Week 0:

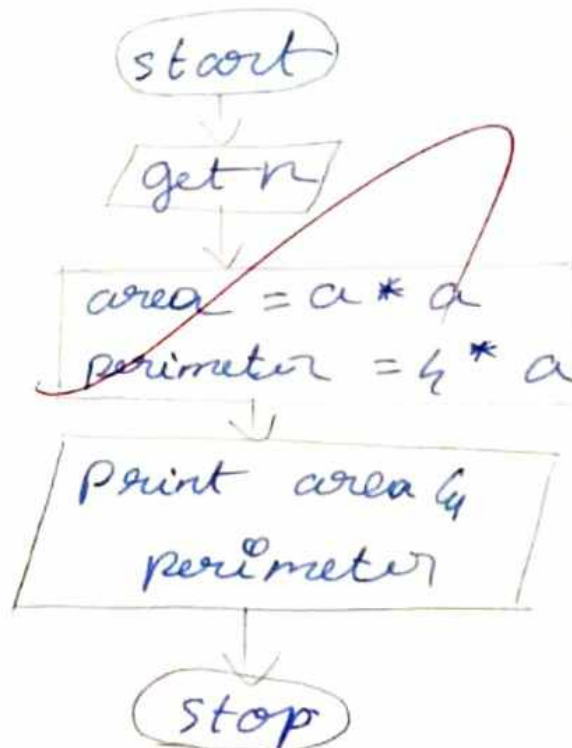**ROLL NO.:240801152**
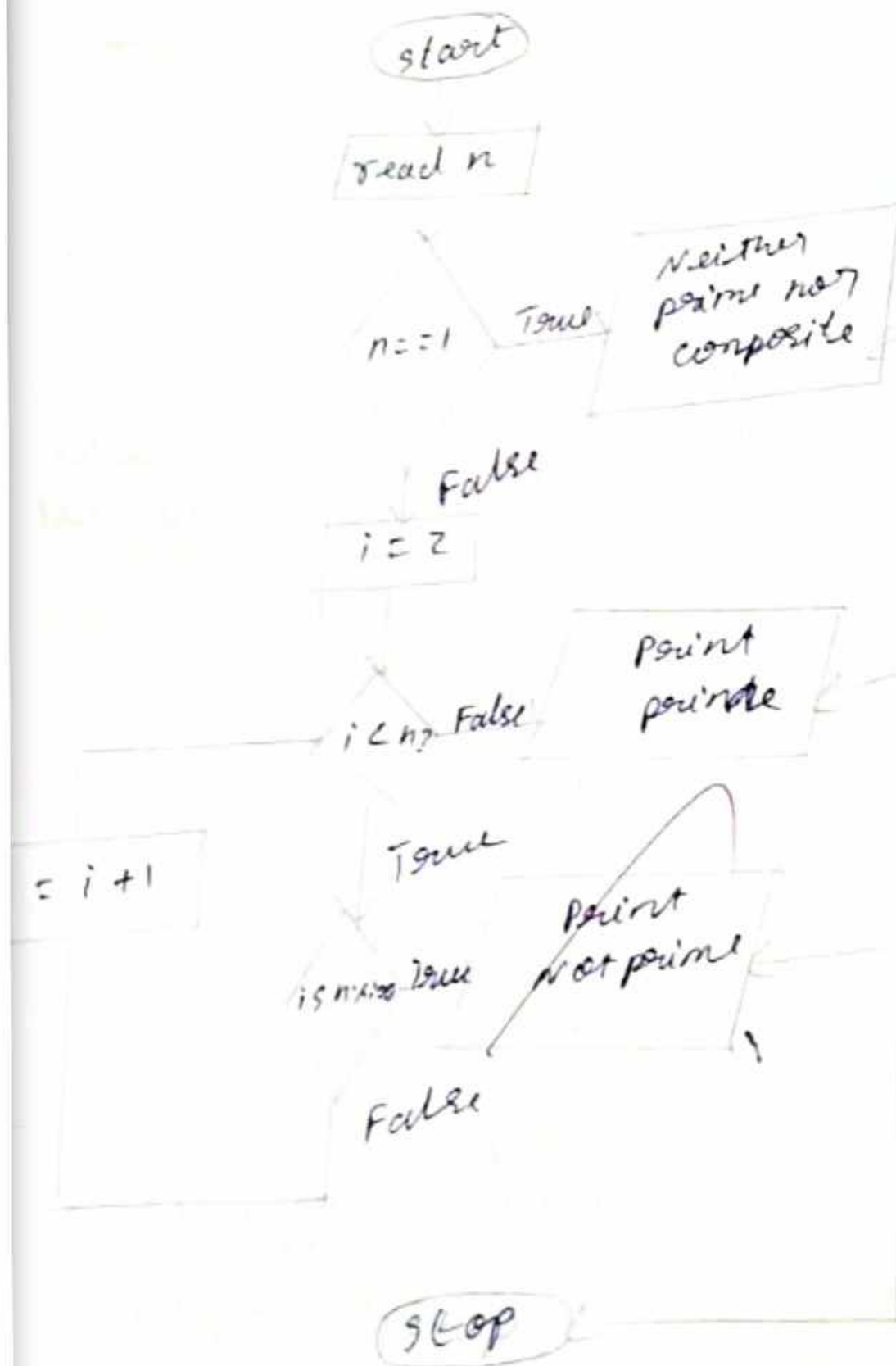
Name: Kavinilavan S

Ex. No.: 1

Date: 26/9/24

Calculate Area and Perimeter

Write an Algorithm and draw a Flowchart to Calculate the area and perimeter of a square.

Algorithm:

step 1 : start

step 2 : Input side

step 3 : Area = side * side

step 4 : Perimeter = 4 * side

step 5 : Output Area (or) Print Area

step 6 : Output perimeter (or) Print Perimeter

step 7 : stop

Flowchart:

start

get n

area = a * a
perimeter = 4 * a

Print area & perimeter

stop

```
                    ( start )

                   | read n |

                                      ┌──────────────┐
                                      │  Neither     │
              n==1      True          │  prime nor   │
                          ─────────→  │  composite   │
                                      └──────────────┘

                   │ False

                 | i = 2 |

                                          ┌──────────────┐
                                          │  Print       │
          i < n?  False                   │  prime       │
   ────────────────────────────────────→  └──────────────┘

              │ True

                                              ┌──────────────┐
                                              │  Print       │
  = i+1    is n%i=0  True    ─────────────→   │  Not prime   │
                                              └──────────────┘

              │ False

                   ( stop )
```

Prime Number

Write an Algorithm and draw a Flowchart to check whether the given number is Prime or not.

Algorithm:

step 1 - start

step 2 - read n

step 3 - set f = 1

step 4 - If n == 1 then
print "n is not prime numbo
go to step 8

step 5 - For 9 = 2 to n-1

step 6 - If n%i == 0 Then set f = 1

Flowchart: else goto step5

step 7 - If f == 1 then
print " n is not Prime numbo"
else

step 8 - stop

Ex. No.:   Date:
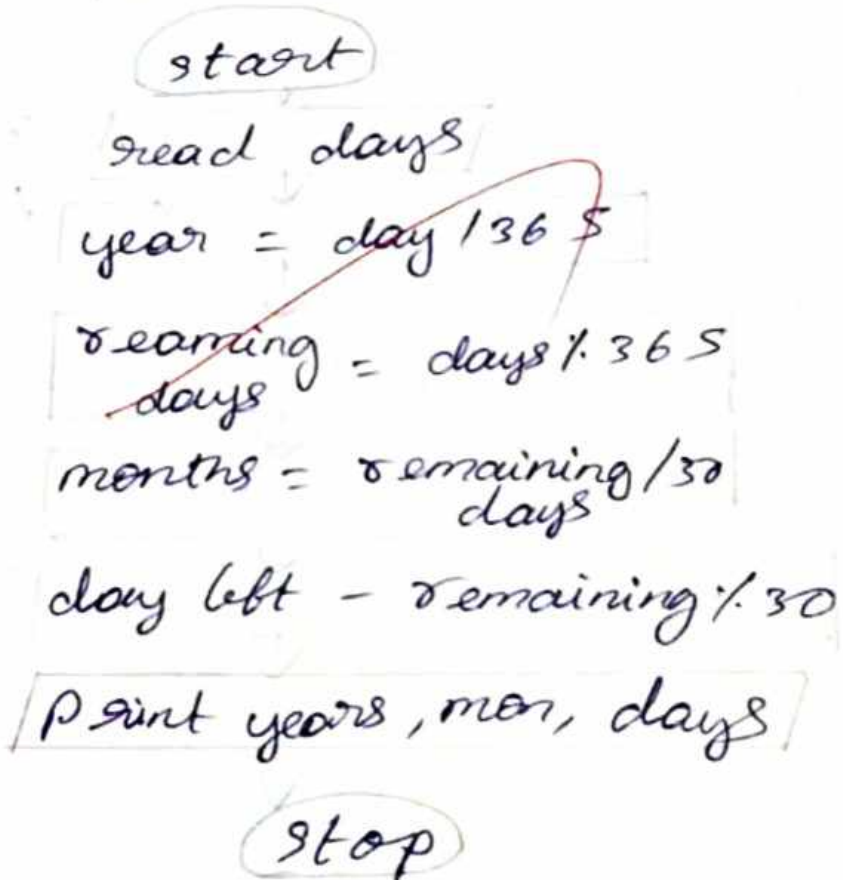
Days to Year Conversion

Write an Algorithm and draw a Flowchart to convert the given days into years & months.

Algorithm:

step 1 : start
step 2 : Input number of days
step 3 : Compute years = total day/365
step 4 : Compute remaining days = total days/365
step 5 : Compute months = remaining day/30
step 6 : Compute days left = remaining/30
step 7 : Print years / months / days
step 8 : stop

Flowchart:

start

read days

year = day/365

reaming days = days % 365

months = remaining days /30

day left - remaining % 30

Print years, mon, days

stop

Ex. No.:   Date:

Leap Year
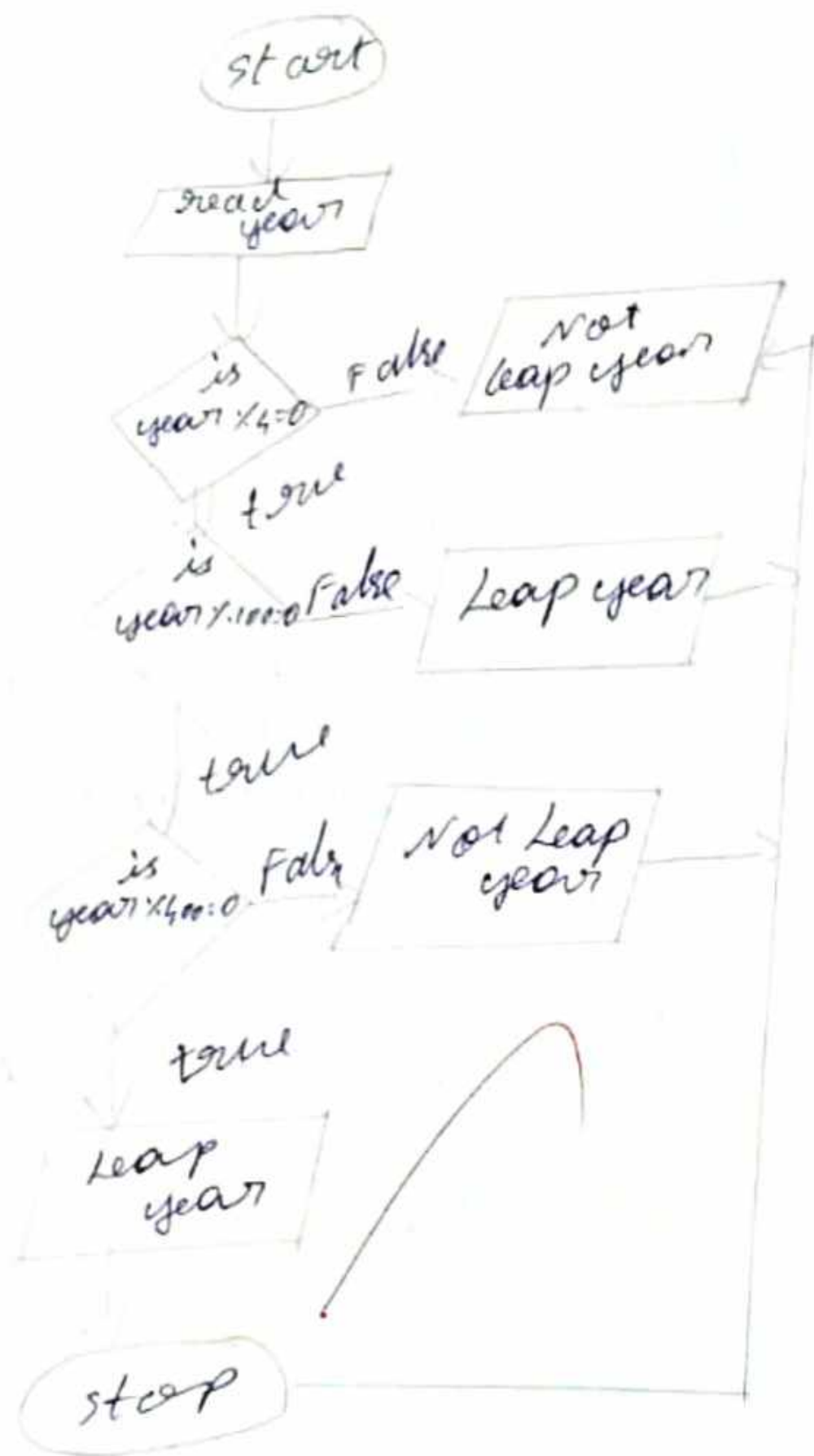
Write an Algorithm and draw a Flowchart to check whether the given year is Leap year or not.

Algorithm:

step 1 - start

step 2 - Read your rem

step 3 - rem = year % 4

step 4 - if rem == 0
                print ("Leap year")

step 5 - else
                print ("not Leap year")

Flowchart:

step 6 - stop

```
                    ( start )
                        |
                        v
                  / read    /
                 /    year  /
                        |
                        v
              is              False        / Not       /
           year%4=0 ---------------------- / leap year /
                |
              true
                |
                v
              is
           year%100=0  False      Leap year
                |
              true
                |
                v
              is            False     Not Leap
           year%400=0 ------------    year
                |
              true
                |
                v
             Leap
             year
                |
                v
            ( stop )
```

Ex. No.: 2   Date: 26/9/24

Palindrome Number

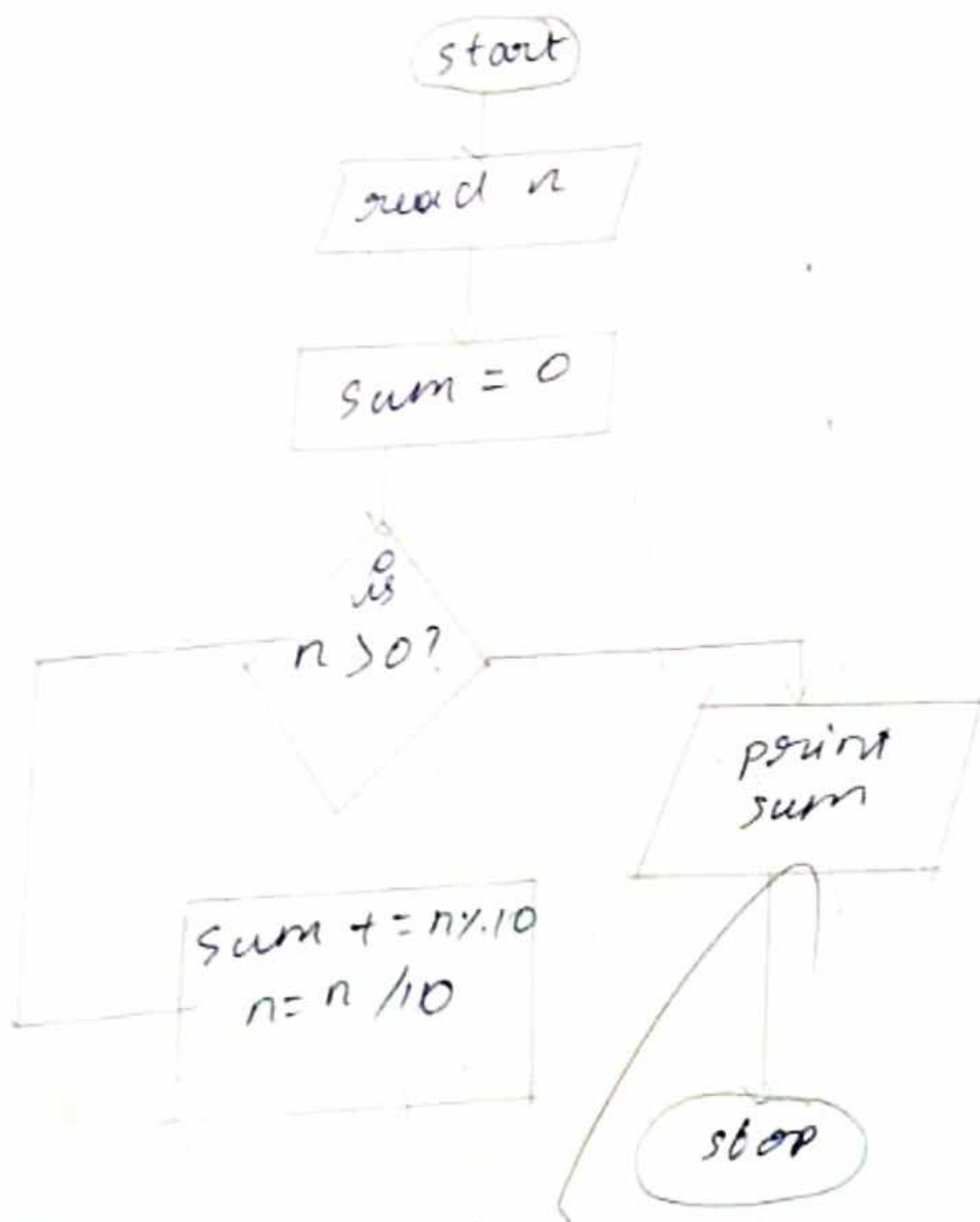Write an Algorithm and draw a Flowchart to check whether the given number is palindrome number or not.

Algorithm:

step1 - start

step2 - read 'n' from user

step3 - step $p = 0$, $a = h$

step 4 - ch whether $n \neq 0$, go to step 5 to step 7

step 5 - $P = (P * 10) + (n \% 10)$

Flowchart:
step 6 - $n = n / 10$, go to step 4

step 7 - check whether $a == P$, true go to step - 08 else go to step 9

step 8 - Print "palindrom" go to step 10

step 9 - Print "Not palindrom"

step 10 - stop

Scanned with ACE Scanner

```
        ( start )
           |
        / read n /
           |
      [ sum = 0 ]
           |
          /is\
         < n > 0 ? >
        /         \
   [ sum += n%10 ]    / print /
   [ n = n/10 ]       /  sum  /
                         |
                      ( stop )
```

Ex. No.:   Date:

Sum of Digits

Write an Algorithm and draw a Flowchart to calculate the sum of digits in the given number.

Algorithm:

step 1 - start

step 2 - get 'n' from the user

step 3 - initialize sum is equal to zero

step 4 - check n > 0 true go to step 5 else go to step 6

step 5 - sum = sum + (n % 10)

Flowchart:

step 6 - n = n/10, go to step 4

step 7 - Print "sum"

step 8 - stop

start

Read
n

original=n
reverse=0

is
n > 0?

False

True

reverse *=10+n%
n=n/10

true

original
= reverse

Palindrome

False

Not
Palindrome

stop