Q.2) Write a program to print the digits of given numbers?

1) Start
2) Enter the Number from user.
3) a) form a = True.
   b) $9/10$ = Answer. | Answer = 9
4) Answer++ = n. | Number = n.
5) Repeat point n.
6) Repeat 3,4,5,6.
7) End.

—————X—————X—————X—————

Q.1) check the number is even or odd?

Start → Input Value From User → ◇ If N%2 ==0

True ← / → False

Numbers is even

Print Number is odd
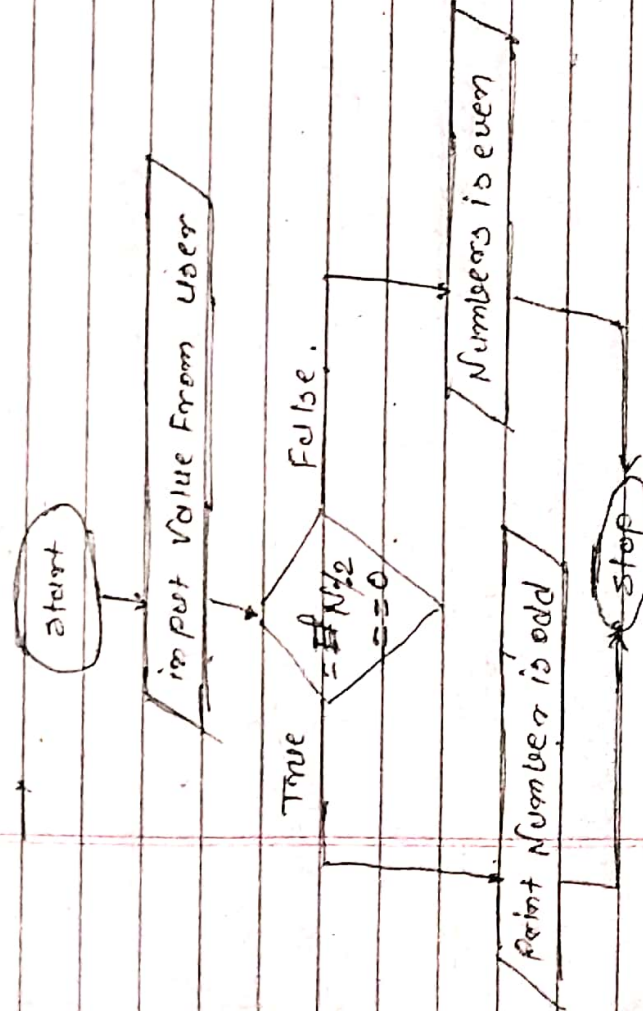
Stop

Q.2) Java program to find Factorial of given number?

Start.

Read n

$i = 1$
Fact = 1

For. $i \leq n$ ——— No

yes.

Fact = Fact * i | Print fact

$i = i+1$ | stop.
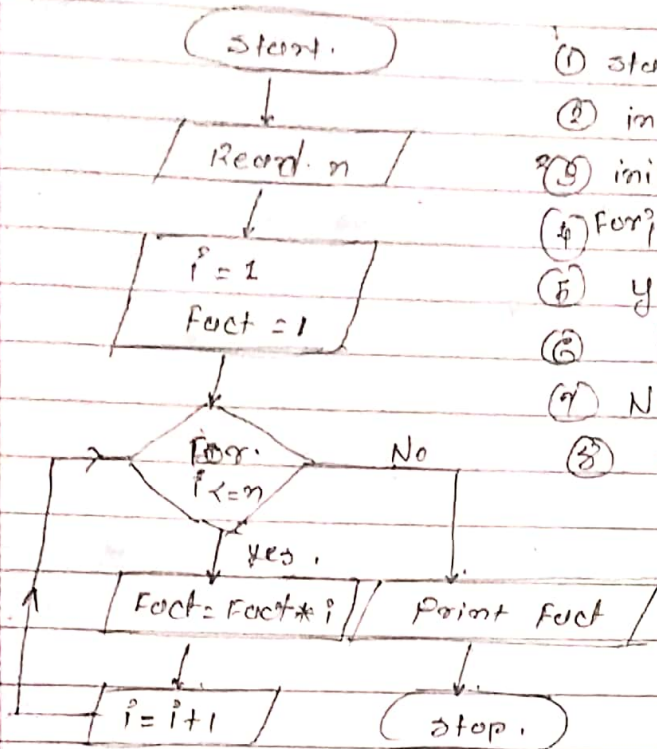
① start
② input number from user.
③ initialise = $i = 1$ & fact = 1
④ For? less than = number.
⑤ yes → Fact = Fact * i
⑥ $i = i+1$
⑦ No → print Factorial
⑧ stop.

——— X ———

Q.3) what is facta. Find Factorial of Number using recursion?

start

Read n

int temp = Fact
$i = 1$, Fact=1

If $n \leq$ number ——— yes.

else.

Fact = Fact * i

$i = i+1$

Print Factorial | stop.
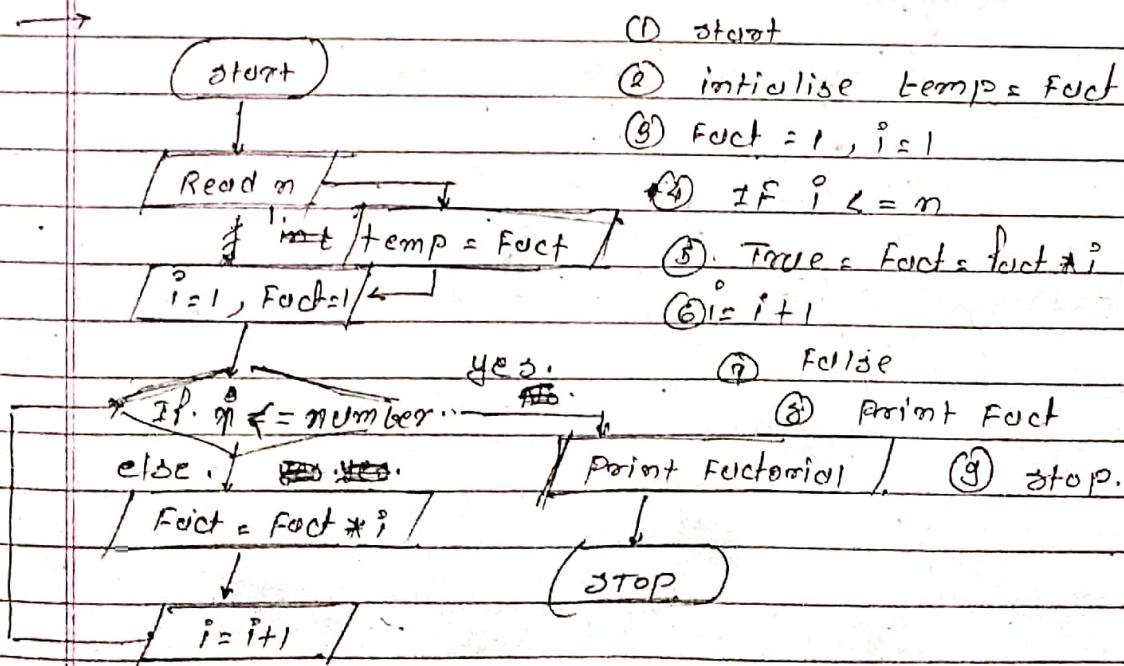
STOP.

① start
② intialise temp = Fact
③ Fact = 1, $i = 1$
④ IF $i \leq n$
⑤ True = Fact = fact * i
⑥ $i = i+1$
⑦ False
⑧ Print Fact
⑨ stop.

Q.4 Swap two numbers without using 3rd variable approach?

```
        ┌─────────┐
        │  Start  │
        └─────────┘
             │
        ╱─────────────╱          → (3,5) = (x, y)
       ╱ Variable x, y╱
      ╱──────────────╱
             │
      ┌──────────────┐
      │   x = x+y    │           → x = 3+5 = 8
      │   y = x-y    │           → y = 8-5 = 3
      │   x = x-y    │           → x = 8-3 = 5
      └──────────────┘
             │
       ╱──────────╱               → (x, y) = (5, 3)
      ╱ Print x, y╱
     ╱──────────╱
             │
        ┌─────────┐
        │  Stop   │
        └─────────┘
```

─────── X ───────
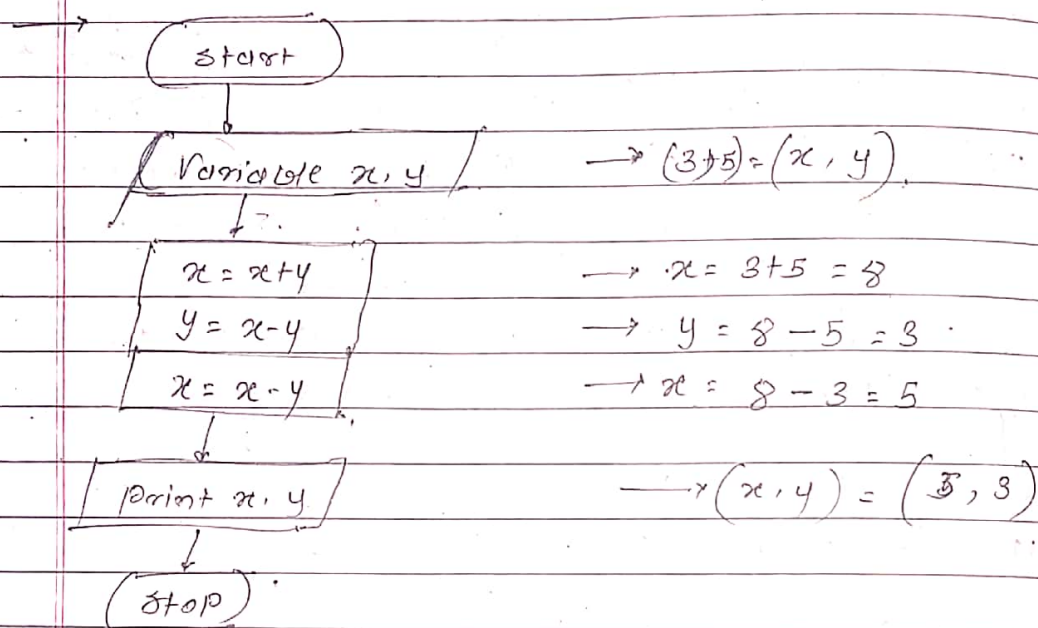
Q.5) How to check number positive or negative?

```
        ┌─────────┐
        │  Start  │
        └─────────┘
             │
      ╱──────────────────────╱
     ╱ Take input number = n ╱
    ╱──────────────────────╱
             │
   else      ◇──────────◇      yes
   ┌─────── ◇  If n < 0  ◇ ───────┐
   │         ◇──────────◇          │
   │                               │
 ╱──────────────╱            ╱──────────────────────────╱
╱ Print Number  ╱           ╱ Print number is negative  ╱
╱ is positive   ╱          ╱──────────────────────────╱
╱──────────────╱                    │
   │                          ┌─────────┐
┌─────────┐                   │  Stop   │
│  Stop   │                   └─────────┘
└─────────┘
```
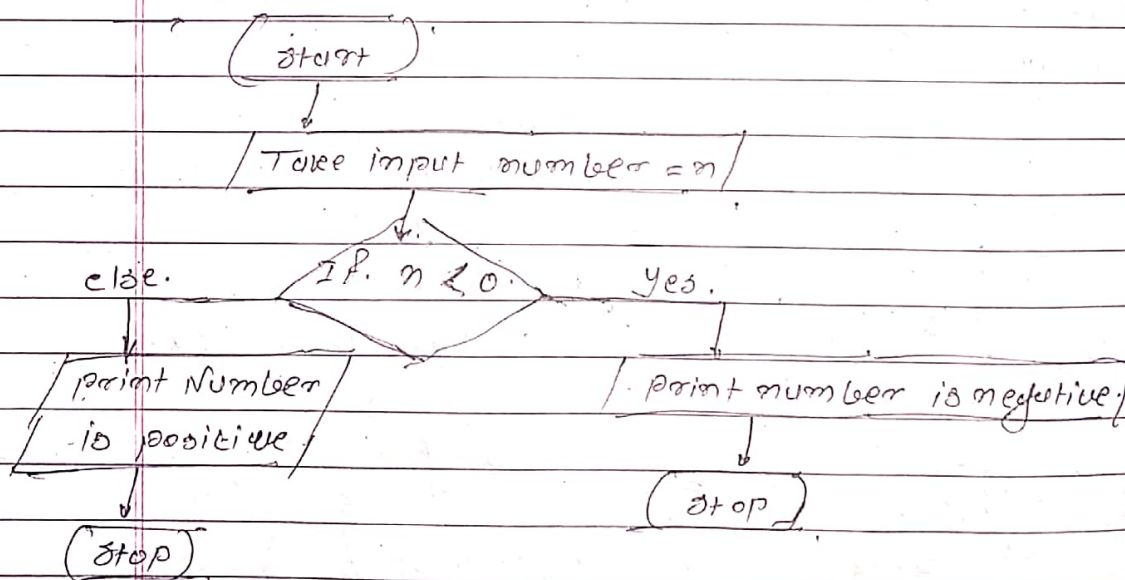
Q.6 write a java program. for given year is leap year?

start

input year y =

If $\frac{y}{4} == 0$ —— yes

else.

Print the year is.
non-leap year

Print the year is leap

stop

stop

—— x —— x ——
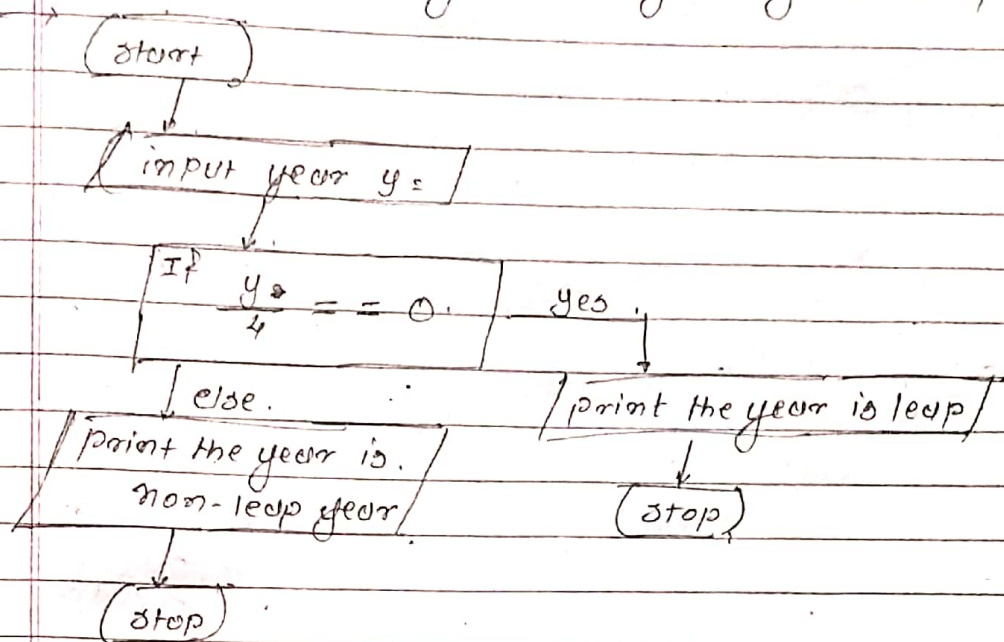
Q.7) write java programme. for printing 1 to 10.
with out using loop?

start

initialise i = 0 —— ✗✗✗✗✗

while. (i < 10)

i = i + 1

print i

stop
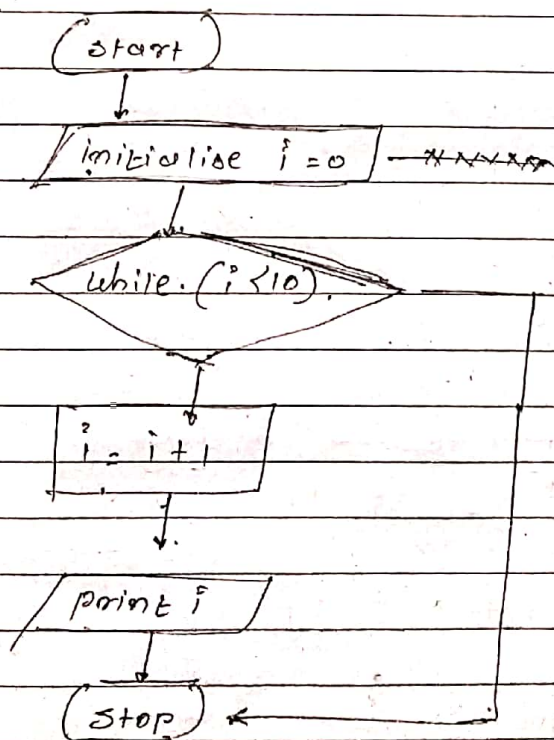
Q.8) Print digits of given number?

Start

Enter number

if Number != 0

yes

digit = Number % 10.
Number = number / 10.

Print digit

Stop
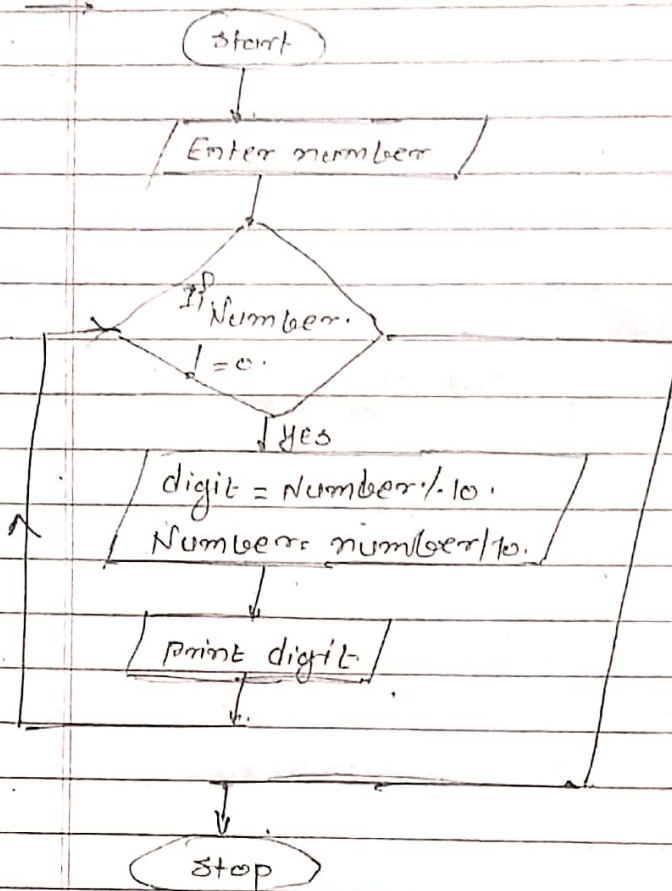
9.9 Factors of given number.

Start

Read num.
Read i = 1

True   num % i == 0   False

Print 'i'   i++;

                    True   i = num   False
                                   2

Print i

Print these are Factors of Number & Number.

Stop

Q.10) Sum of digits of Num.

Start

Read Num

Sum = 0
rem = 0

Rem = num % 10.

Num = num / 10.

Sum = sum + rem.

true.   If num=0.   False.

Print sum

Stop

---x---x---
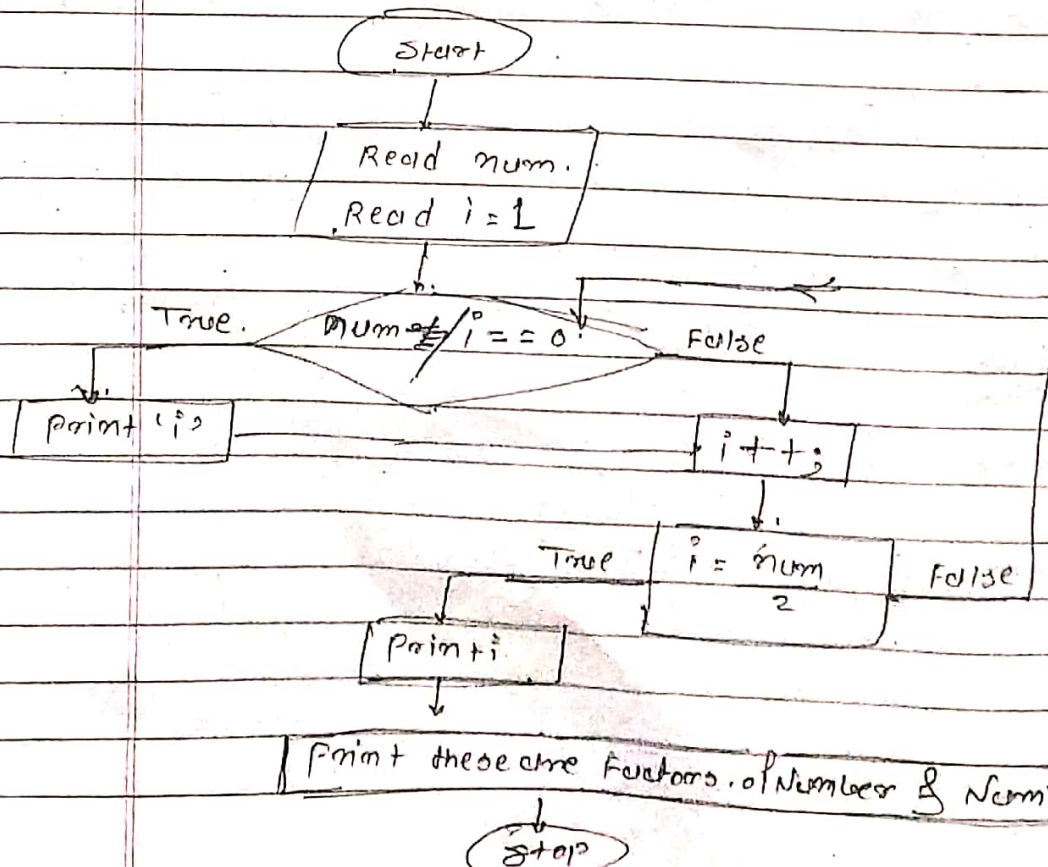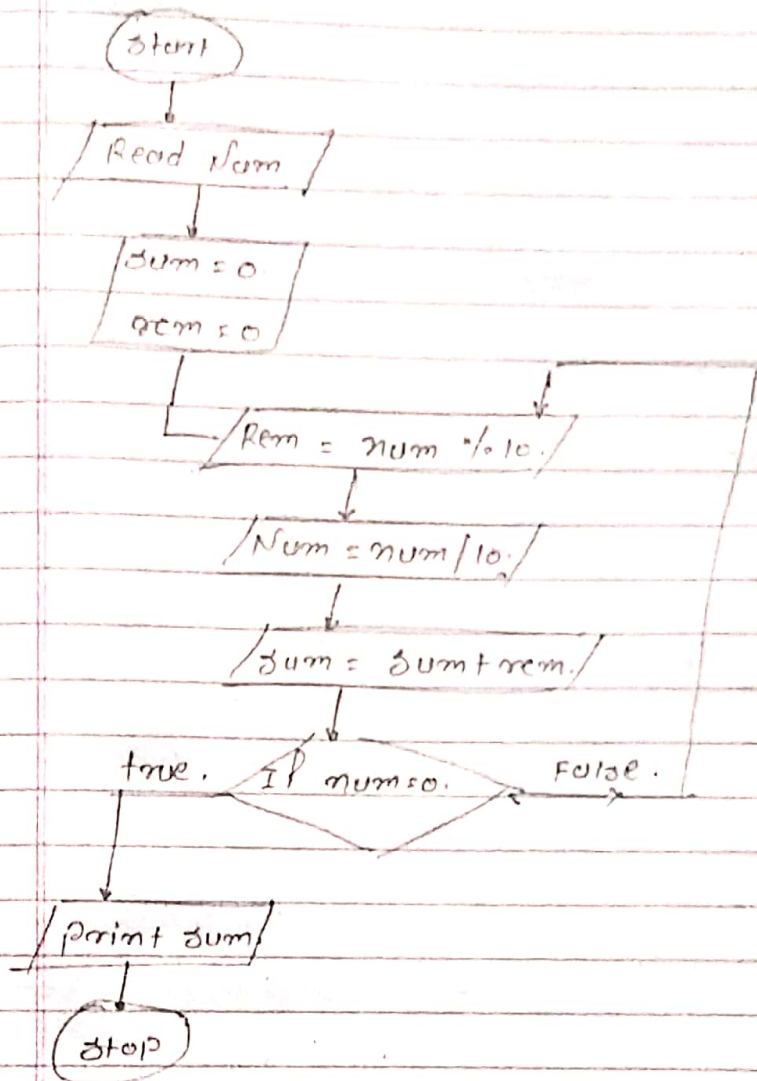
Q.12) How to add two numbers without using arithmatic operator in java?

Start

Initialise a, b → i = a

for i=1; i<=b; i++

return / Print a

Stop
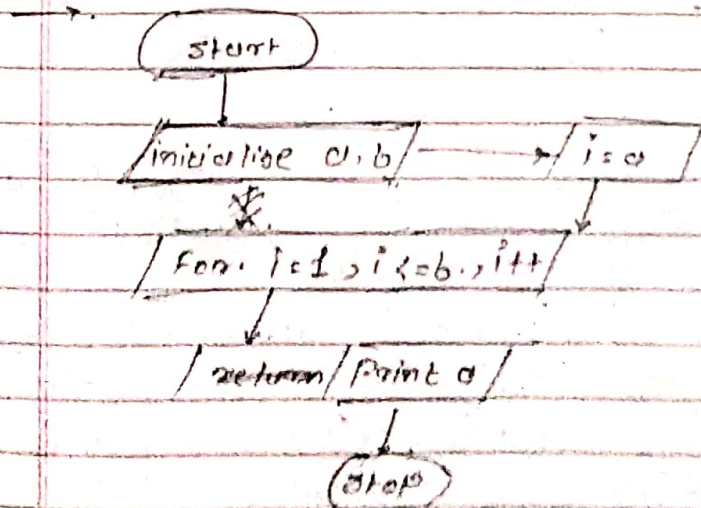
Q.13) write programe to reverse given Numbers

start

rem = 0
rcue = 0.

n % 10 = = rem

rcue = (reu × 10) + rem.

n / 10 = n.

True   n = = 0.   False

print rev.

stop.
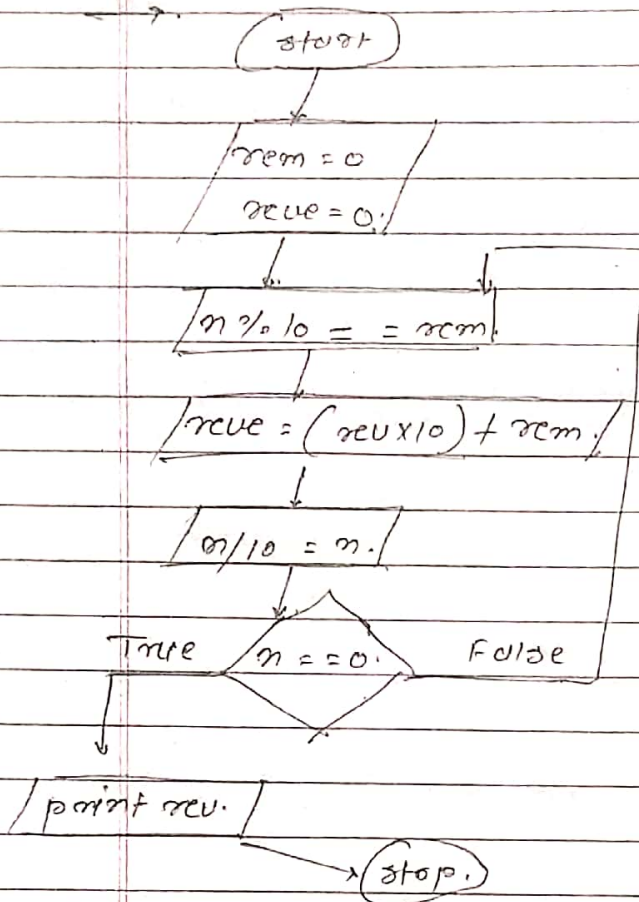
Q.14) write Java program to find the GCD of two given numbers?

start

Declare ni, n2 / gcd = 1, i = 1

input / ni = n2

False   ni > n2.   true.

n2 = n2 - ni   Ni = ni - n2

print result

Stop

Q.1(a)

(Start)

Declare Variable n_1, n_2,
gcd=1, i=1

input n_1 & n_2.

$i <= n_1$ & $i <= n_2$. — yes →

If $n_1 \% i == 0$
&& $n_2 \% i == 0$. — No →

No ↓ (left branch)

yes ↓

gcd = i

$i = i+1$

Print gcd

(Stop.)

— x —— x —— .
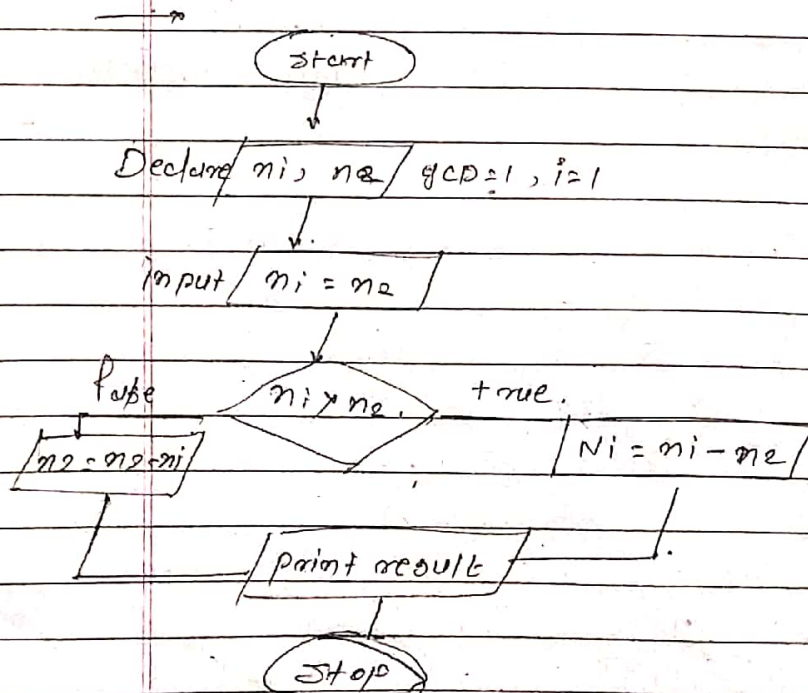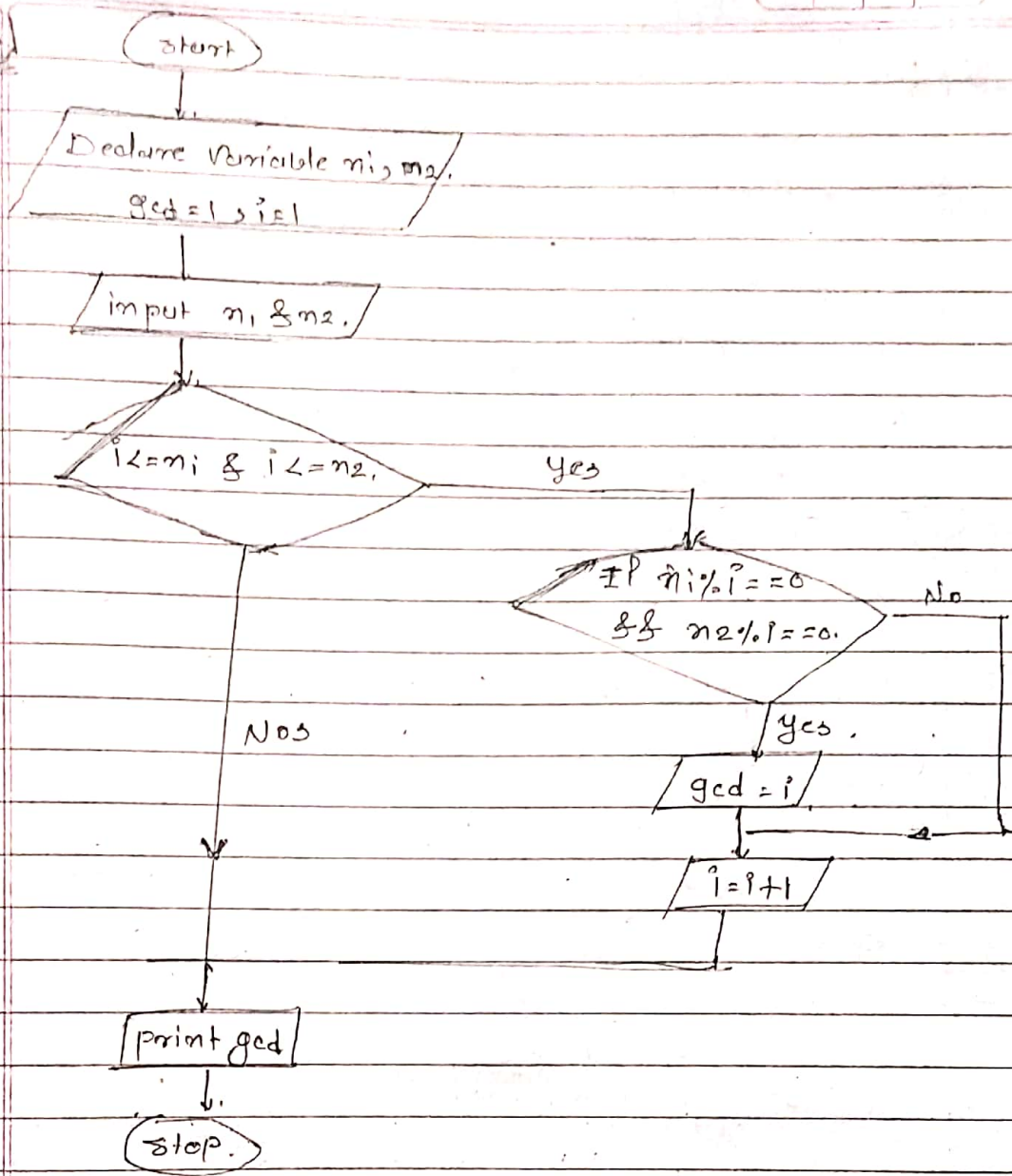
Q.1(b) Flochart for Lcm of two numbers using prime factor. method?

~~Beg~~   (Begin)

input a, b

$L = max(a, b)$

check Next page.

Q.16 →

Start

input a, b

L = max (a, b)

If
(L % a == 0
&& L % b == 0)

Yes → output → Stop

No

L = L+1

x ⟶ x
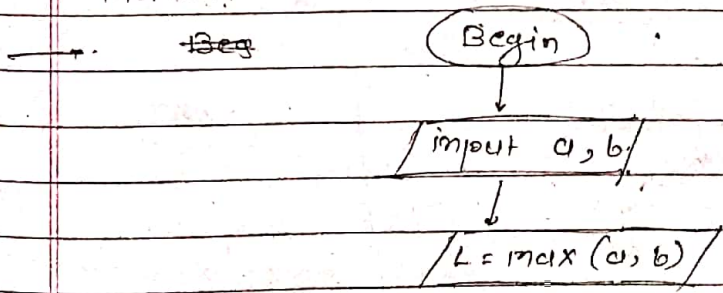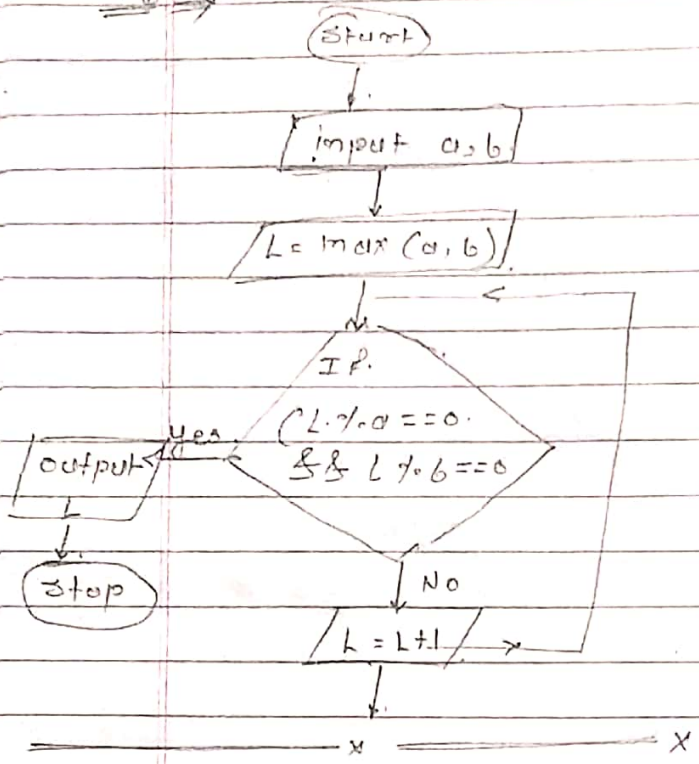
Q.17   check whether the given number is palindrome or not?

Start

Read Num

Rev = 0
Remin = 0.

temp = num

Print pallindrome no

True

False

n % 10 = rem.

rev = (rev × 10) + rem

Print Not pallindrome

False

rev == temp

n / 10 = n.

True   n == 0   False
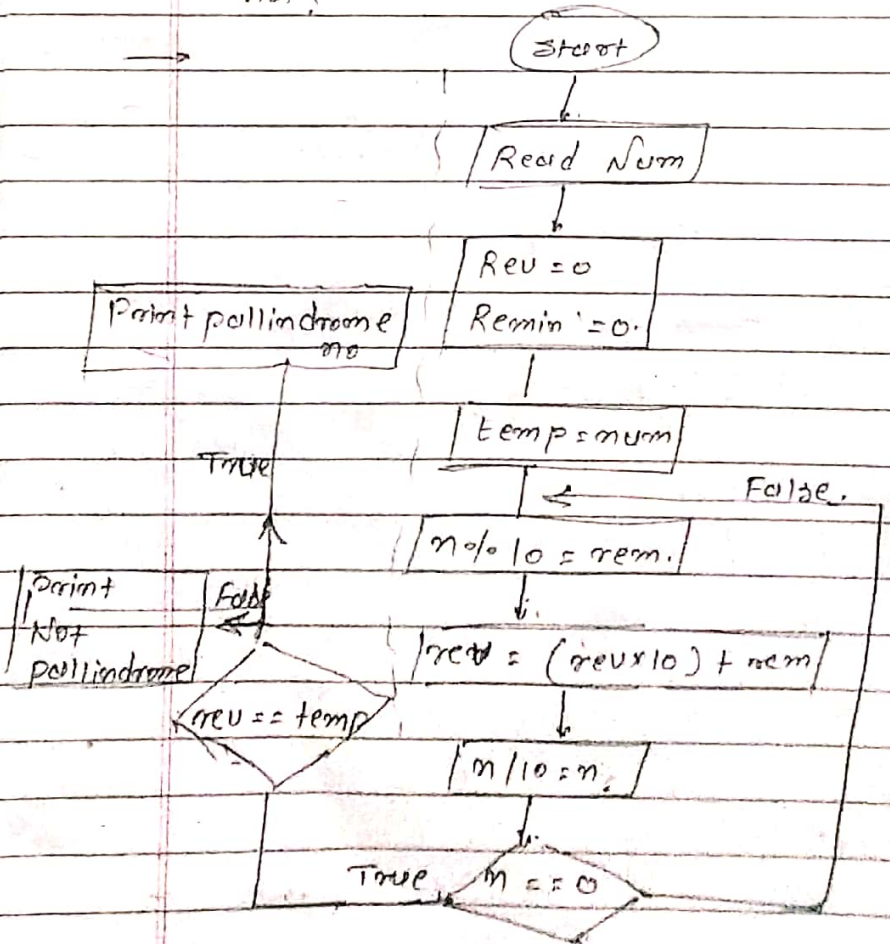
Q.18) Prime factors of a number:

```
            ( Start )
                |
                v
      +---------------------+
      |  Read  number       |
      +---------------------+
                |
                v
   +----------------------------+         yes
   | check = Number.            |----------------+
   |      prime number.         |                |
   +----------------------------+                |
          |                                      v
        ≠ No.                         +------------------------+
                                      | Print prime factor     |
                                      +------------------------+
                                                  |
                                                  v
                                             ( Stop )
```
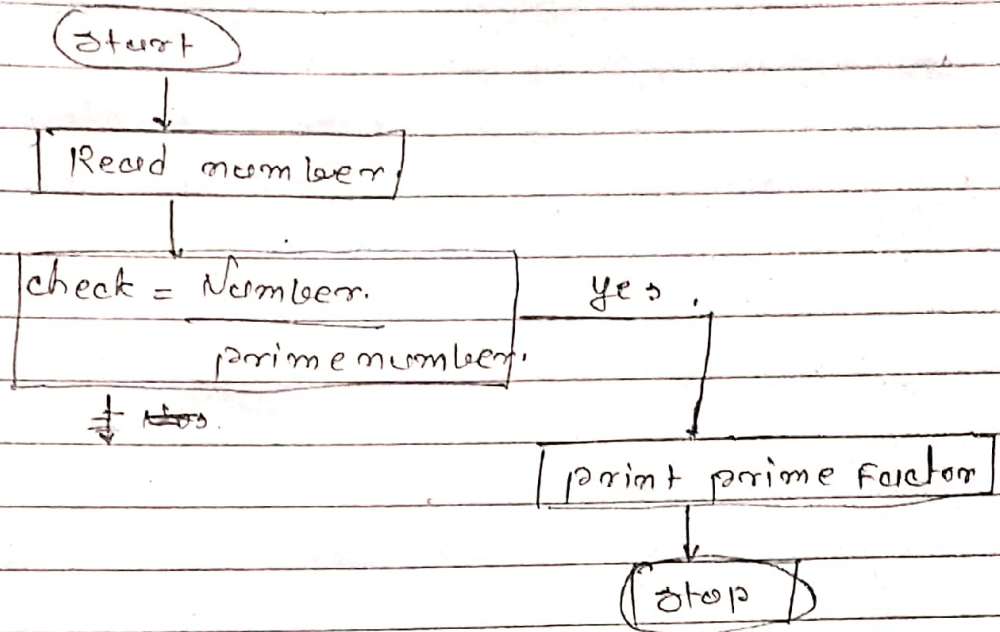
Q.19) To print the following series of even Number.
  series , 2, 4 ...

⟶ ① start programe.
  ② input Number = i
  ③ K is even = i%2 = 0 ⟶ Remainder.
  ④ (k, k<100, k++)
  ⑤ Print k If (condition (3) is true , or repeate.
    process 8 ⟶ 4 ⟶ 3 ⟶ 4
  ⑥ end programe.

⟶ x ═══ x ⟶

Q.20) To print the following series of odd Number

  ① start programe.
  ② Take input of Number ⟶ i
  ③ k is odd = i%2 = 1 ⟶ Remainder
  ④ (i, i<100, i++)
  ⑤ print k if the condition (3) is true.
    or repeat process 4 ⟶ 3 ⟶ 4
  ⑥ end programe