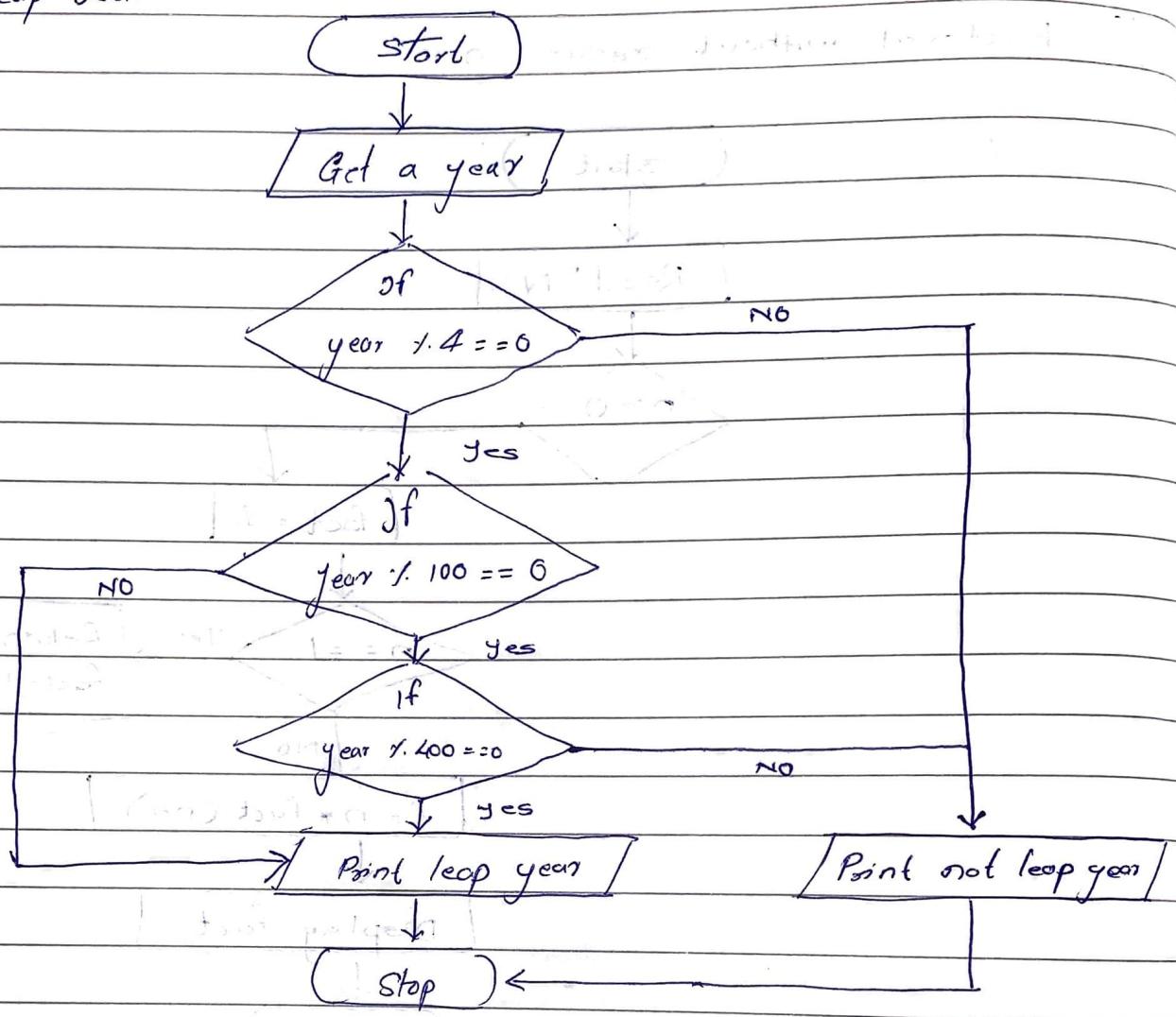
### Q.5. Positive / Negative



### Algorithm

- ① start
- ② Read  $n$
- ③ if ( $n > 0$ ) then print  $n$  is positive  
 else if ( $n < 0$ ) then print  $n$  is negative  
 else ( $n = 0$ ) then print "zero is neither positive nor negative"
- ④ stop

## (6) Leap Year

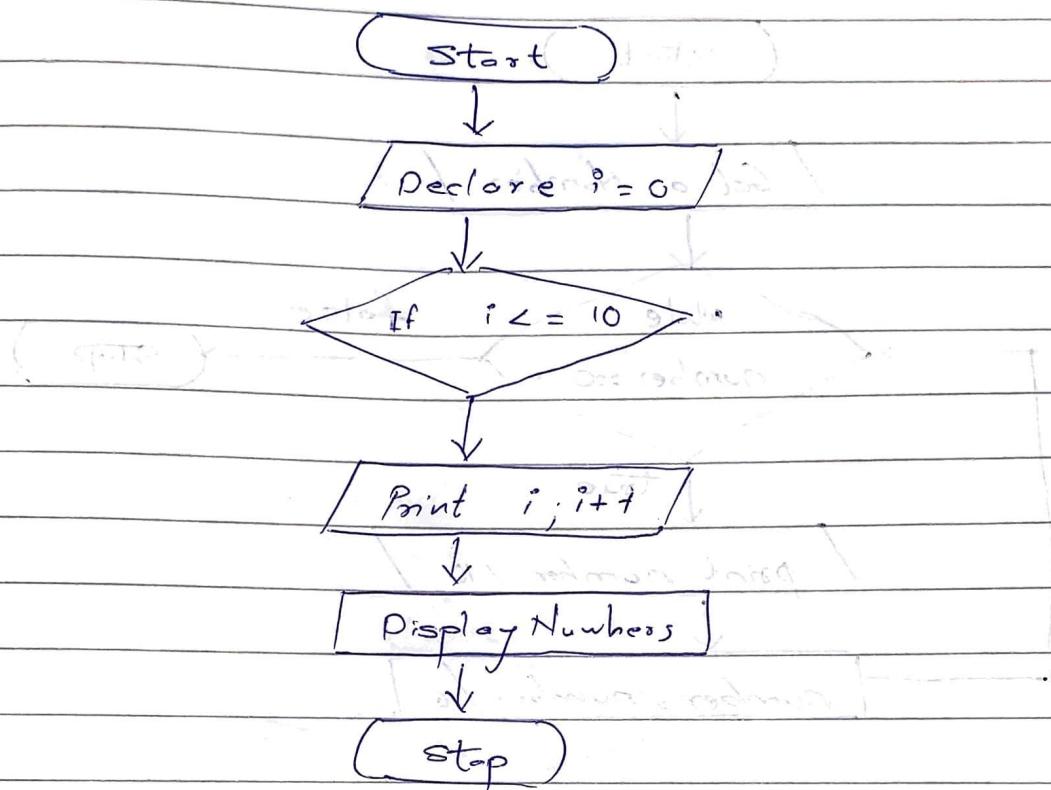


## Algorithm

- ① Start
- ② Get a input year
- ③ Check year divisible by 4, if true go to step 4, else Go to Step 7
- ④ Check year divisible by 100, if true go to Step 5, else Go to Step 7
- ⑤ Check year divisible by 400, if true go to step 6, else go to Step 7
- ⑥ Print leap year
- ⑦ Print not leap year
- ⑧ Stop.

⑦

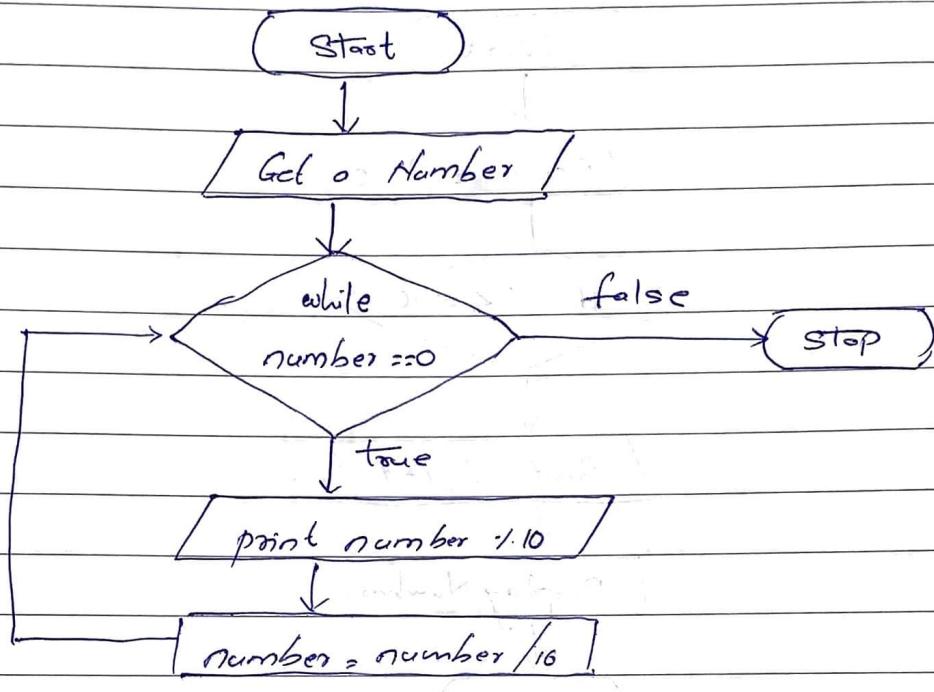
1 to 10 numbers without using loop.



Algorithm.

- 1) start
- 2) declare Variable  $i = 0$  ①
- 3) if ( $i \leq 10$ ) then ②
  - a) print  $i$ ,  $i + 1$  ③
- 4) stop ④

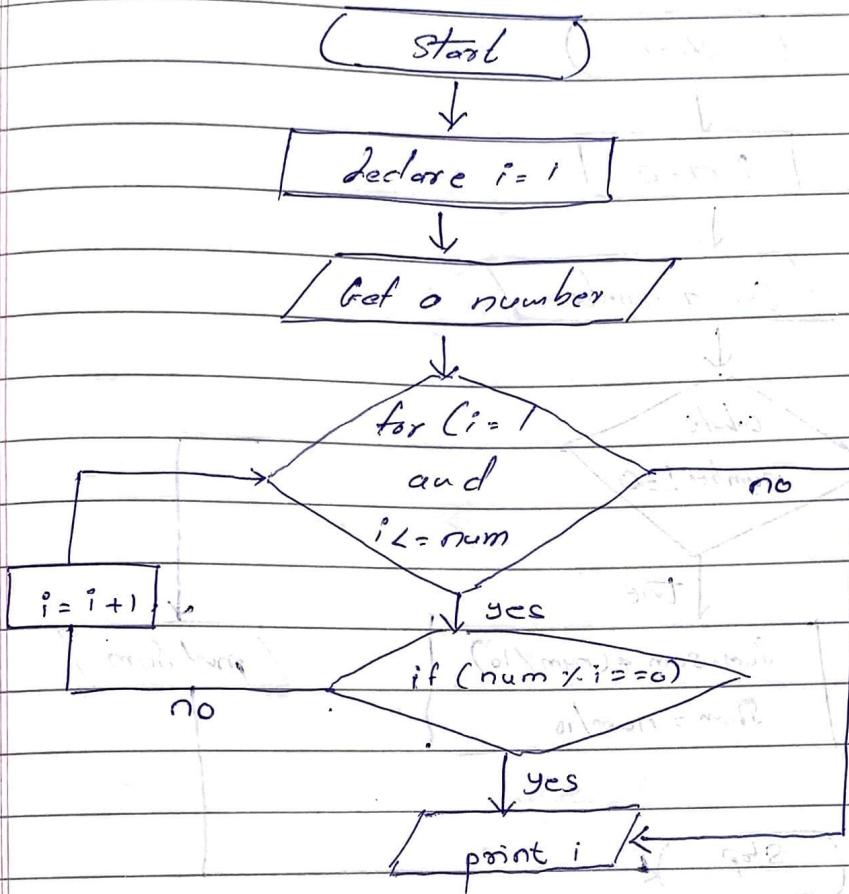
8 Point the digit of given number



### Algorithm

- ① Start
- ② Get a number
- ③ Print the value of number /10
- ④ Number = number /10
- ⑤ Repeat step 3 to 4 until number is not equal to zero
- ⑥ Stop

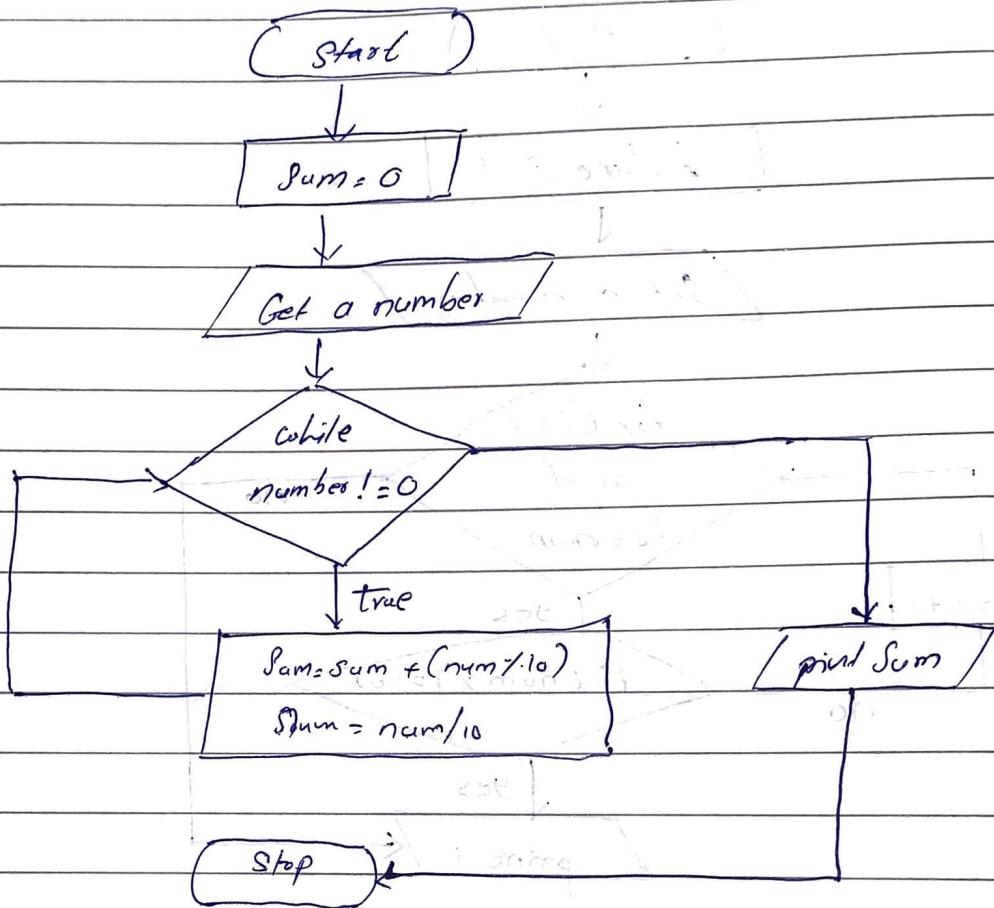
### g. Factor of a given number



Algorithm

- ① Start
- ② Get a number
- ③ Declare  $i=1$
- ④ check  $\text{number} \% i = 0$  if true print  $i$  and increment the value of  $i$
- ⑤ Repeat step 4 until  $i \leq \text{number}$
- ⑥ Stop

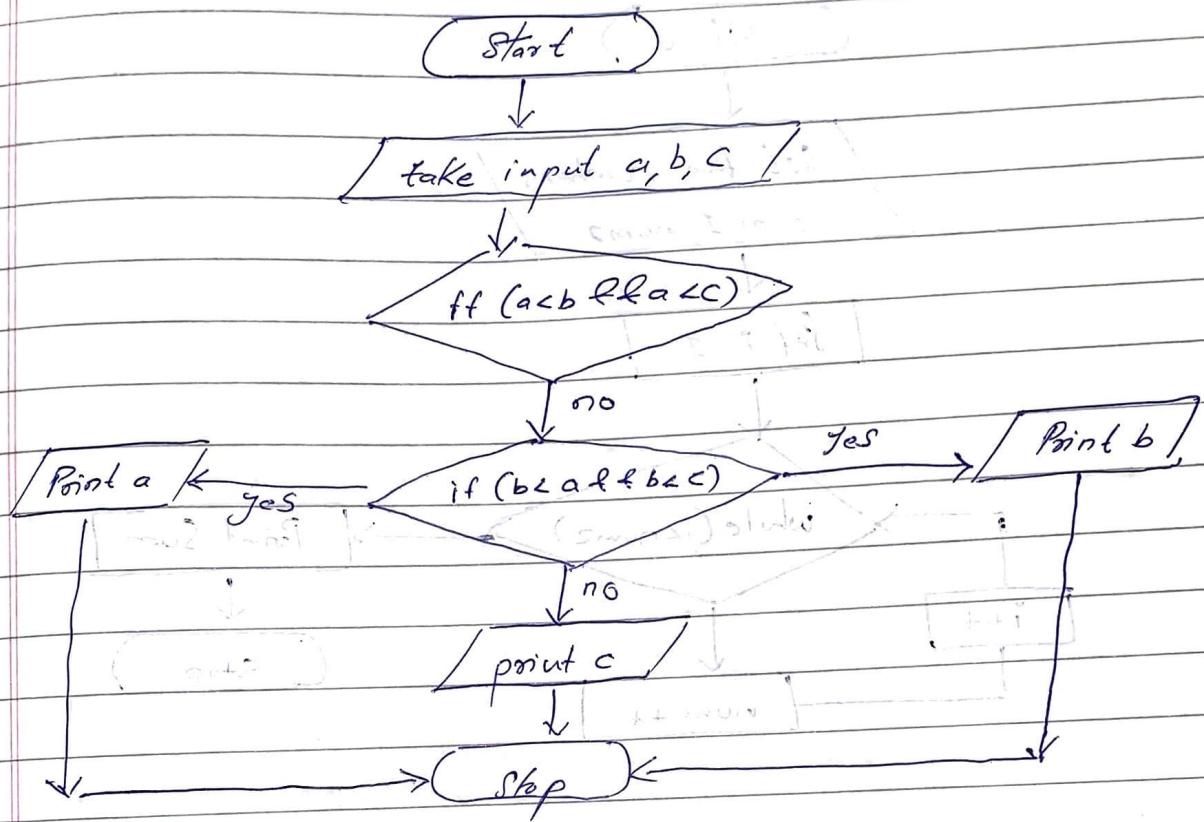
o) Sum of digit of given number



Algorithm -

- (1) Start
- (2) Get a number
- (3) Set sum = 1
- (4) While (number != 0)
  - sum = sum + (number % 10)
  - num = num / 10
- (5) Print sum
- (6) Stop

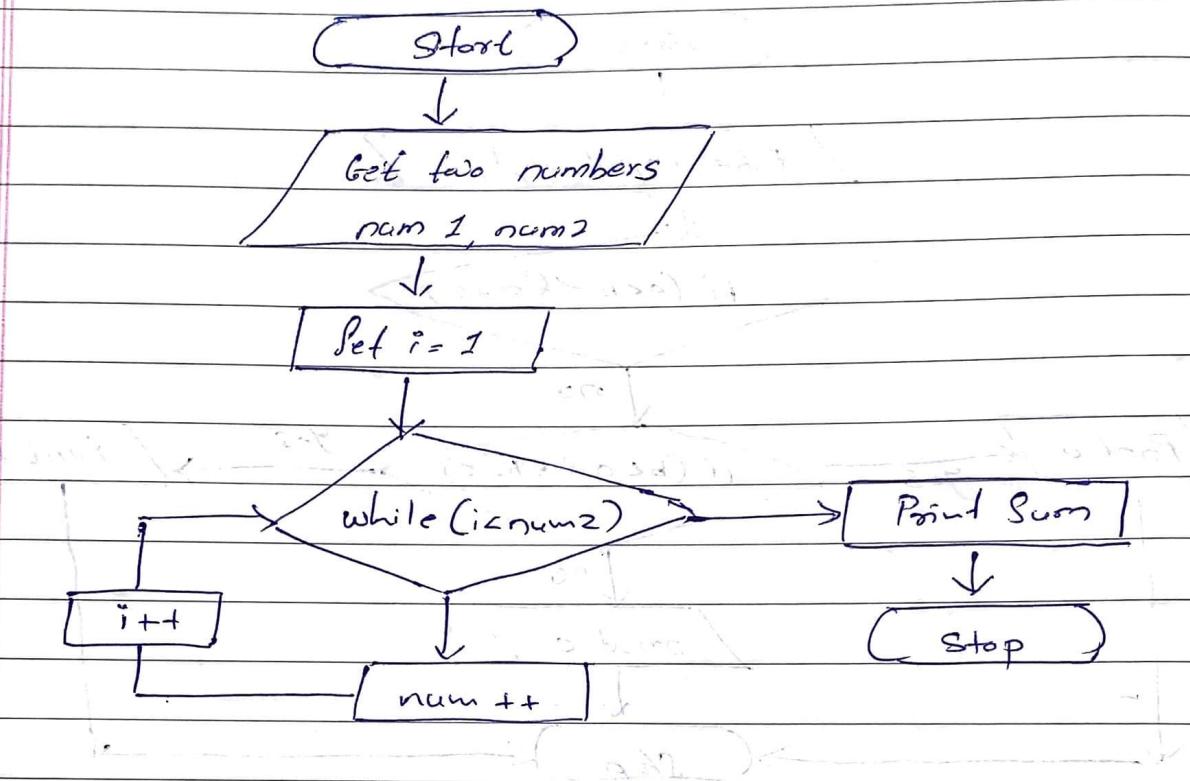
## (ii) Smallest of three numbers



Algorithm

- (1) Start
- (2) Get three numbers from user
- (3) check if  $a < b$  and  $a < c$ , if true print (a) and exit  
go to Step 4
- (4) check if  $b < a$  and  $b < c$ , if true print b and exit  
go to Step 5
- (5) print c
- (6) stop

## (12) Addition Without arithmetic operators

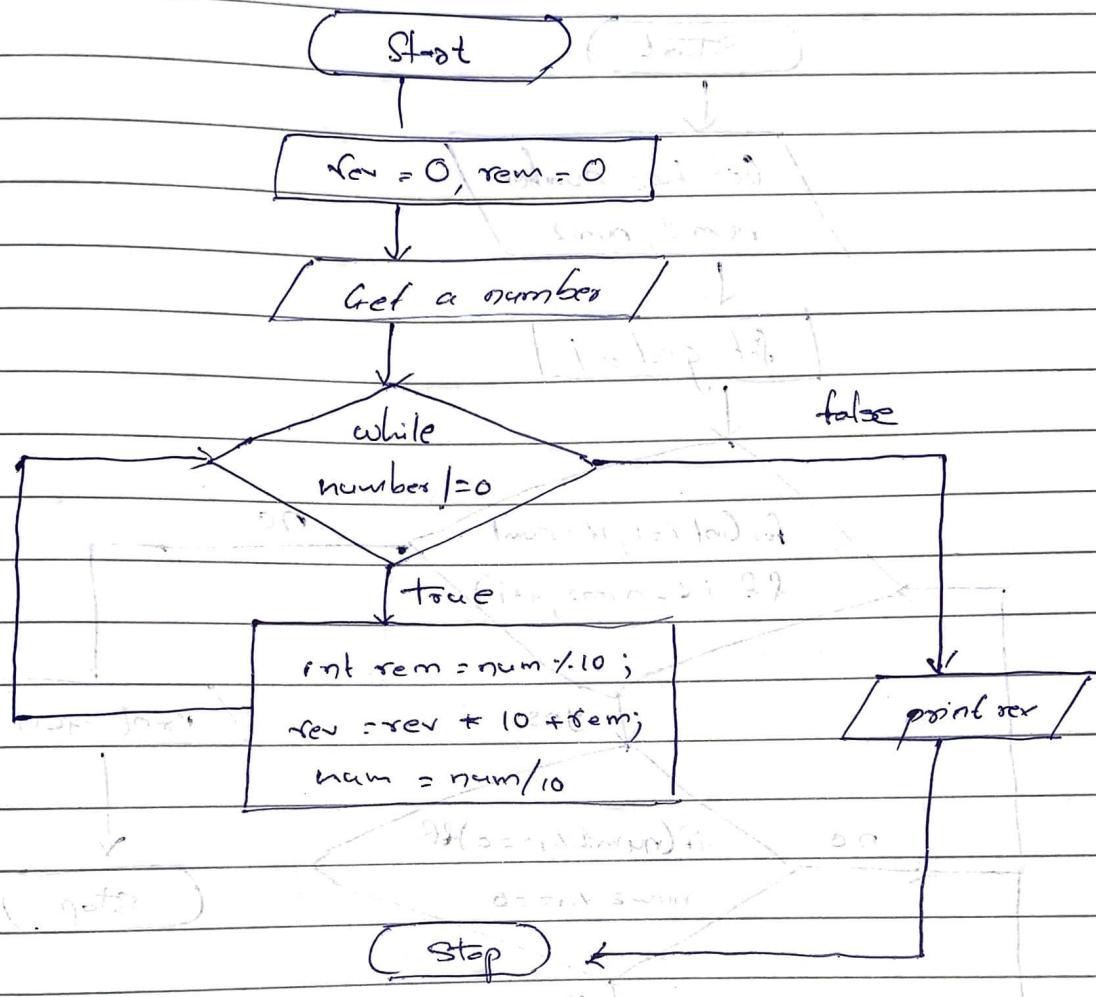


Algorithm

- (1) Start
- (2) Get two numbers
- (3) Call addNum(num1, num2) method
- (4) For (i=1; i < num; i++)  
 a. Num1 + 1  
 b. num - 1
- (5) Point Sum
- (6) Stop

B Reverse a given number

method out is void



Algorithm

① start

② Get a number

③ Set rem=0, rev=0

④ while (number != 0)

a. int rem = number % 10

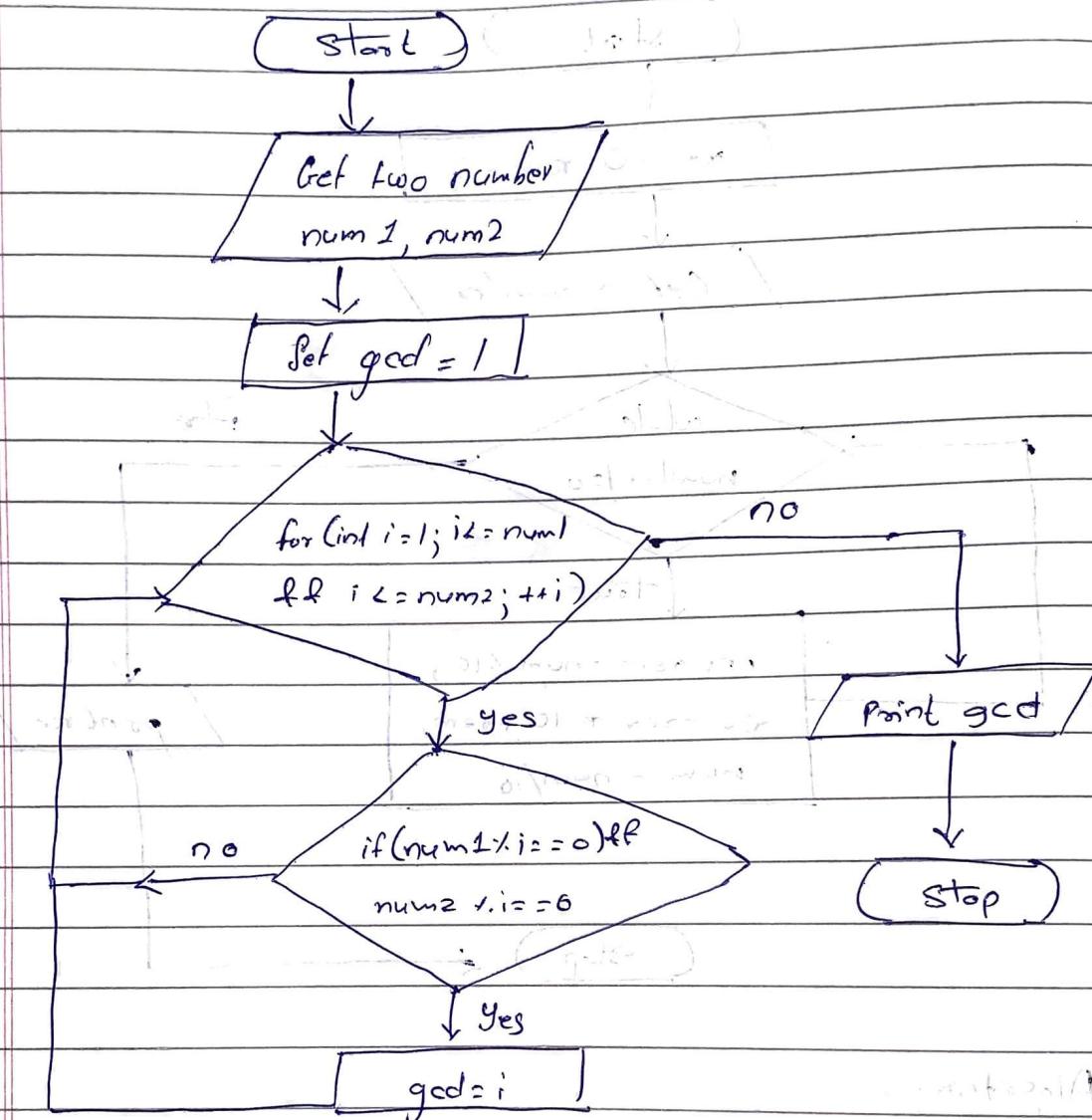
b. rev = rev + 10 \* rem

c. number = number / 10

⑤ Print rev

⑥ stop

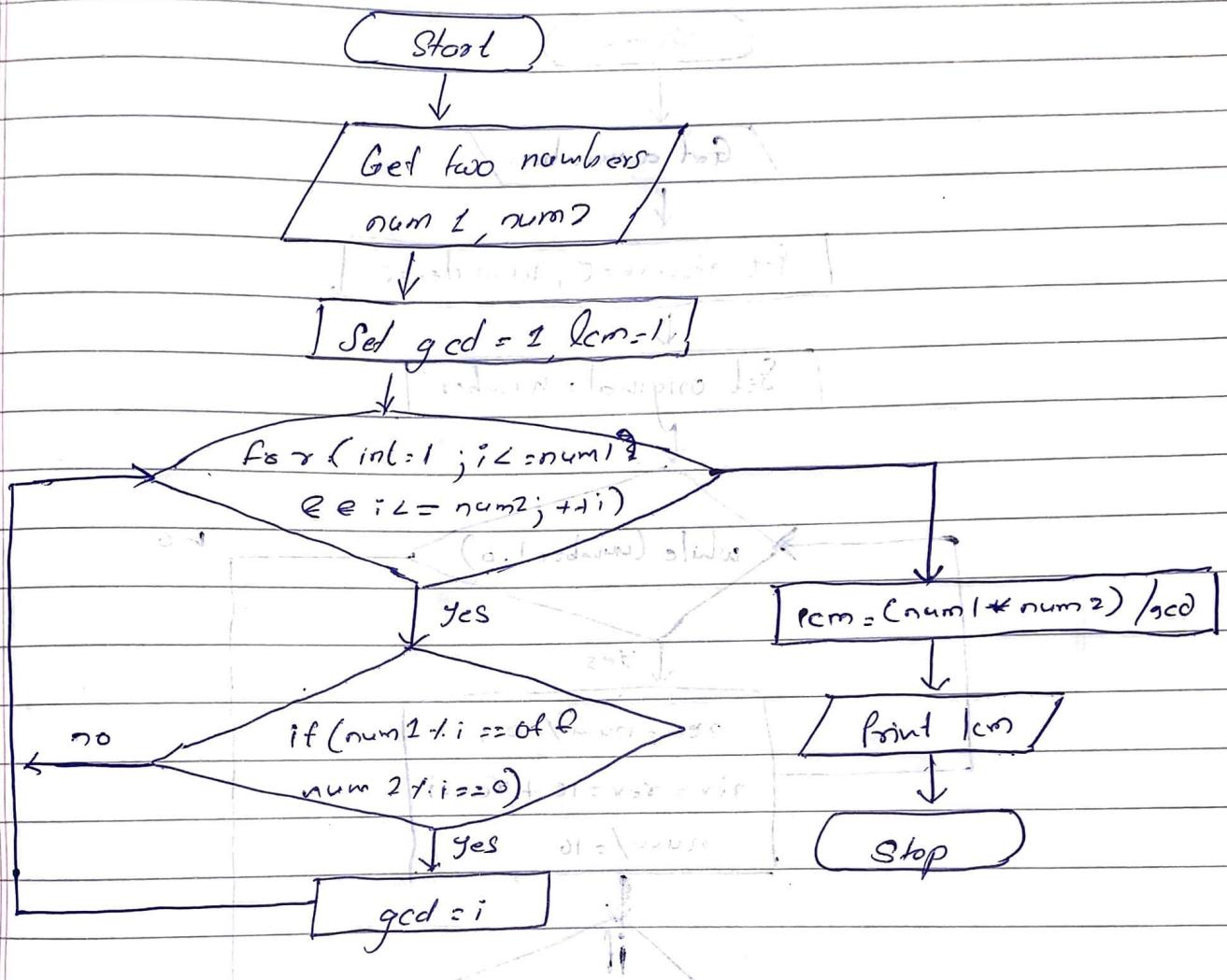
## 14 GCD of two number



Algorithm

- (1) start (with two numbers)  $\rightarrow$   $i = 1$
- (2) get two numbers  $\rightarrow$  num1, num2
- (3)  $\rightarrow$  set gcd = 1
- (4)  $\rightarrow$  for  $\sim$  (int  $i = 1$ ;  $i \leq \text{num1}$   $\text{ff } i \leq \text{num2}; ++i)$   
 $\quad$  if  $(\text{num1} \% i == 0 \text{ ff } \text{num2} \% i == 0)$   
 $\quad$  set  $\text{gcd} = i$
- (5) point & GCD
- (6) stop

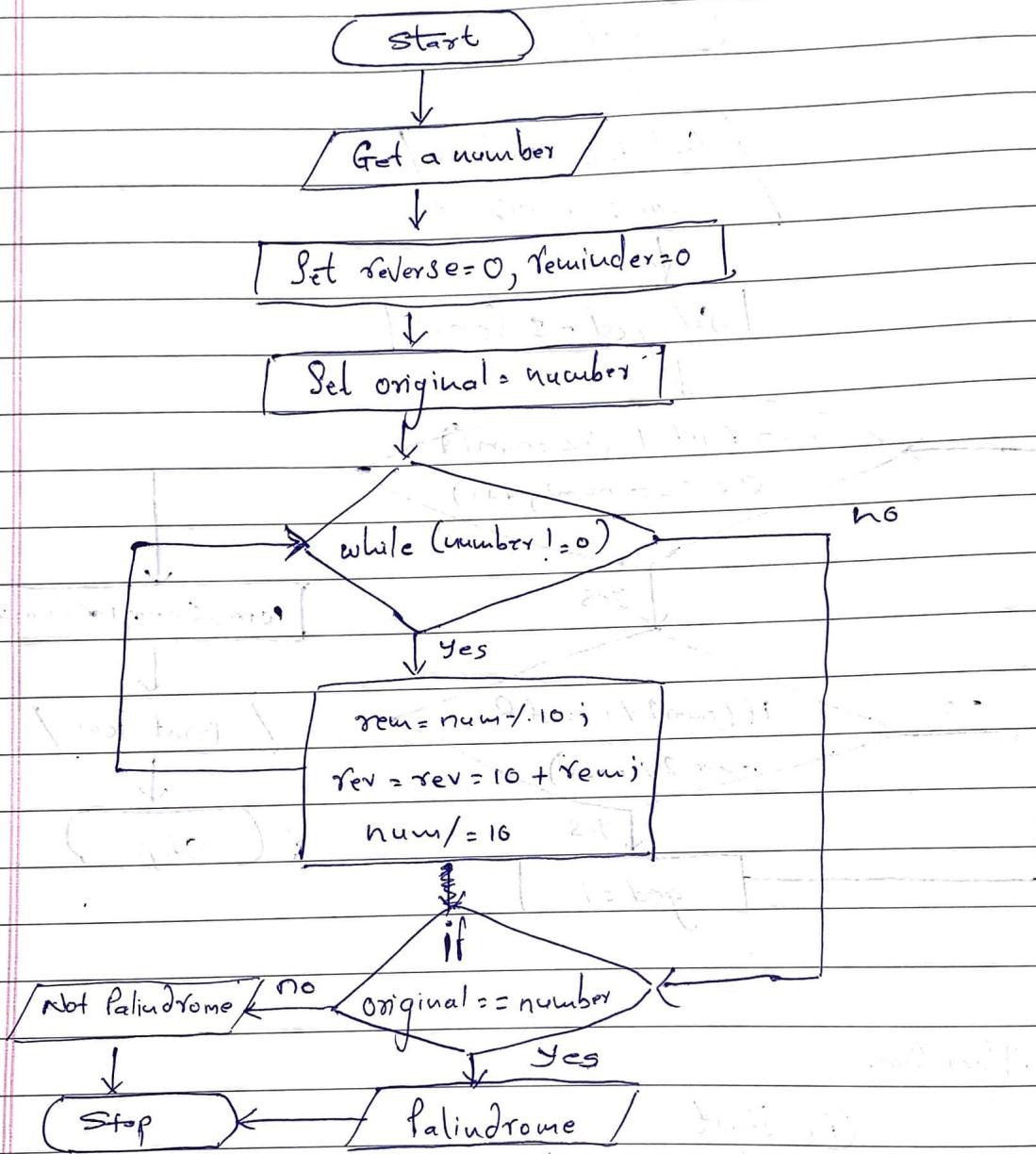
## 15. LCM of two numbers



Algorithm:

- (1) Start
- (2) Get two numbers num1, num2
- (3) for (int i=1; i<=num1 || i<=num2; i++)
   
if (num1 % i == 0 && num2 % i == 0)
   
Set gcd = i
- (4) LCM = (num1 \* num2) / gcd
- (5) print LCM
- (6) Stop

17 check Palindrome number or not.

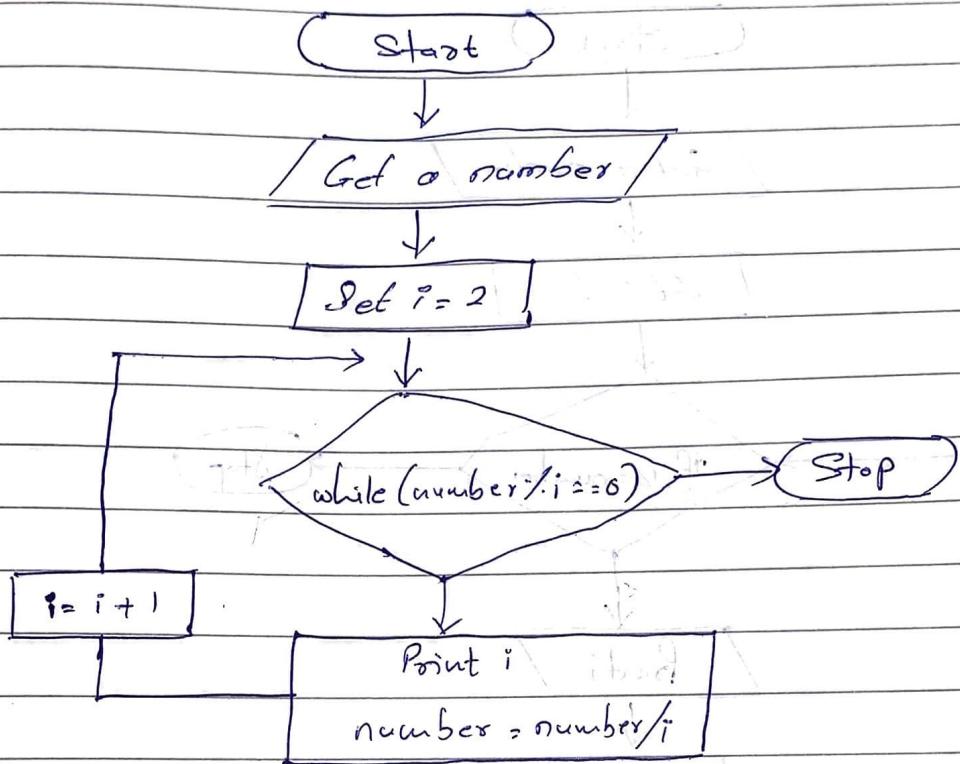


Algorithm:

- 1) Start
- 2) Get a number
- 3) Set reverse = 0 and remainder = 0
- 4) Set original = number
- 5) Check number != 0 if true go to 6 else goto 7
- 6) rem = num % 10;  
rev = rev \* 10 + rem;  
num /= 10
- 7) Check if original == no if true print palindrome else not palindrome

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## Prime factor of given number.

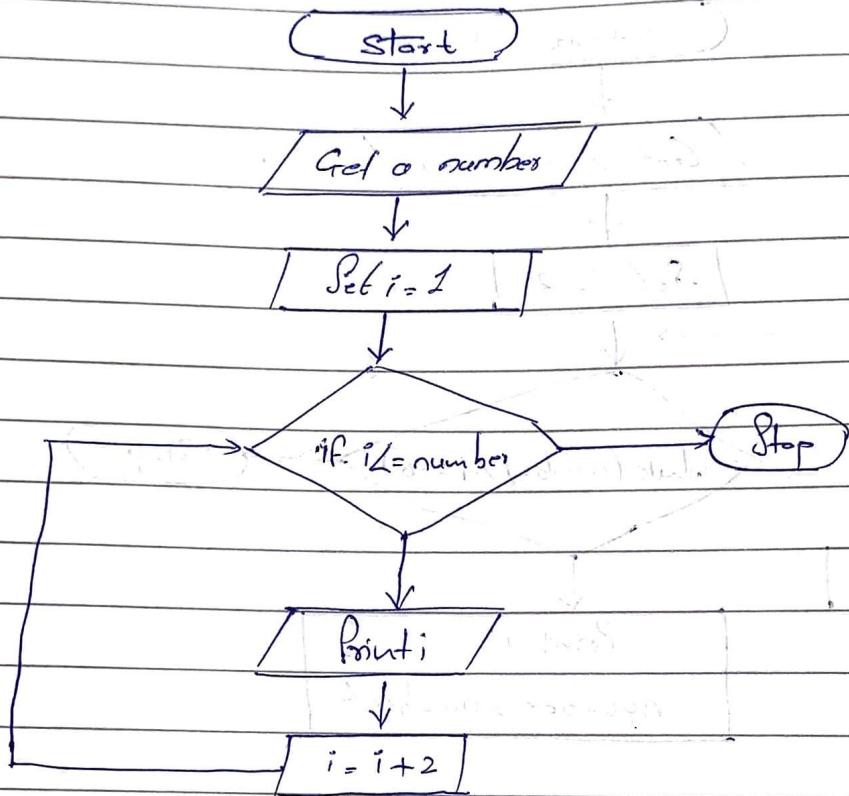


Algorithm.

1. Start
2. Enter the Number
3. Take  $i = 2$
4. check the input Number is greater then enter in loop.
  - a. while (Number is greater than 1)
  - b. check the condn (Number  $> i = 0$ )
  - c. if it true enter in bracket.
  - d. point ( $i$ ) value on terminal.
  - e.  $Number = Number / i$  else  $i++$  then loop will iteration again.

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## Even Series



## Algorithm.

1. Start

2. Get a number from user upto which they want to

3. Set i=2

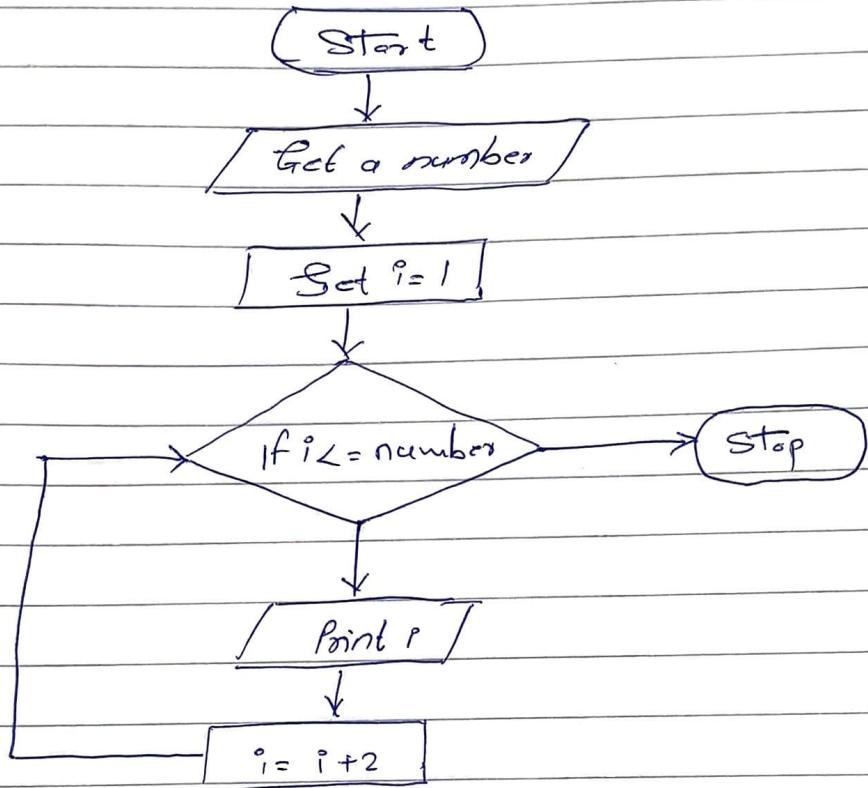
4. If i &lt;= number, point i and i = i + 2. Else go to

Step 6

5. Repeat step 4 until i &lt;= number

6. Stop

## 20 odd Series



1. Start
2. Get a number from user upto which they want to print even number
3. Set  $i = 1$
4. if  $i \leq \text{number}$ , print  $i$  and  $i = i + 2$  Else go to Step 6
5. Repeat Step 4 until  $i \leq \text{number}$ .
6. Stop.