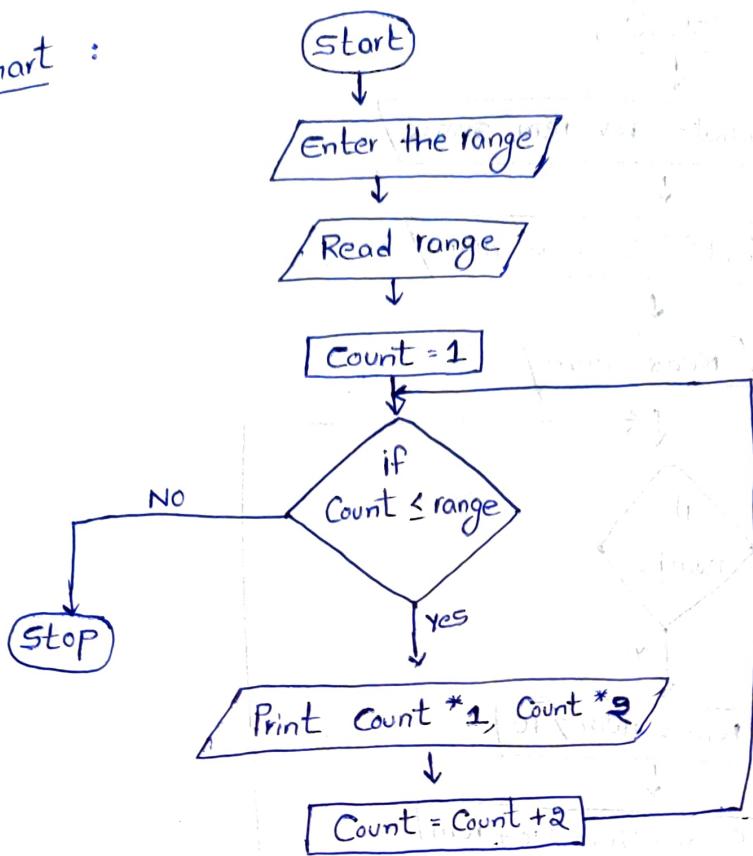
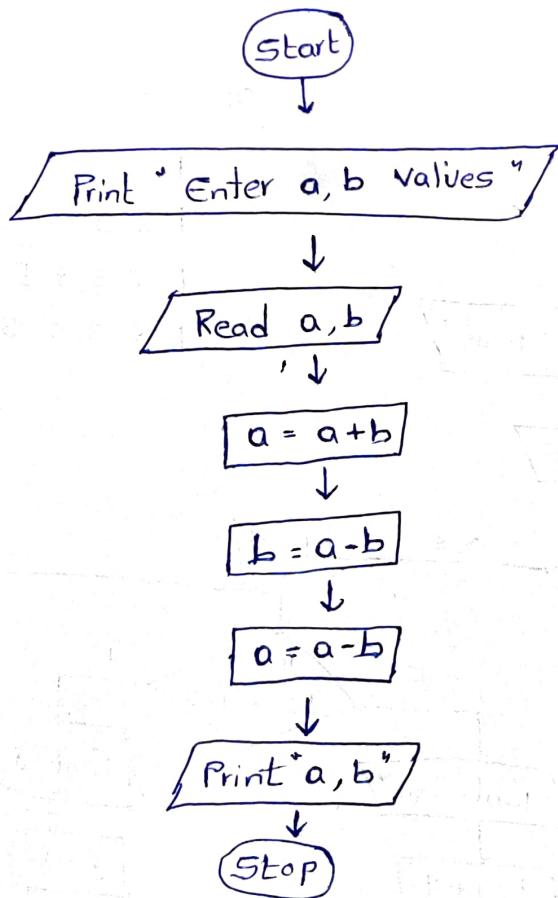


① 1, 2, 3, 6, 5, 10, 7, 14, 8, 18, ...

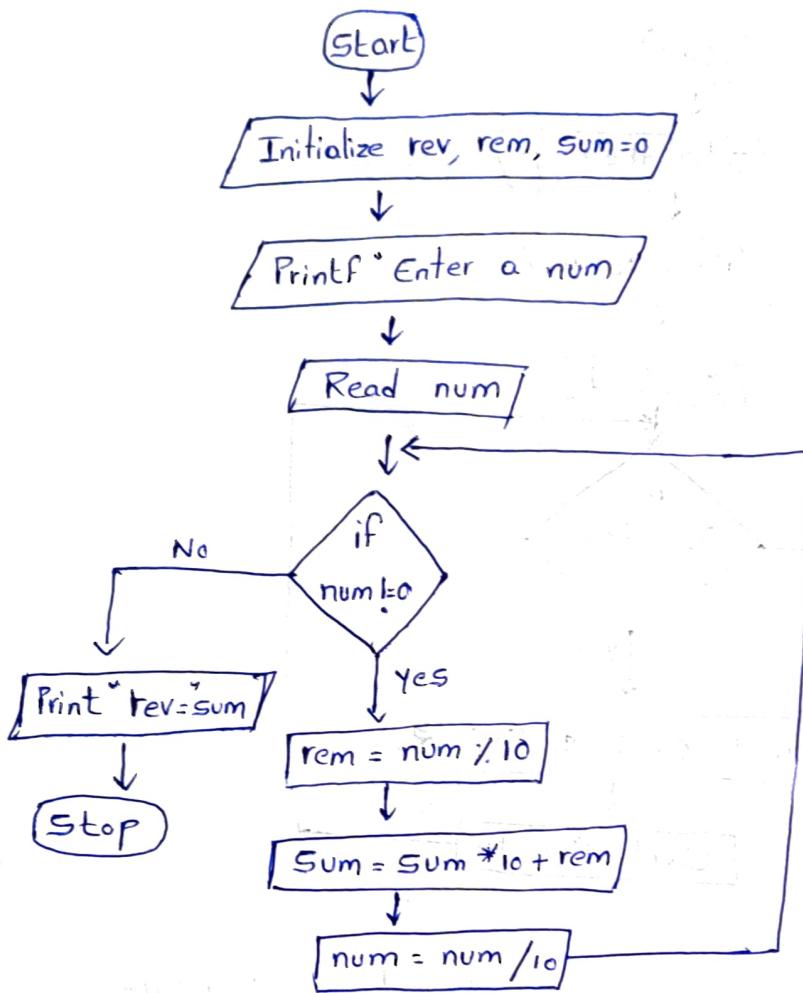
Flowchart :



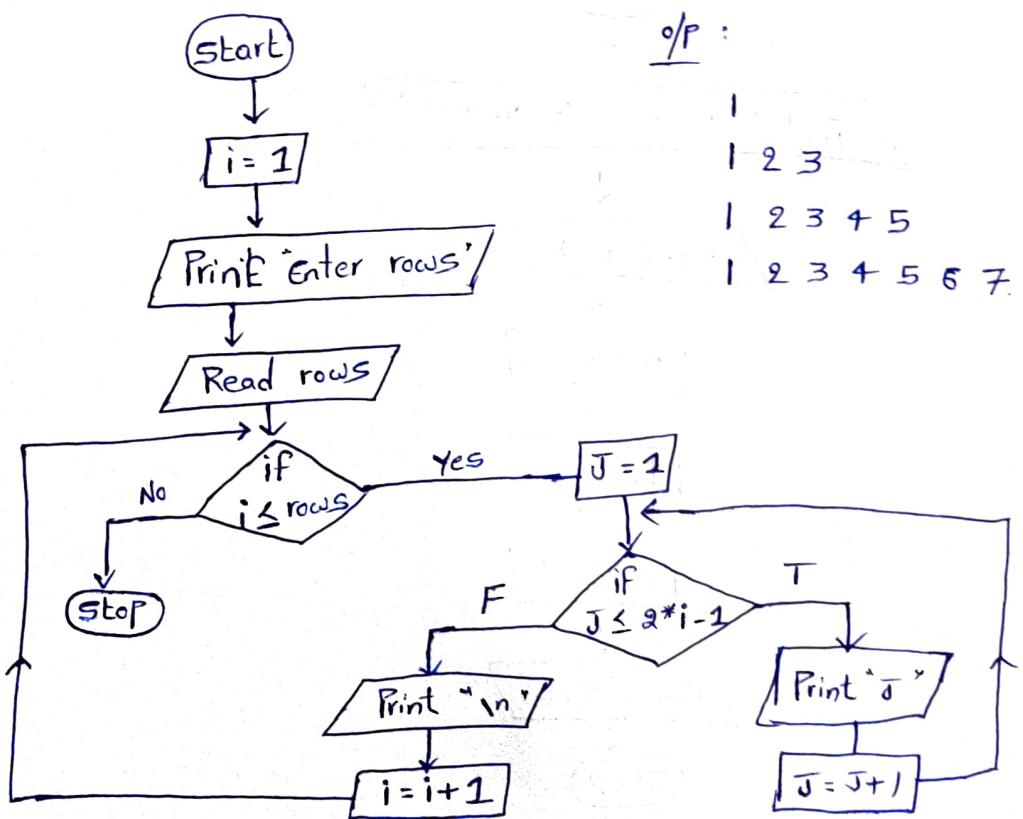
② Swapping two numbers Without temp Variable.



### 3. Reverse a number.



4.



O/P :

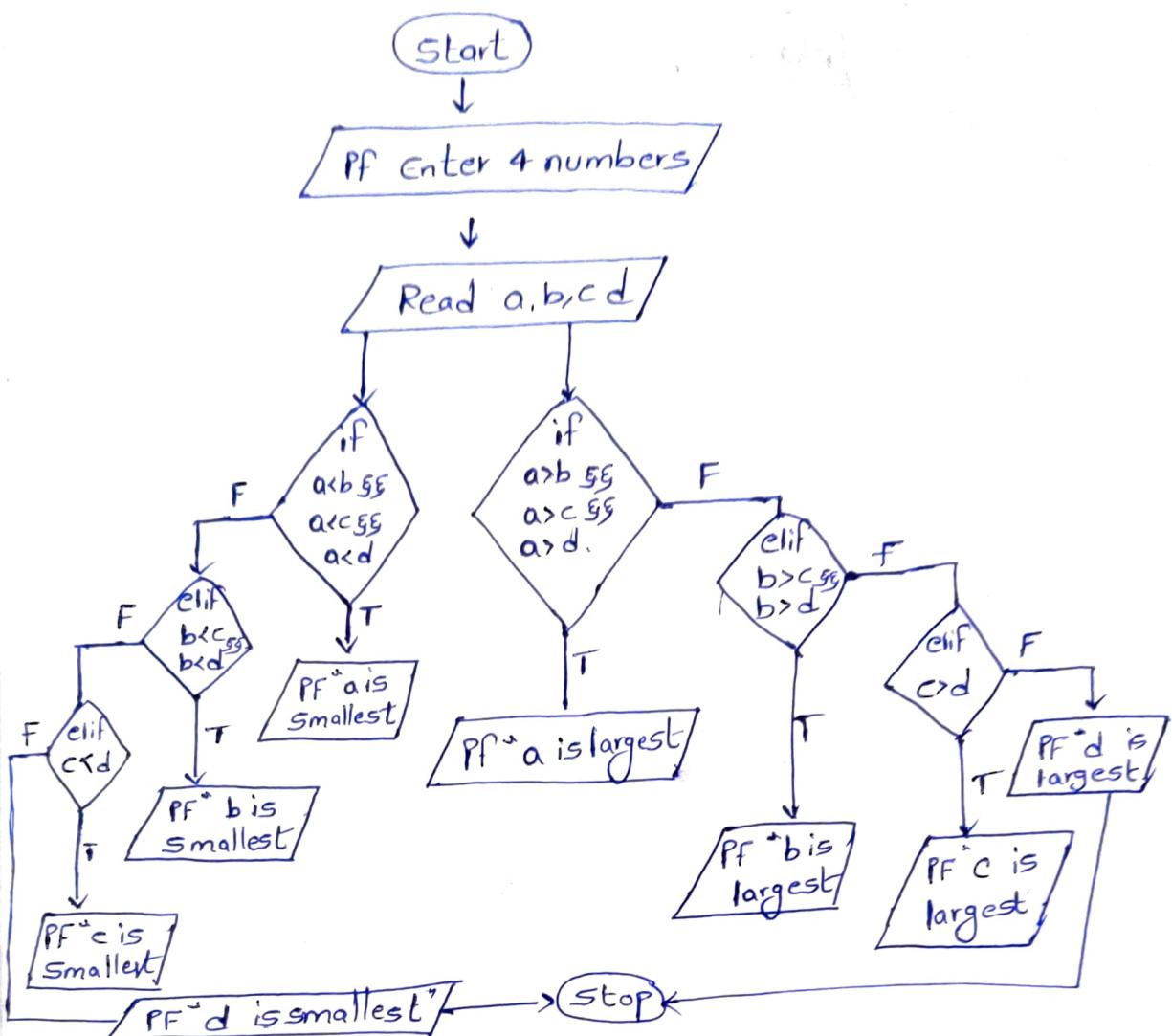
1

1 2 3

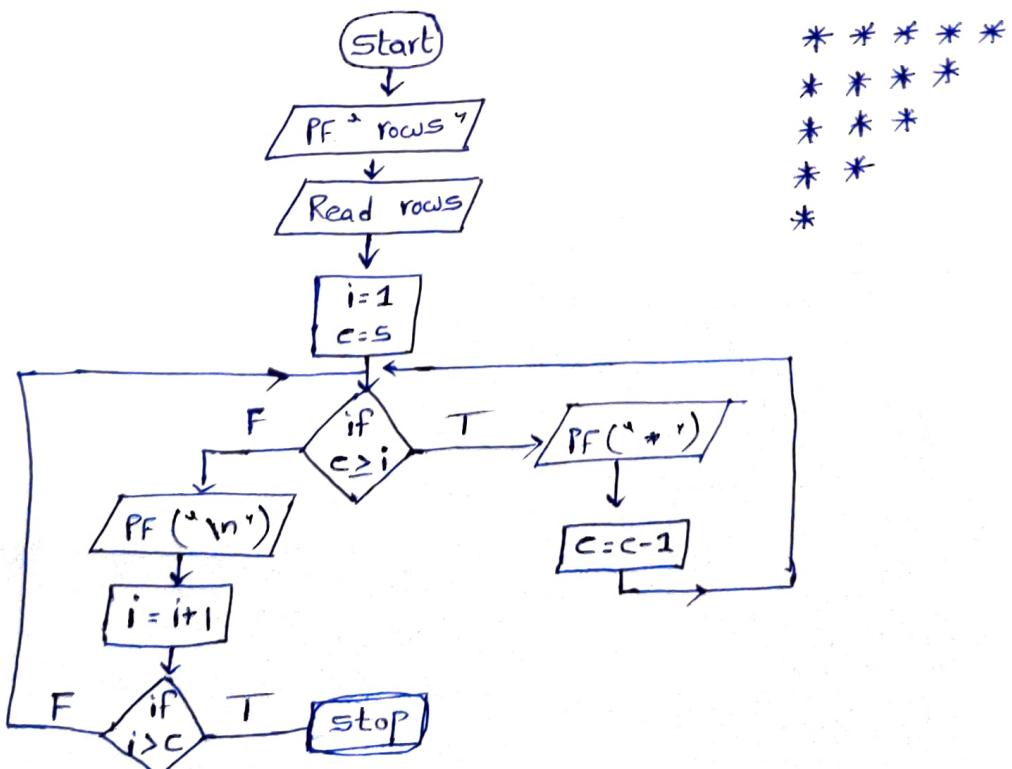
1 2 3 4 5

1 2 3 4 5 6 7

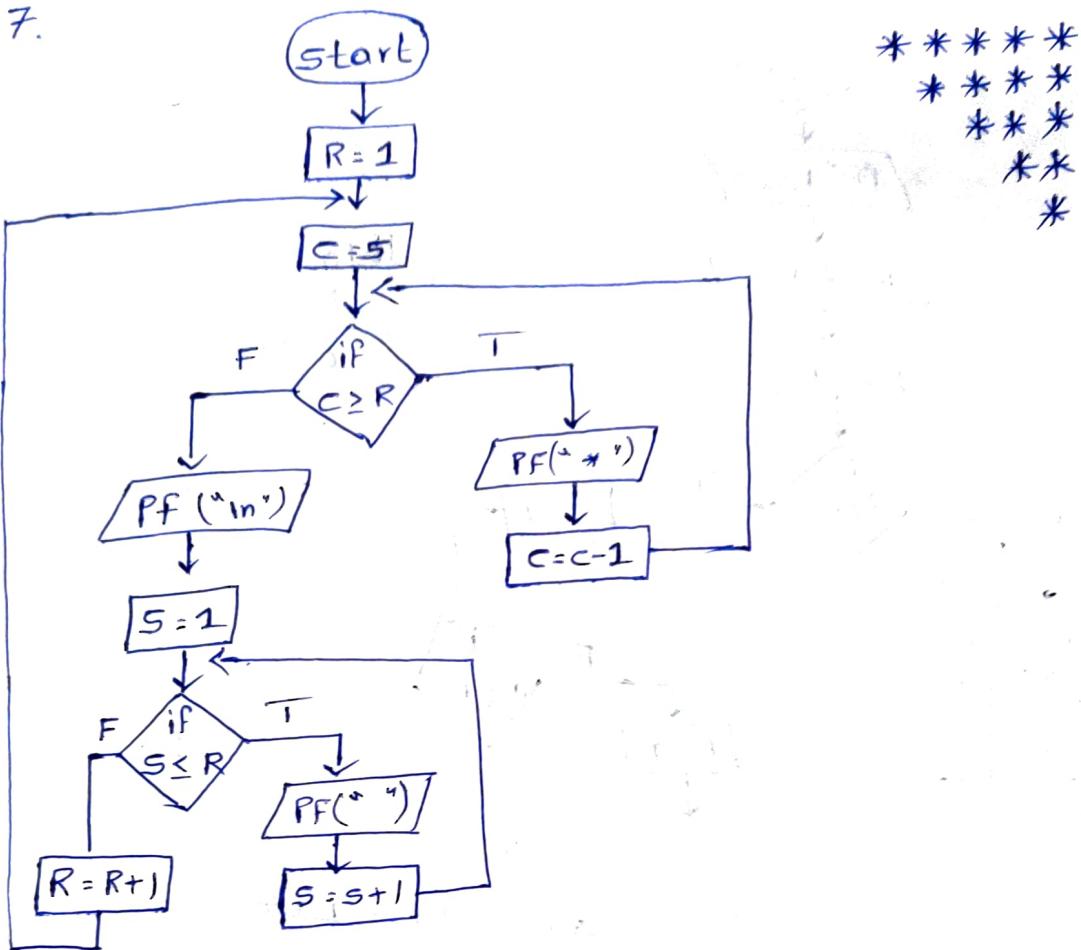
⑤ Largest number & Smallest number among 4 numbers



6.



7.

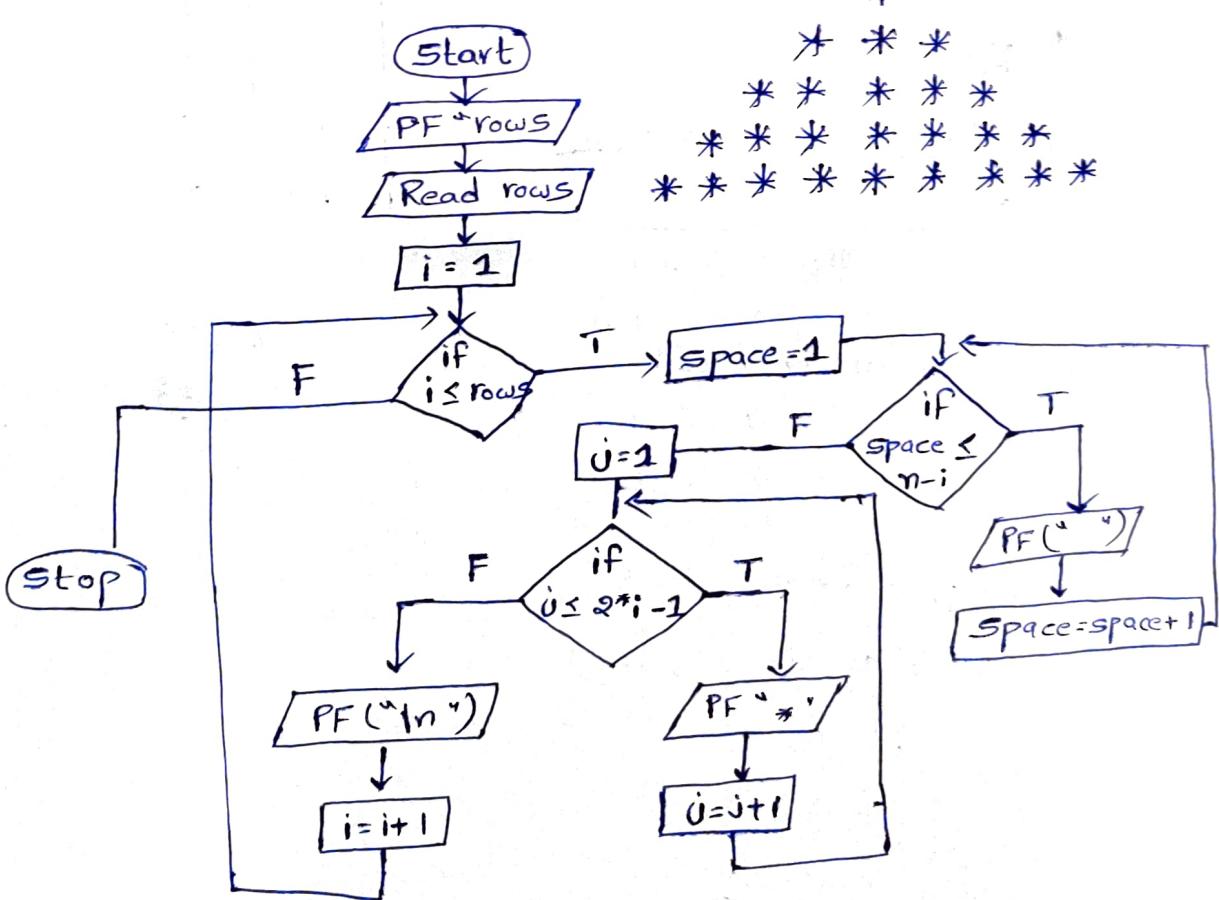


```

*****
*****
*****
*****
*****
*****

```

8.

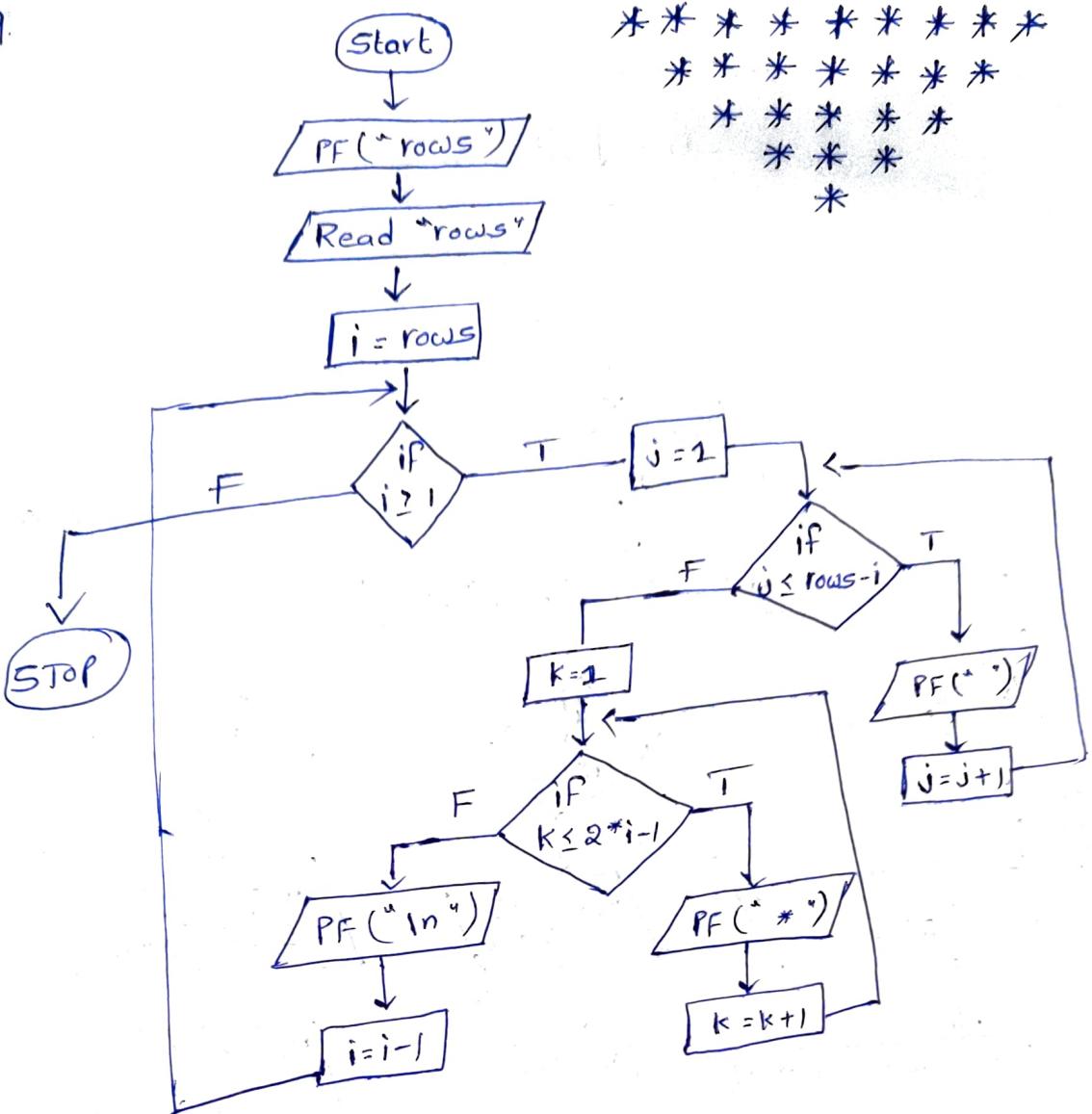


```

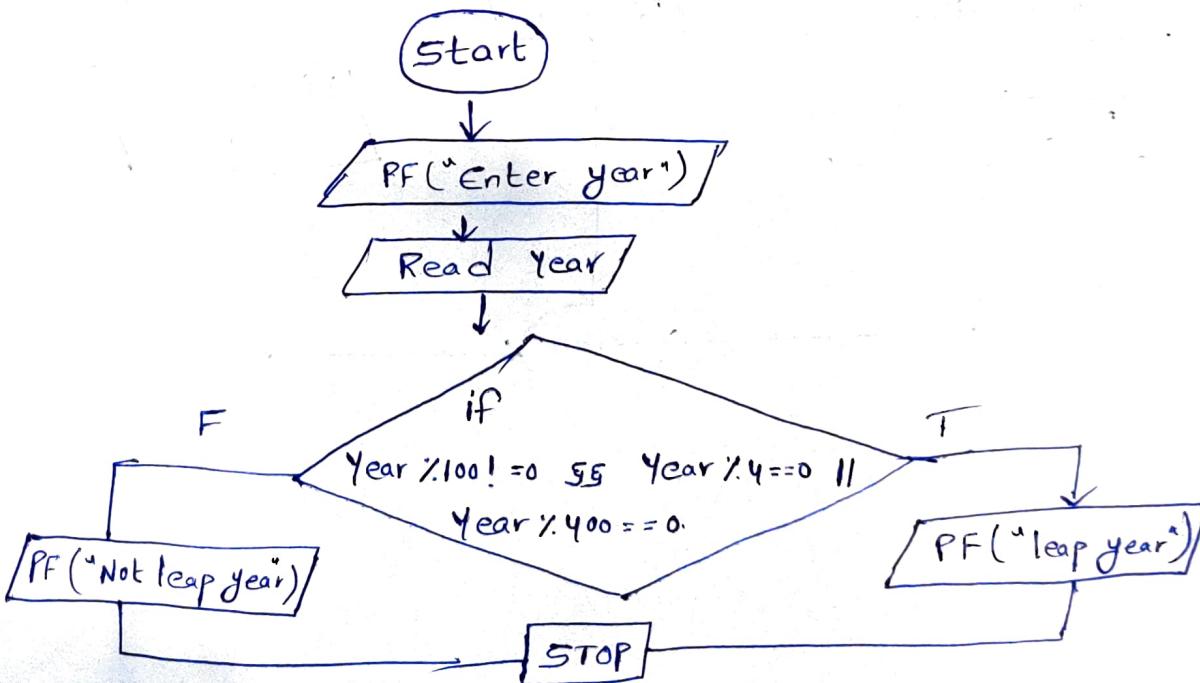
*****
*****
*****
*****
*****

```

9.



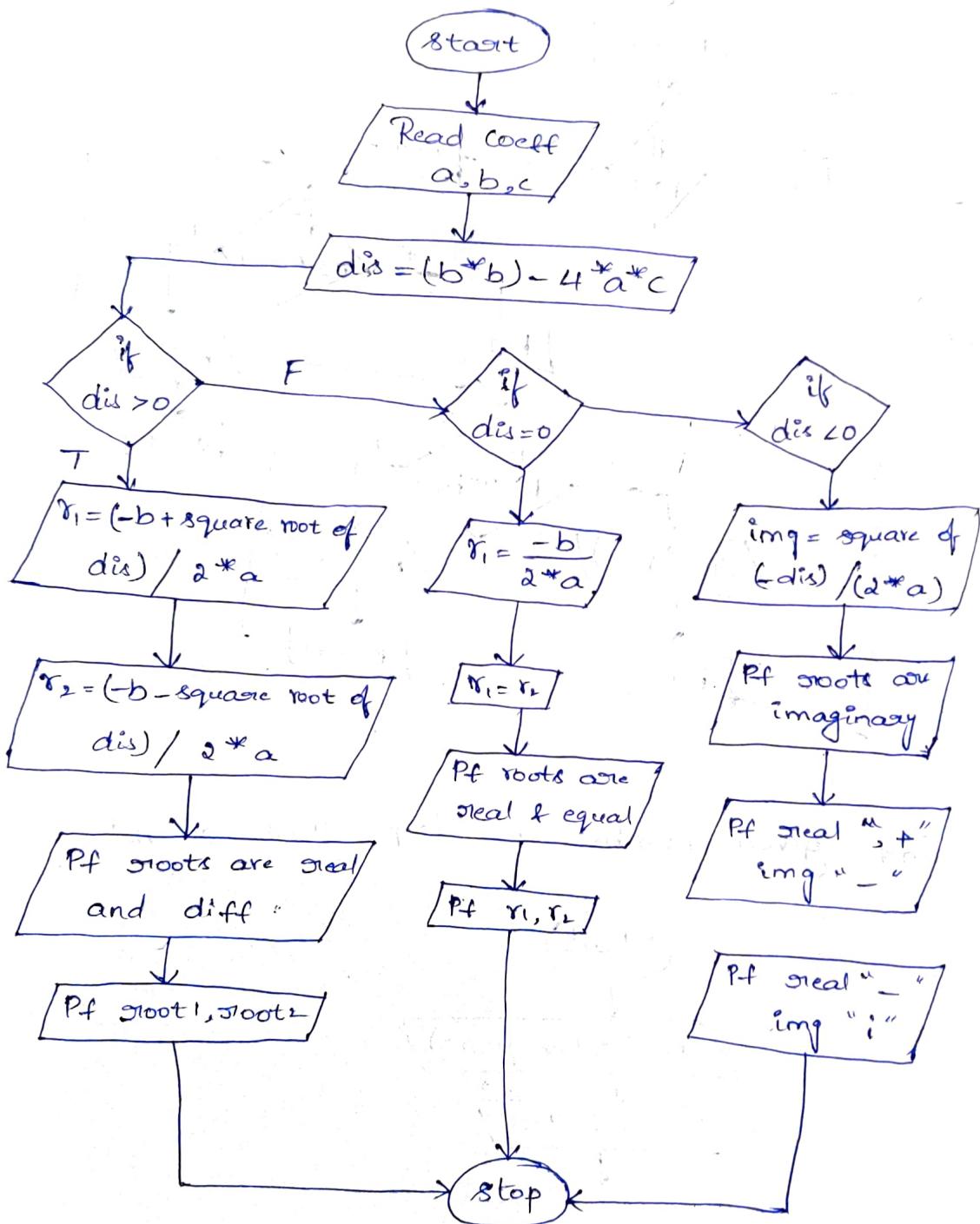
10. Find given number is leap year or not.



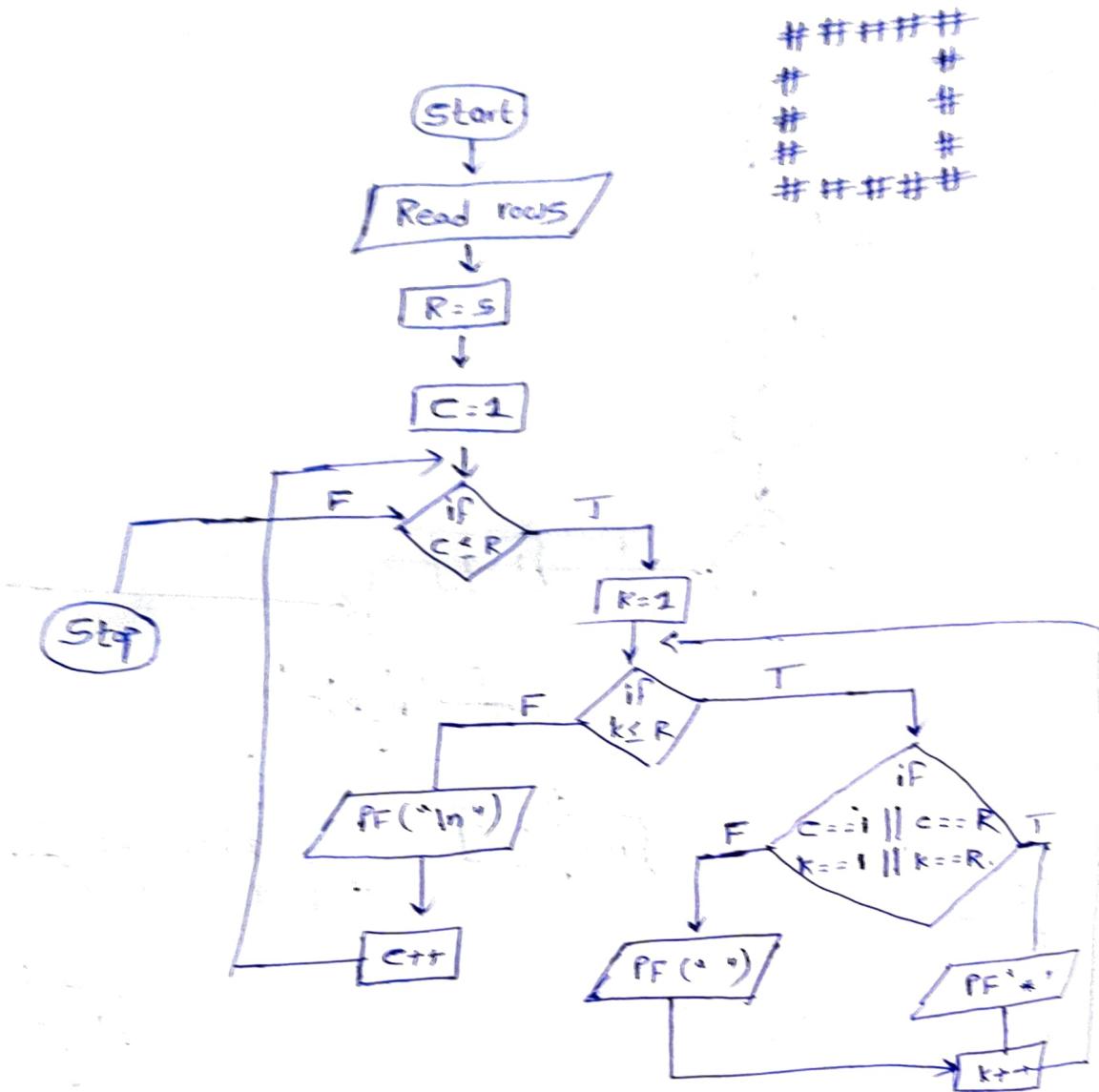
## 11. Roots of quadratic equation.

$$ax^2 + bx + c = 0$$

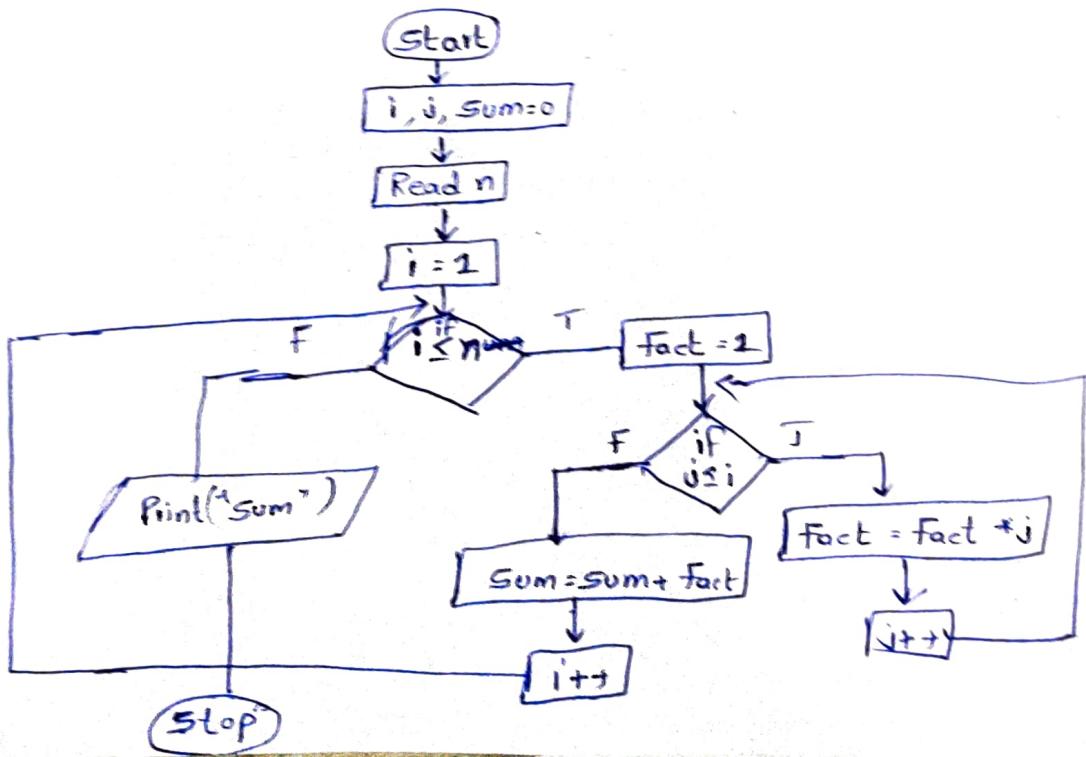
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



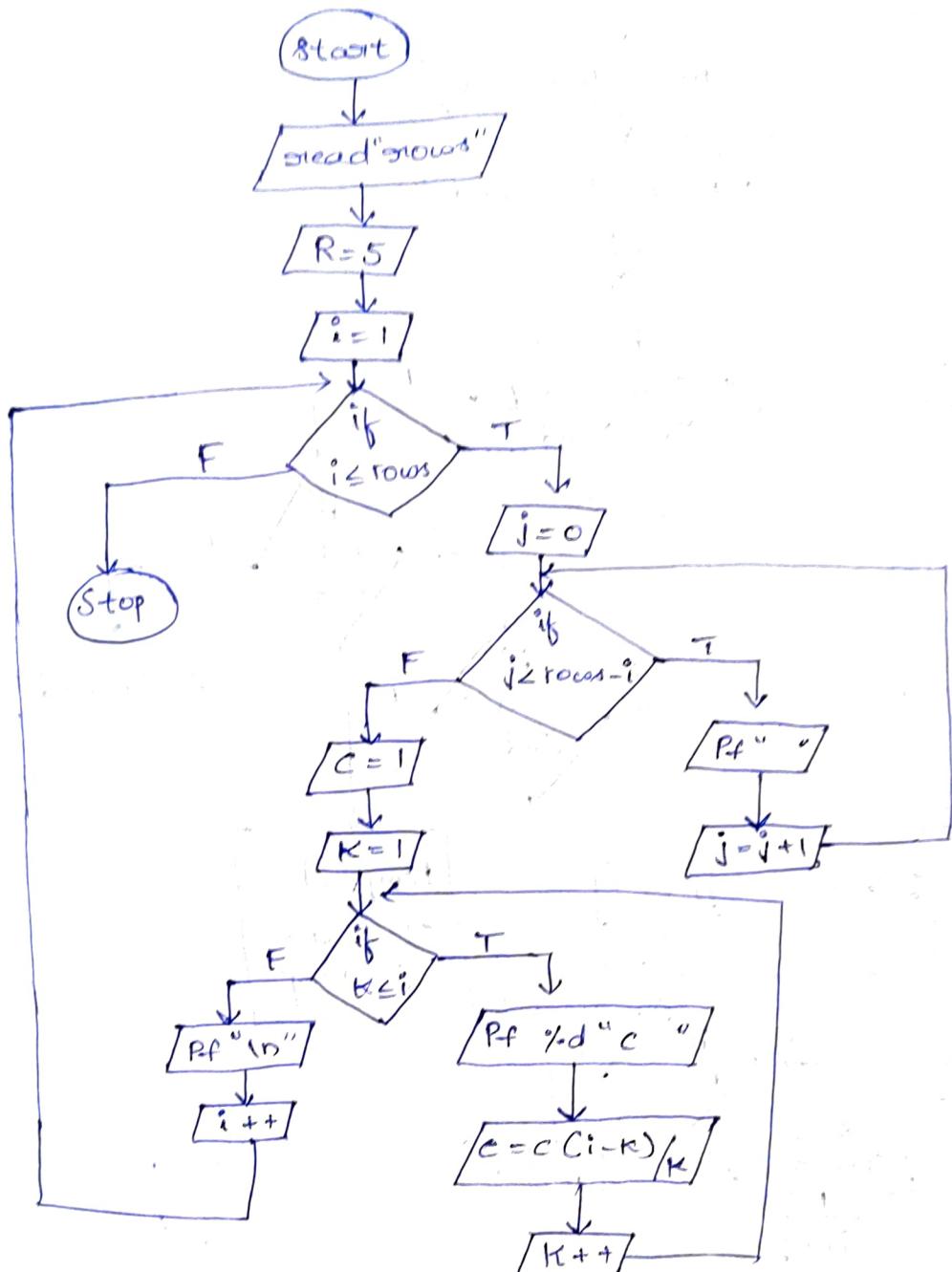
## 12. Hallow - square



## 13. Sum of the factorial of series



## 14. Pascal Triangle

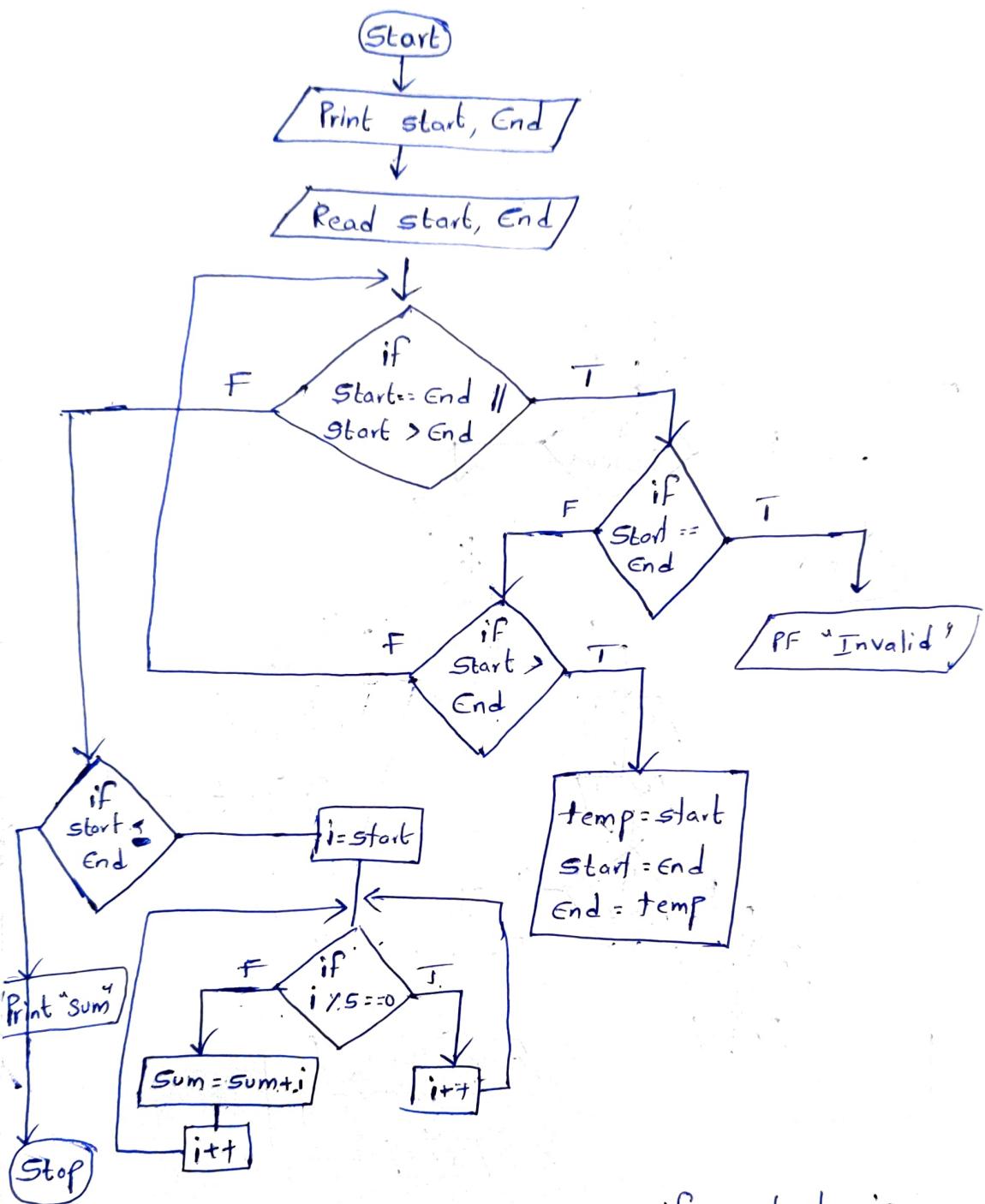


Output :-

```

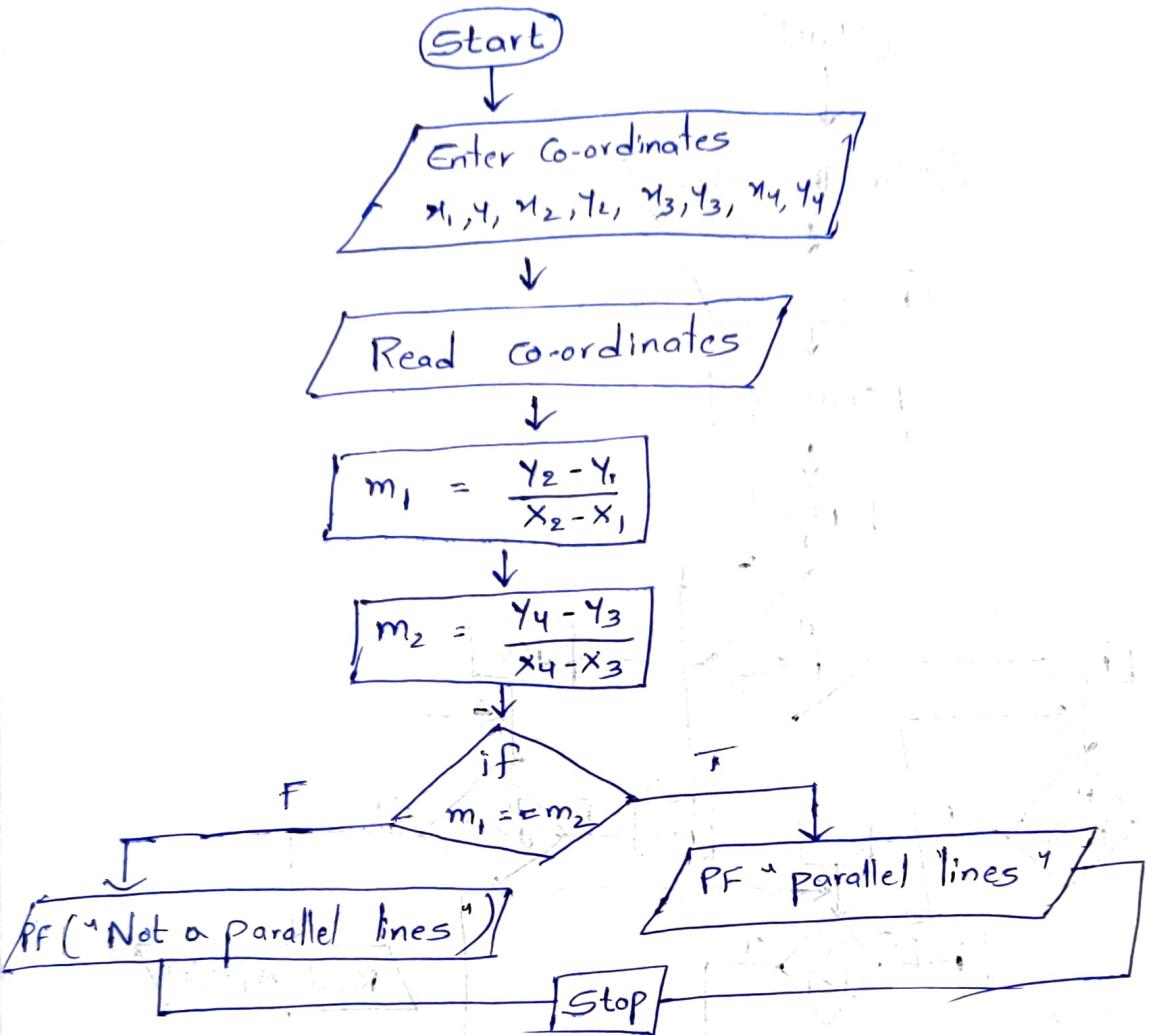
      1
    1   1
   1   2   1
  1   3   3   1
 1   4   6   4   1
1   5   10  10  5   1
  
```

15.

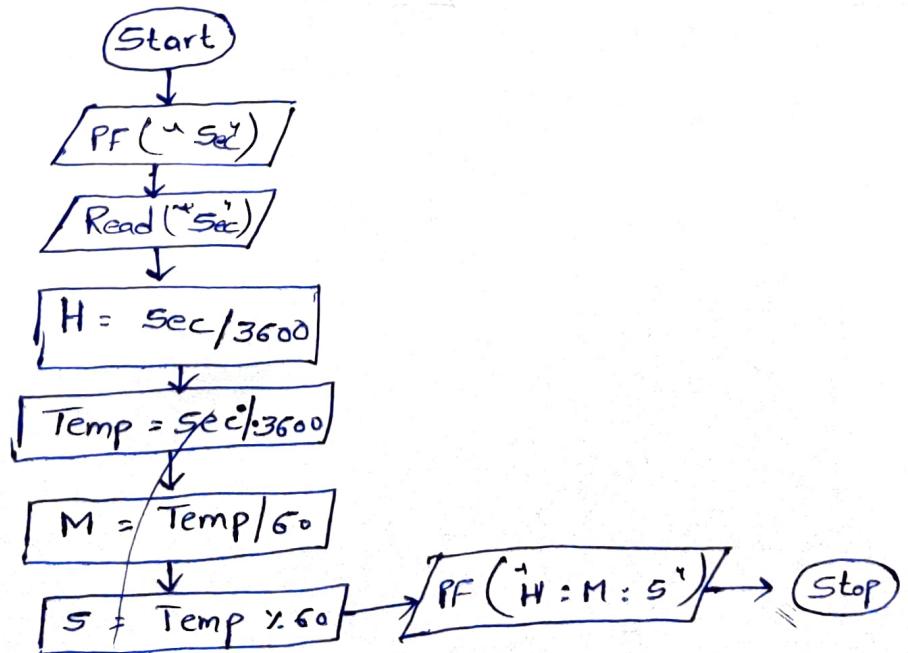


→ Take two ranges from user if start is equal to end it shows invalid and if start greater than end it swaps and start is less than end and prints the sum of numbers which are not divisible by 5.

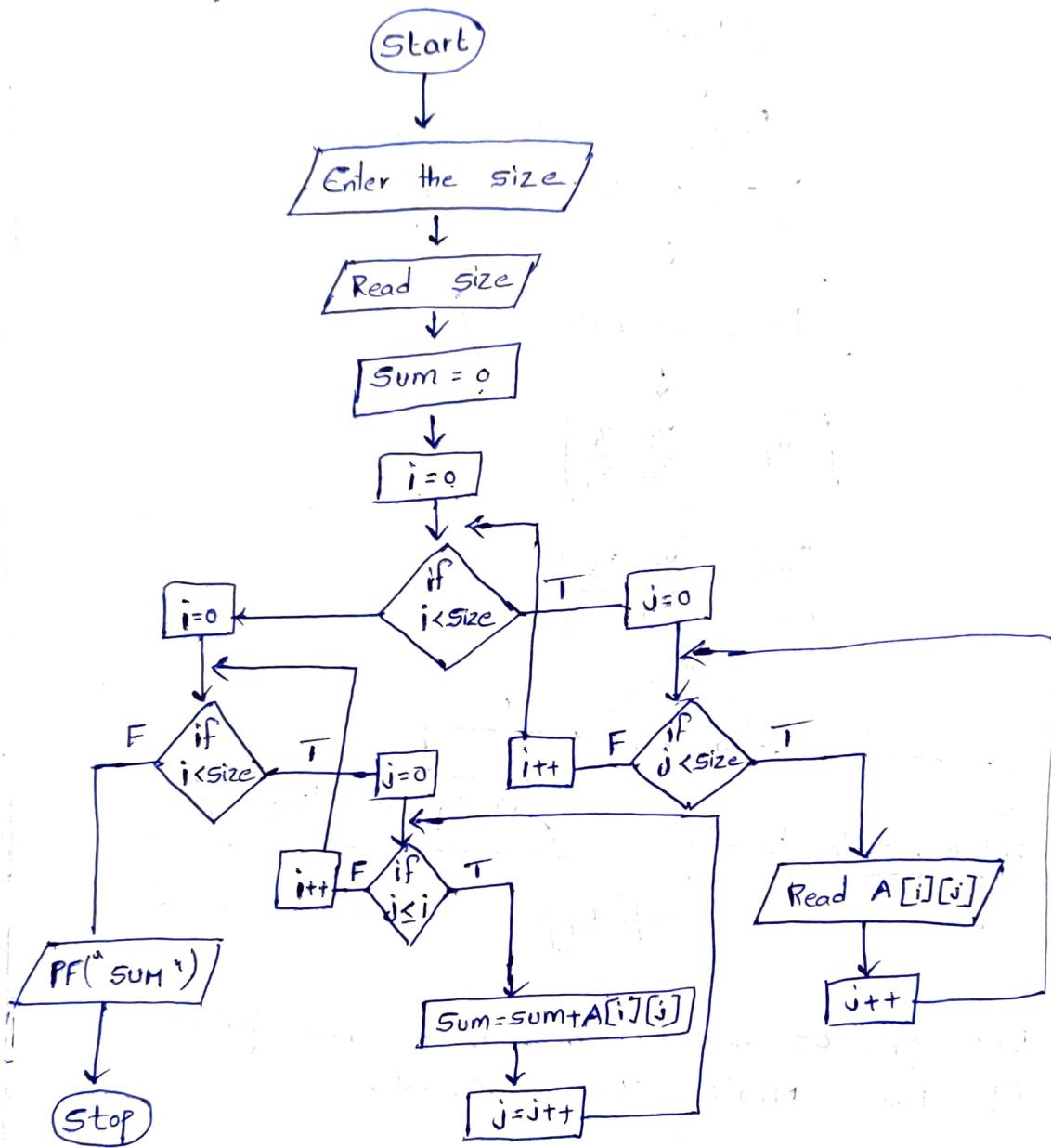
16. Check whether two lines are parallel or not.



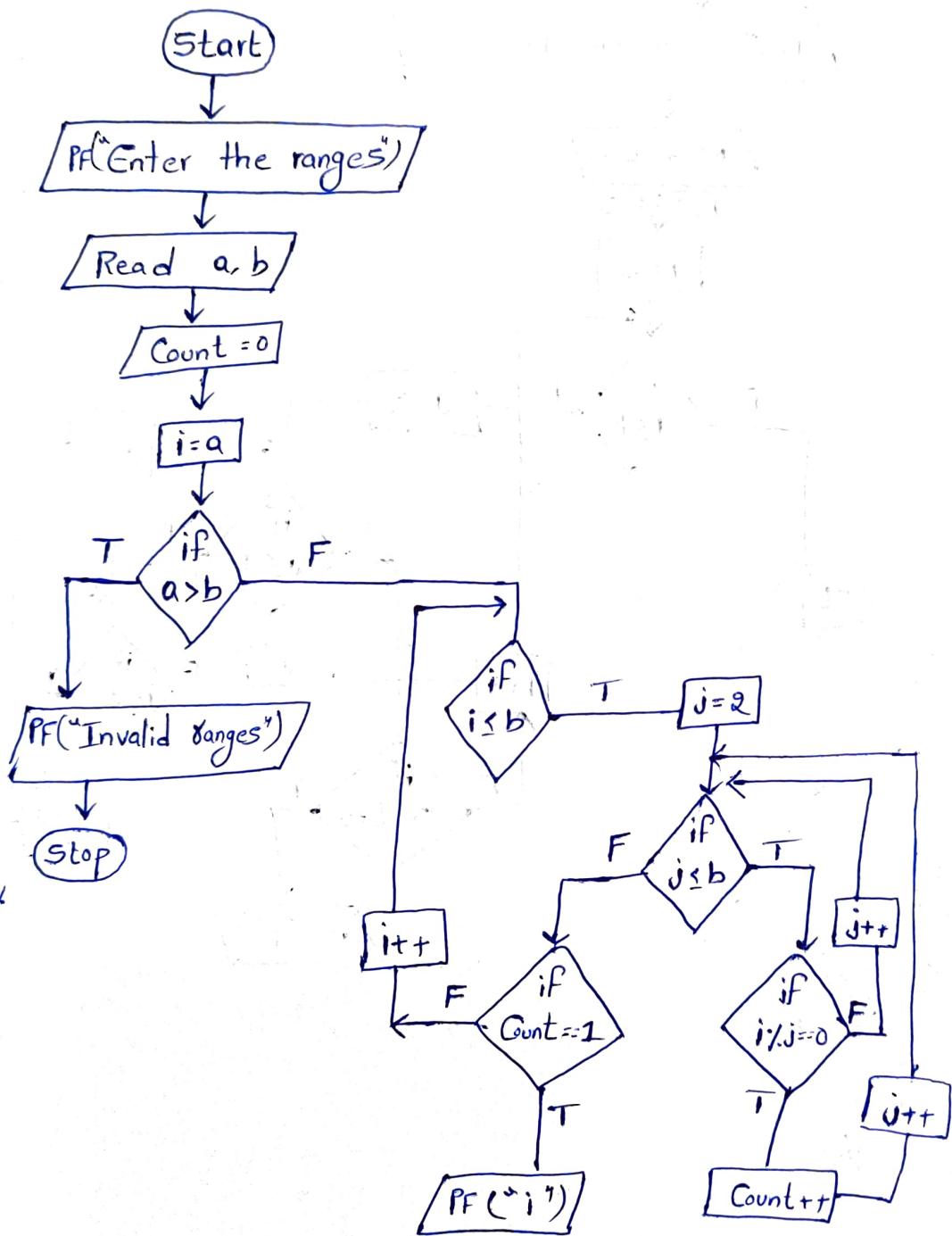
17. Take i/p as seconds from user and prints into Hours : Minutes : second format.



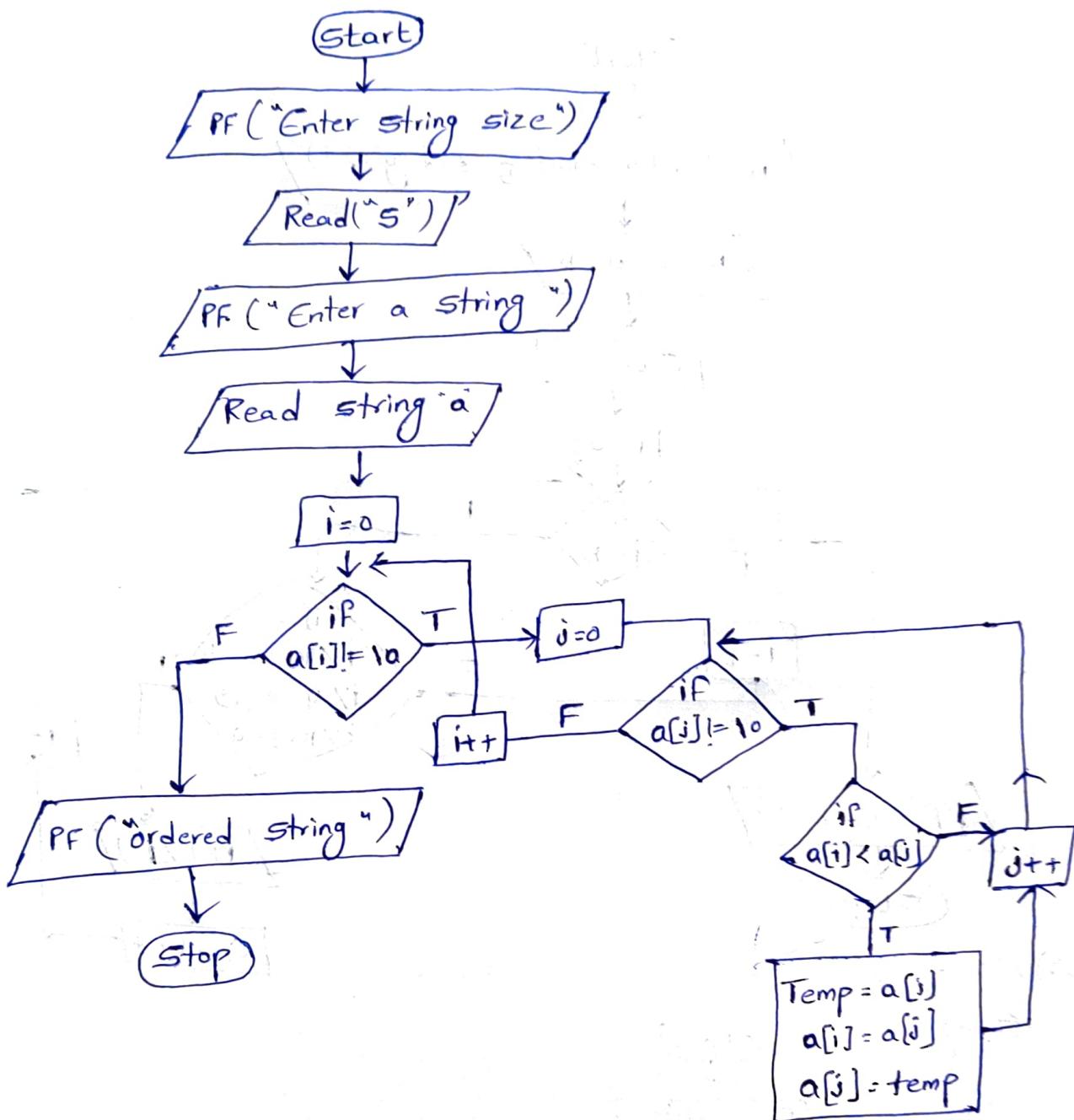
18. Sum of the elements of lower triangle in a square matrix.



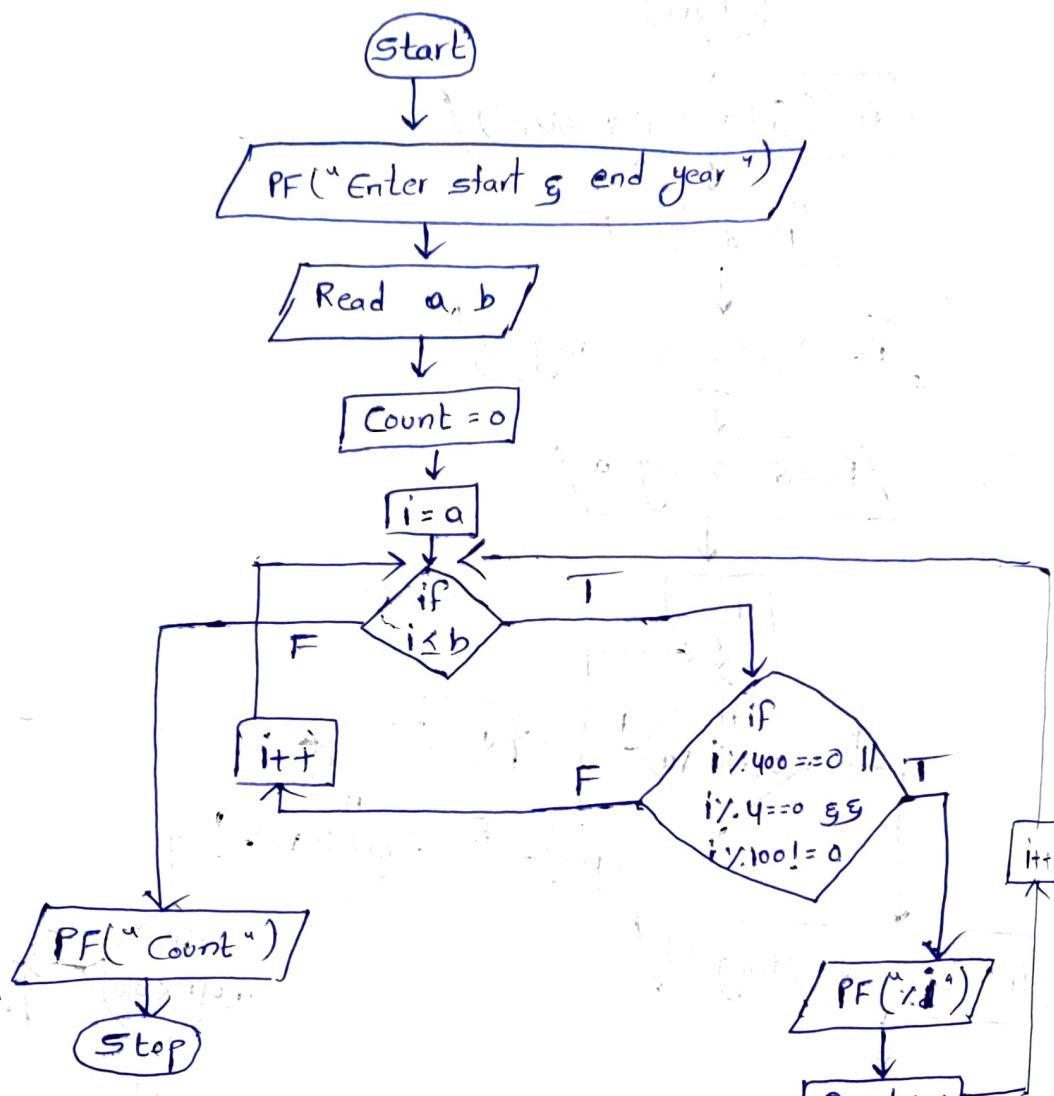
19. Find the prime numbers between two ranges given by user.



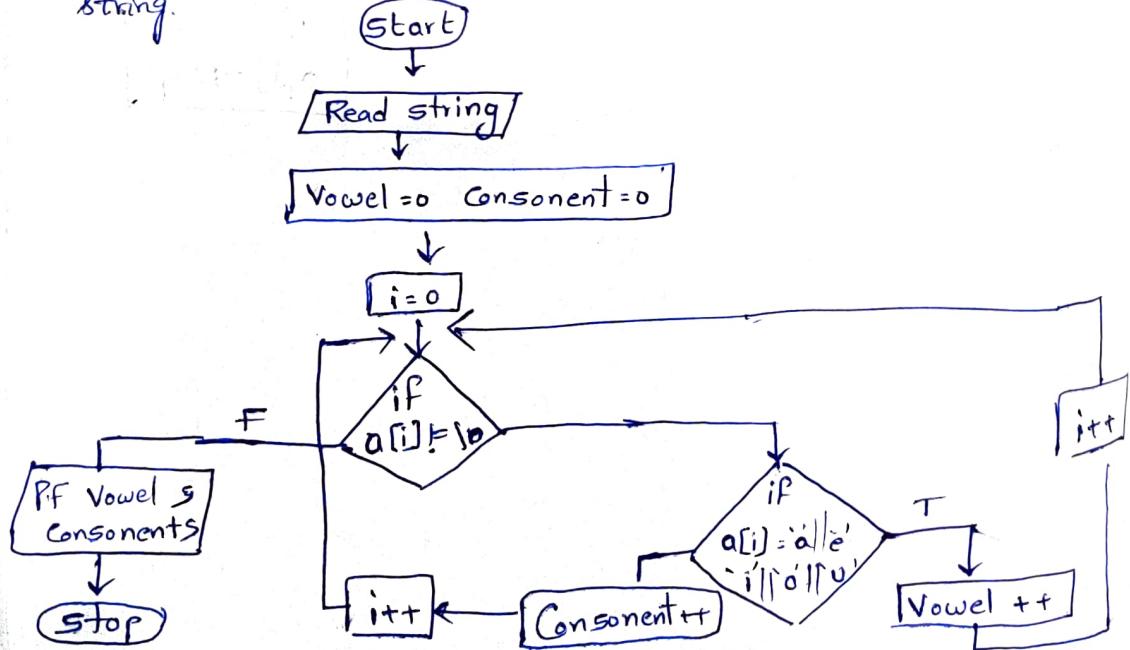
20. Take a string from the user, and arrange the characters in alphabetical order.



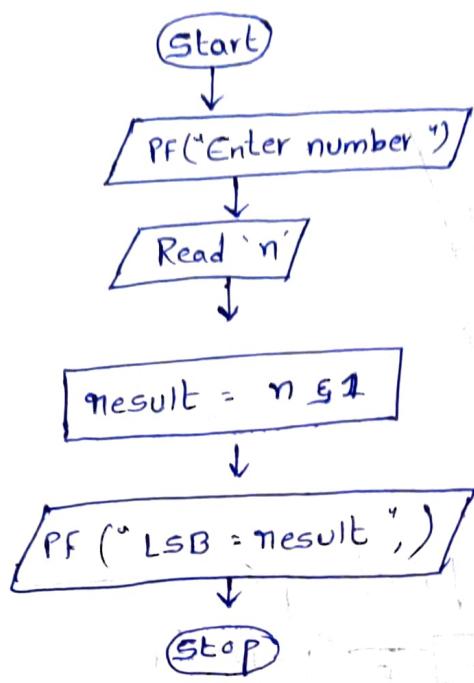
Q1. Find the leap years and count between the ranges given by user.



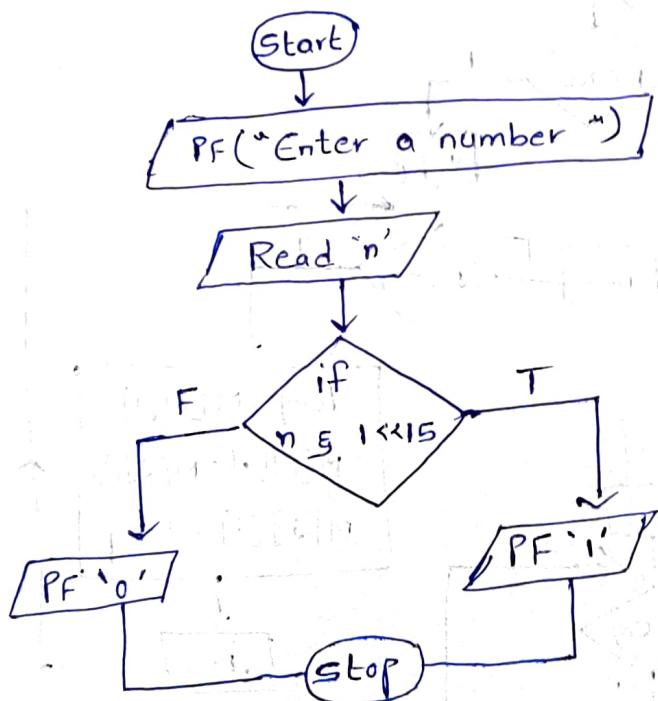
Q2. No. of vowels & consonents in a given string.



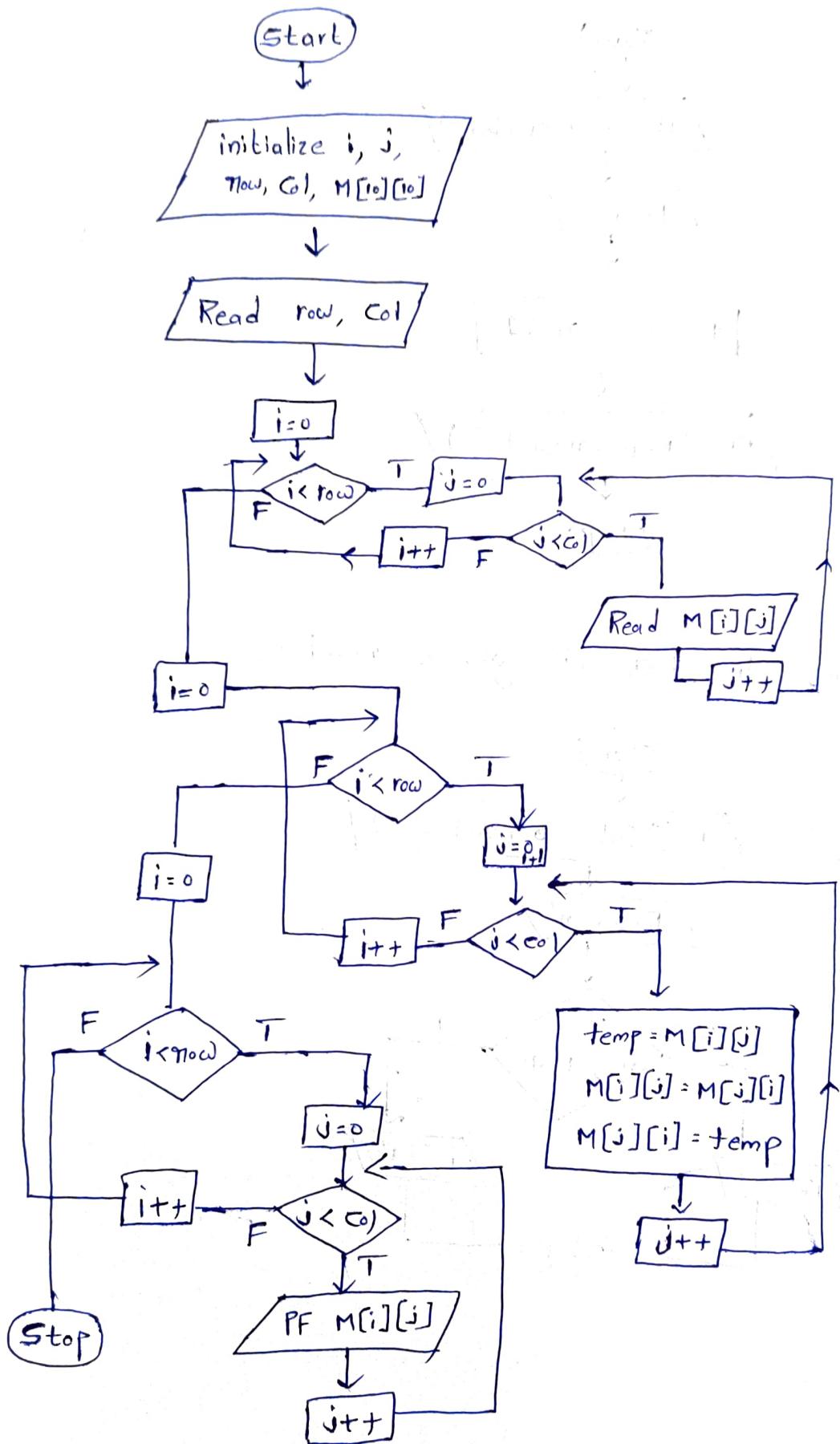
23. Find the least significant bit of given number.



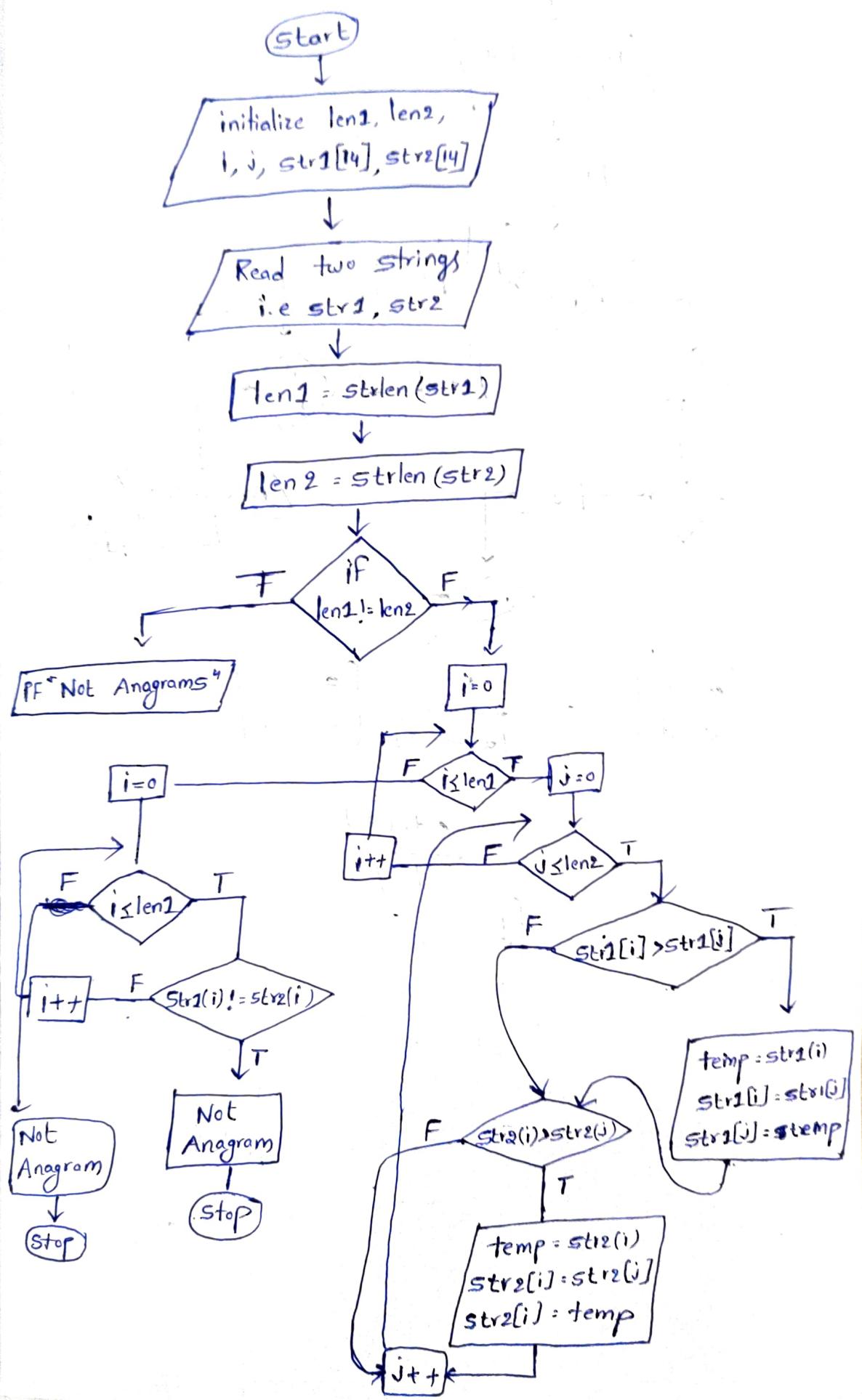
24. Find the MSB of given number.



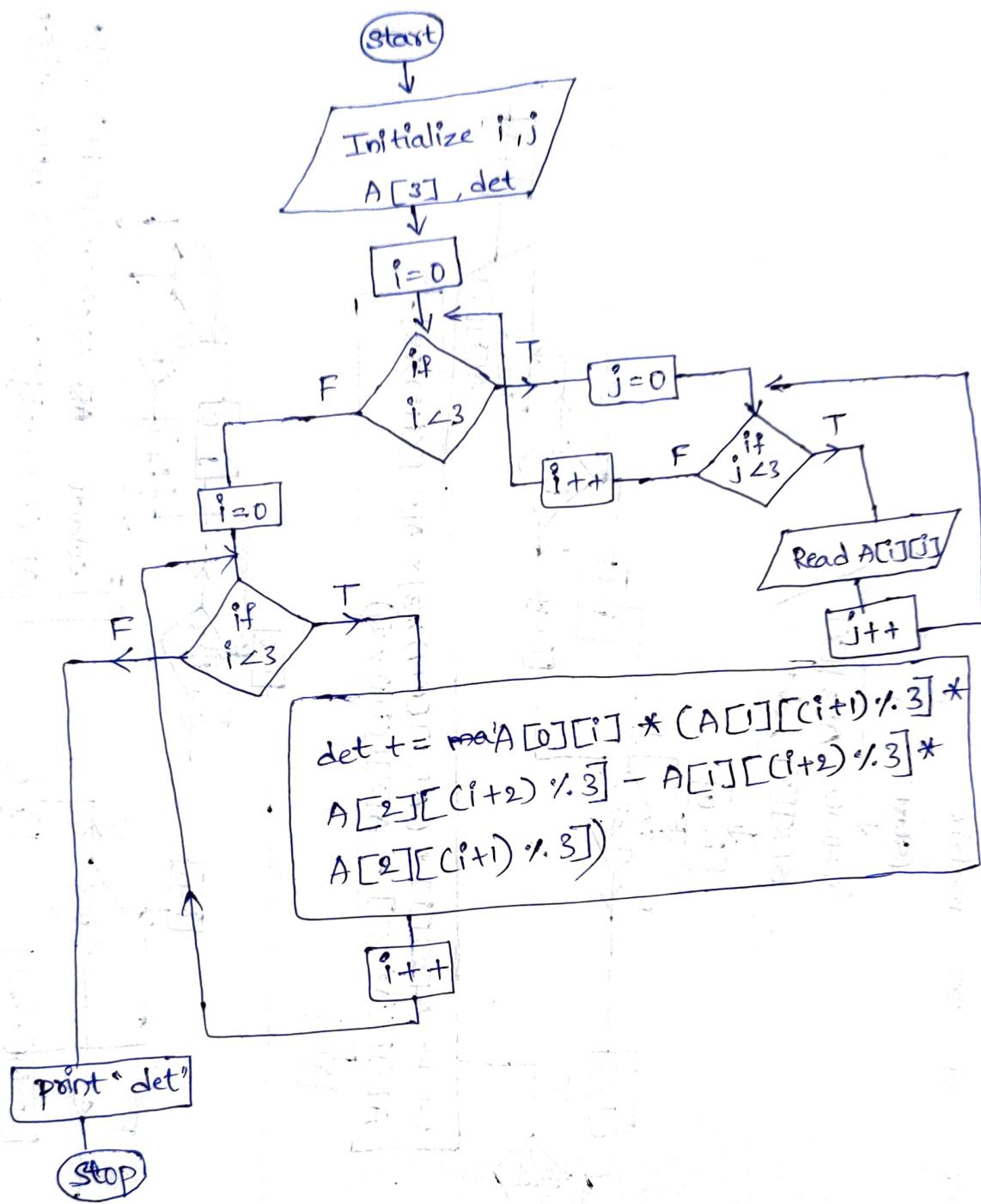
## 25 Transpose of a matrix



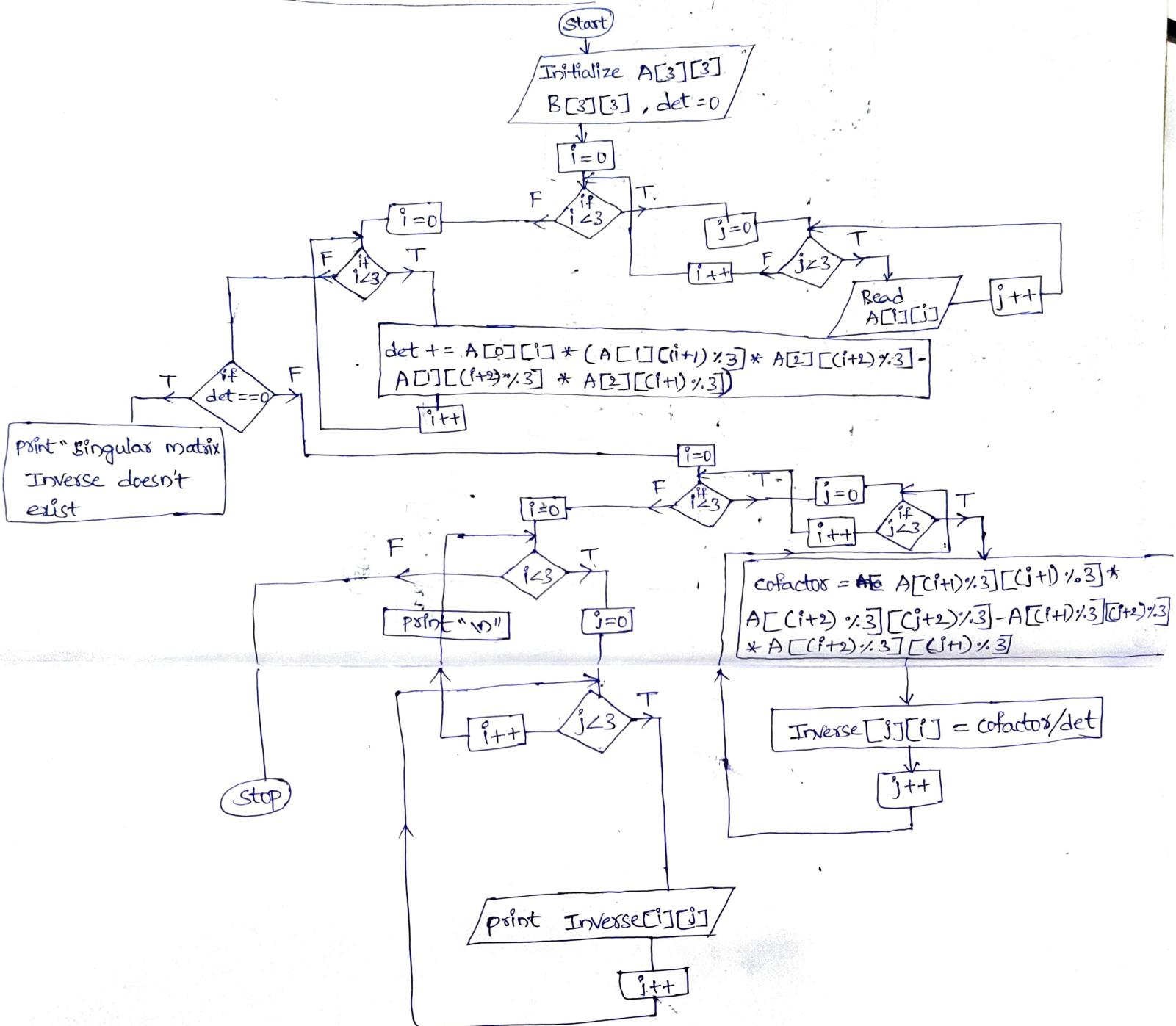
②6 Anagram



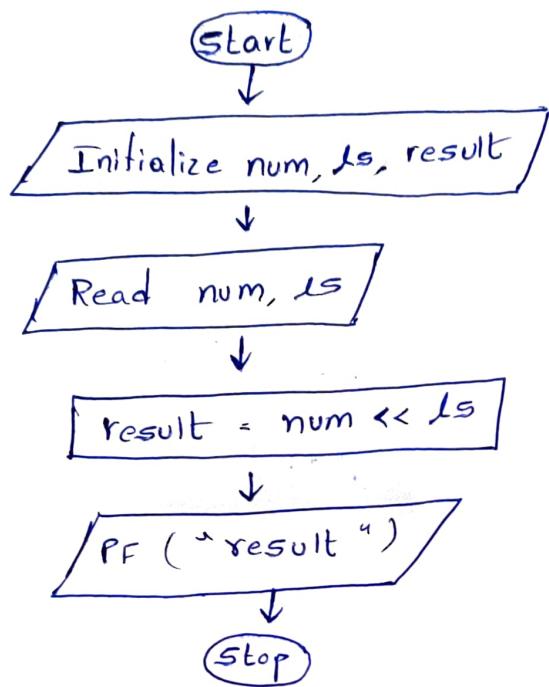
# 27 Determinant of 3x3 matrix



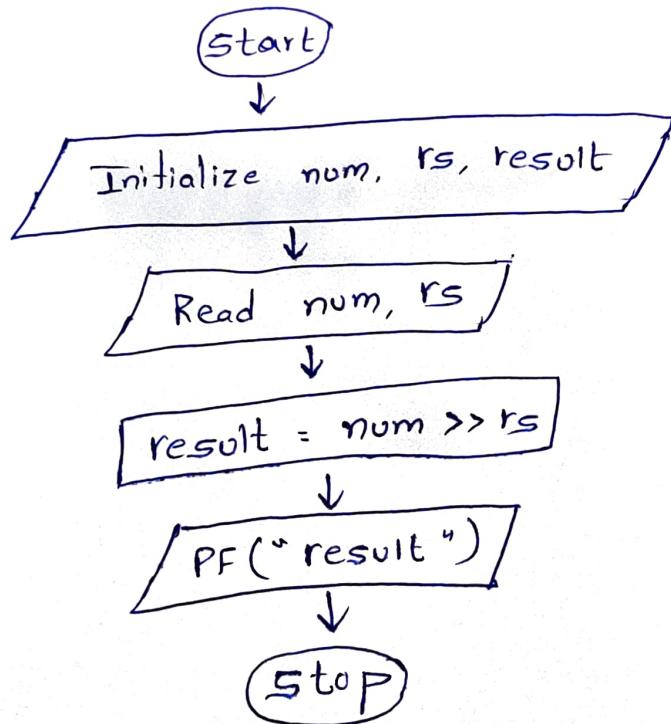
28) Inverse of 3x3 matrix



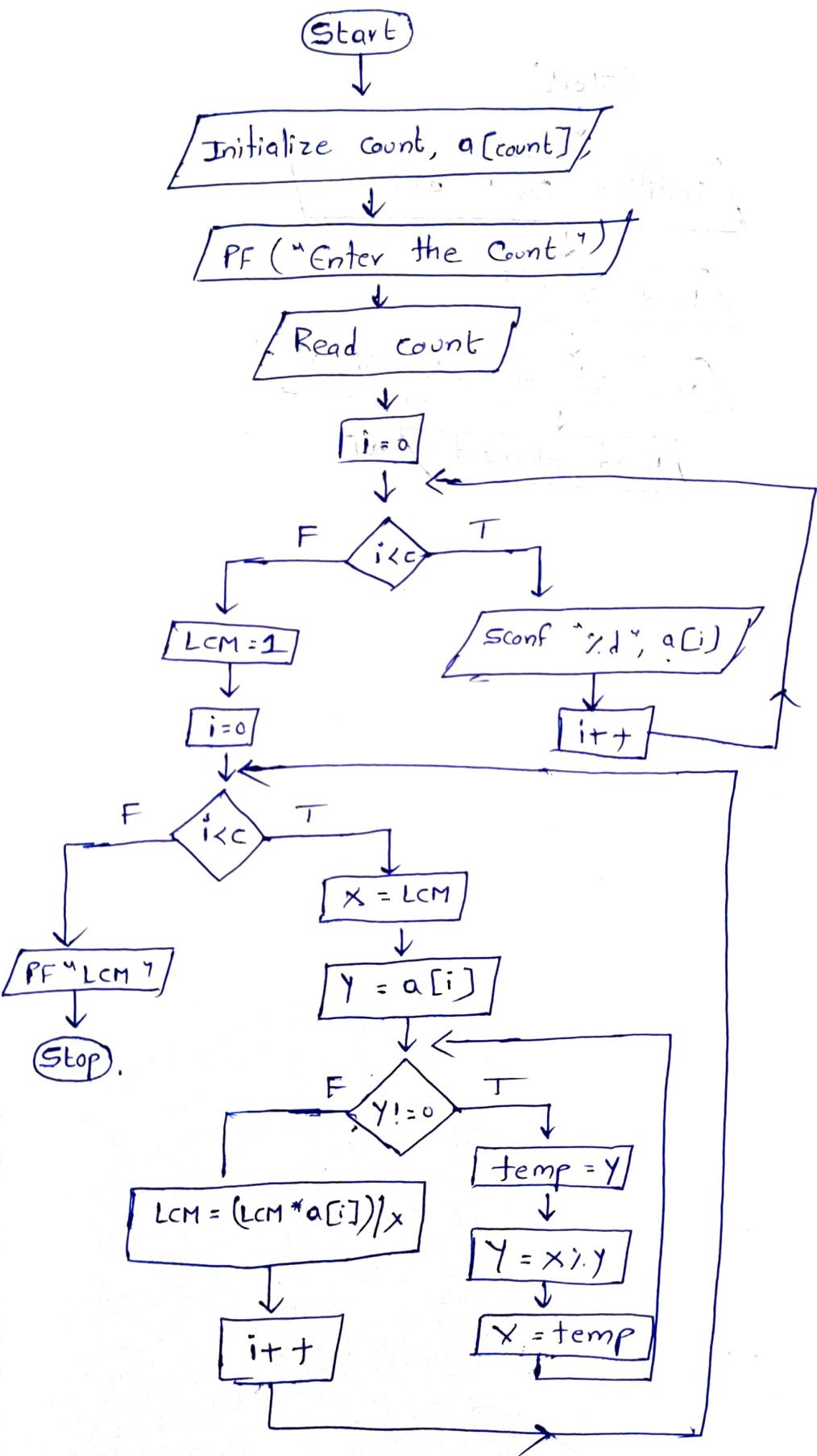
29) Take a number and left shift based on user input.



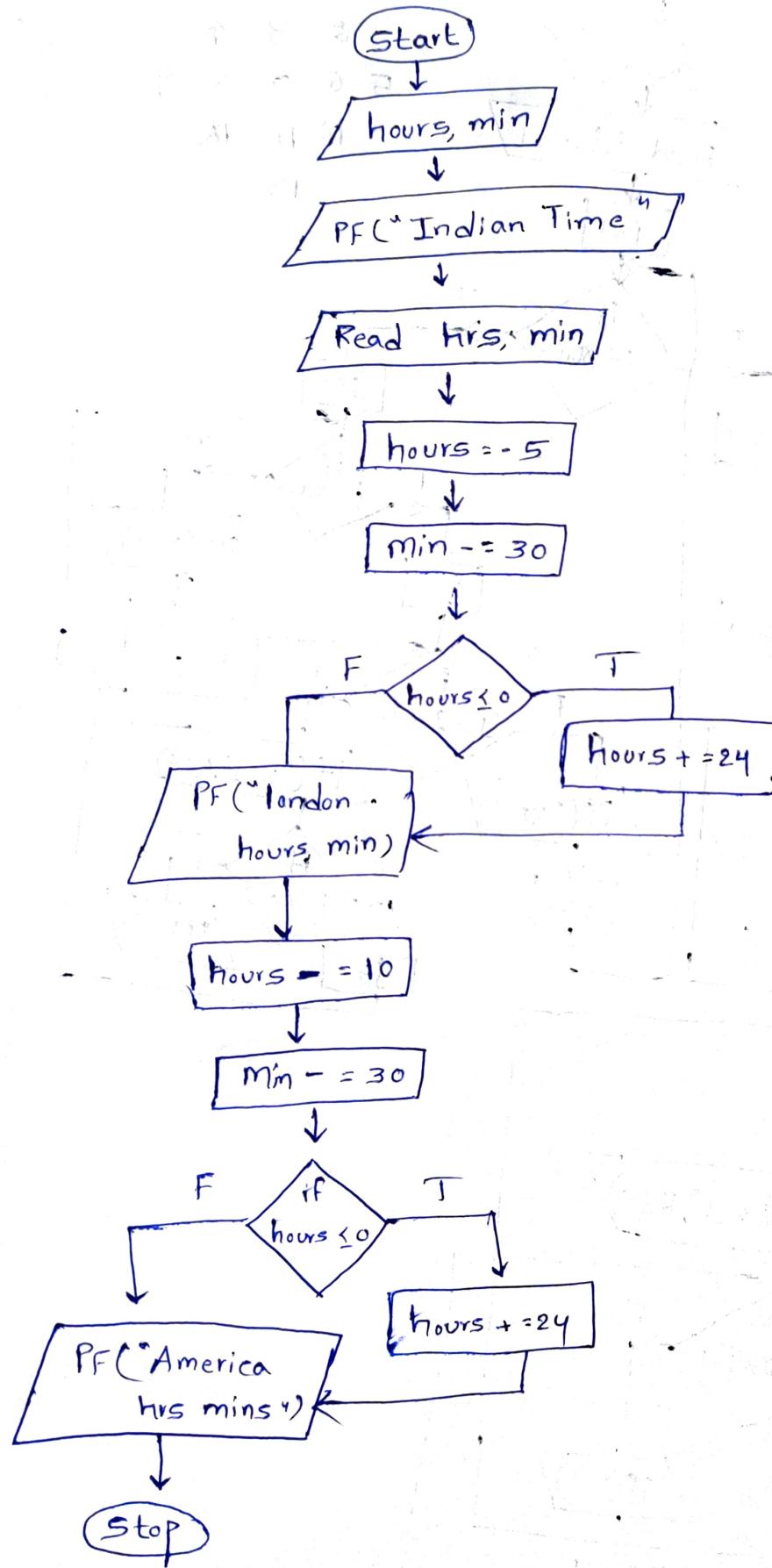
30) Take a number and right shift based on user input.

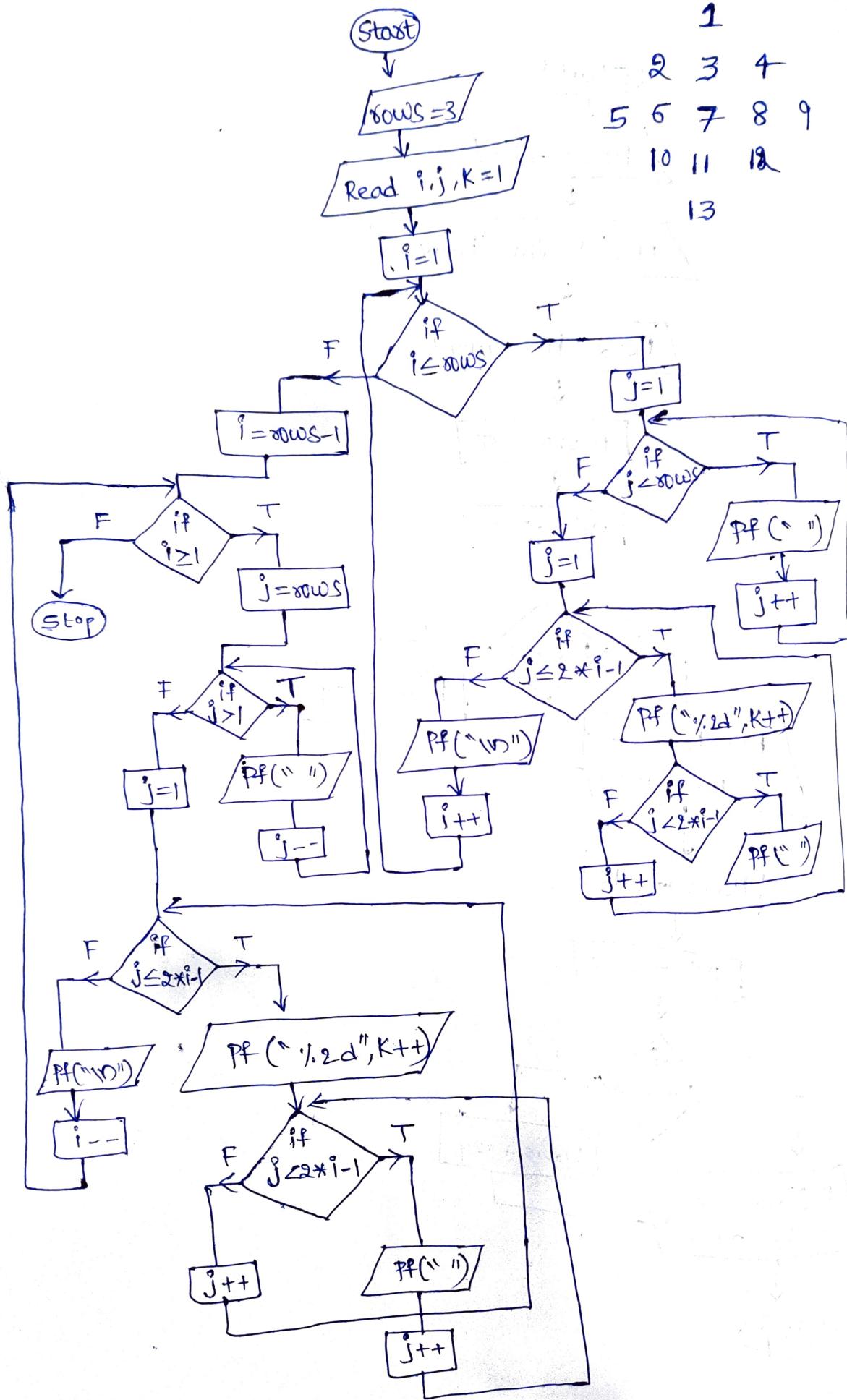


### 31) LCM of (n numbers) (user input)



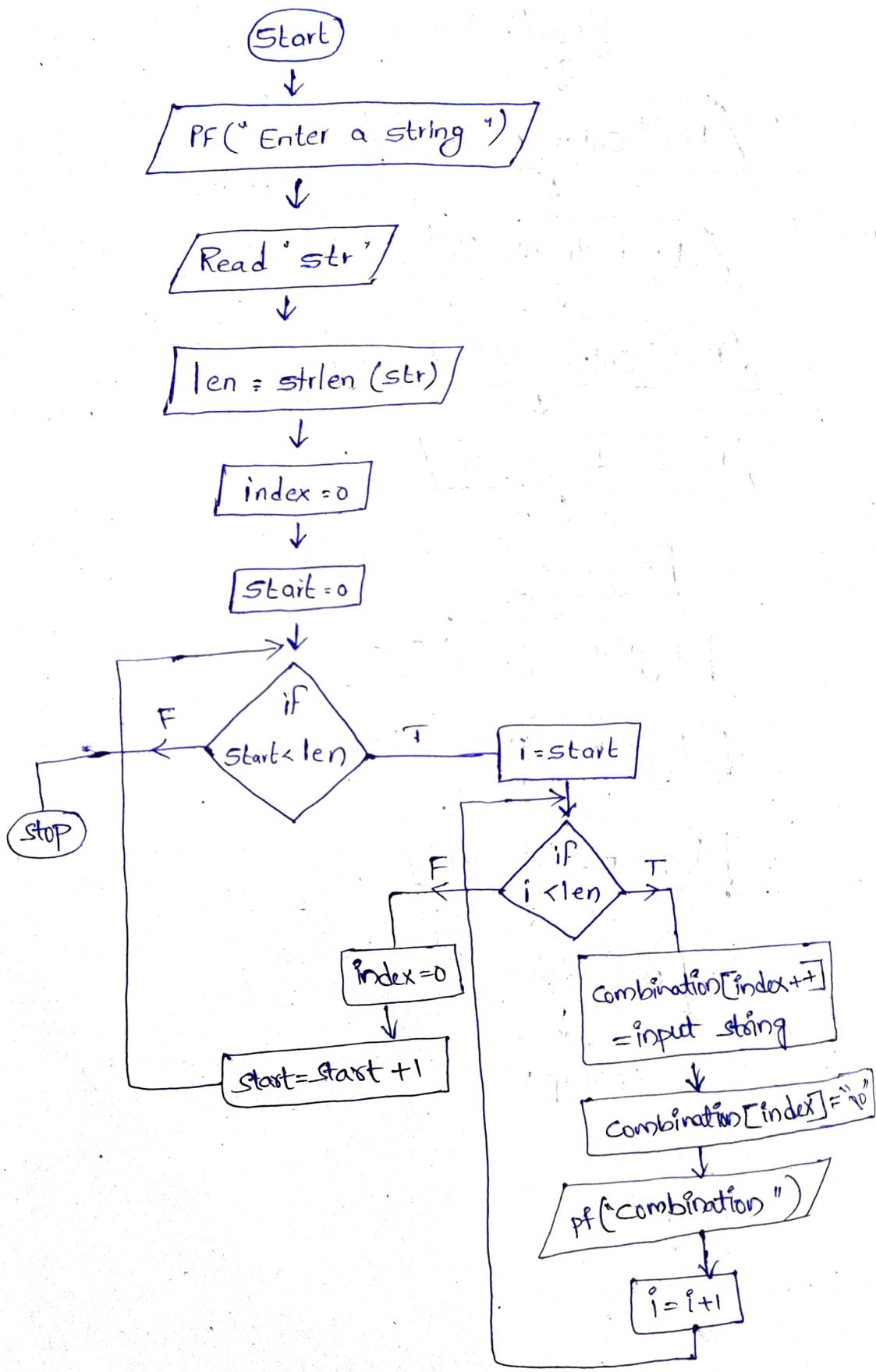
# Indian Time to London time



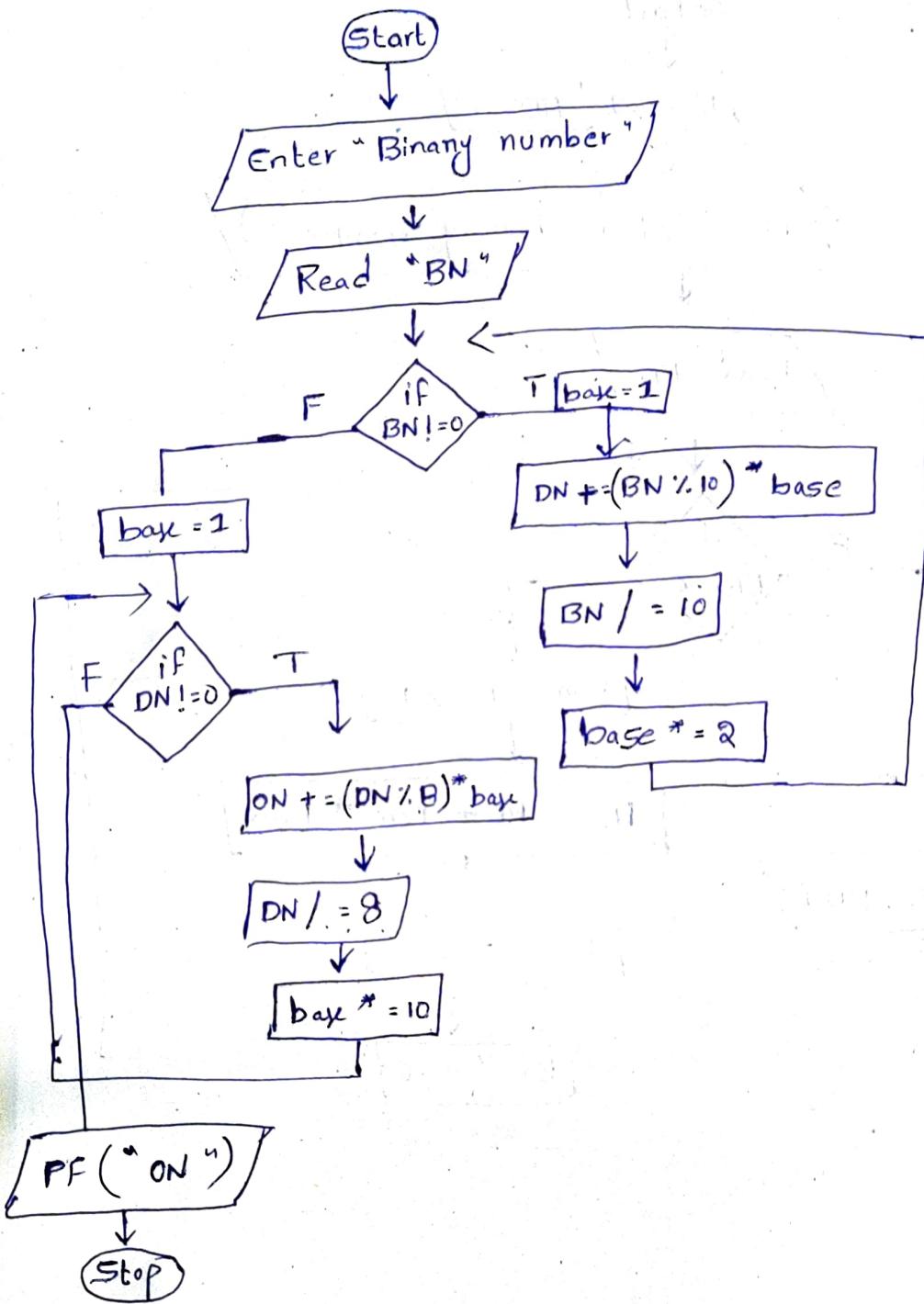


35

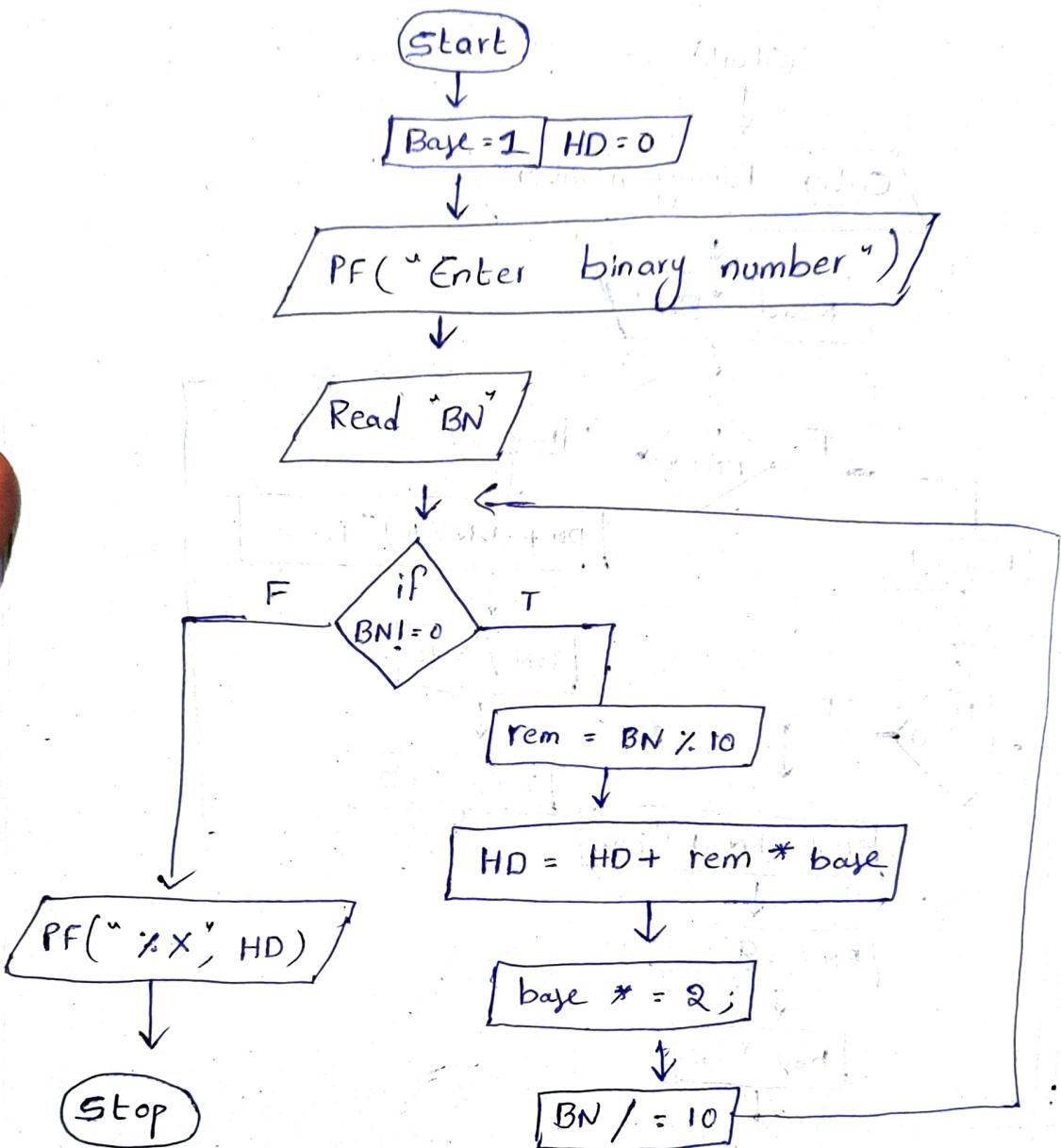
## String Combinations



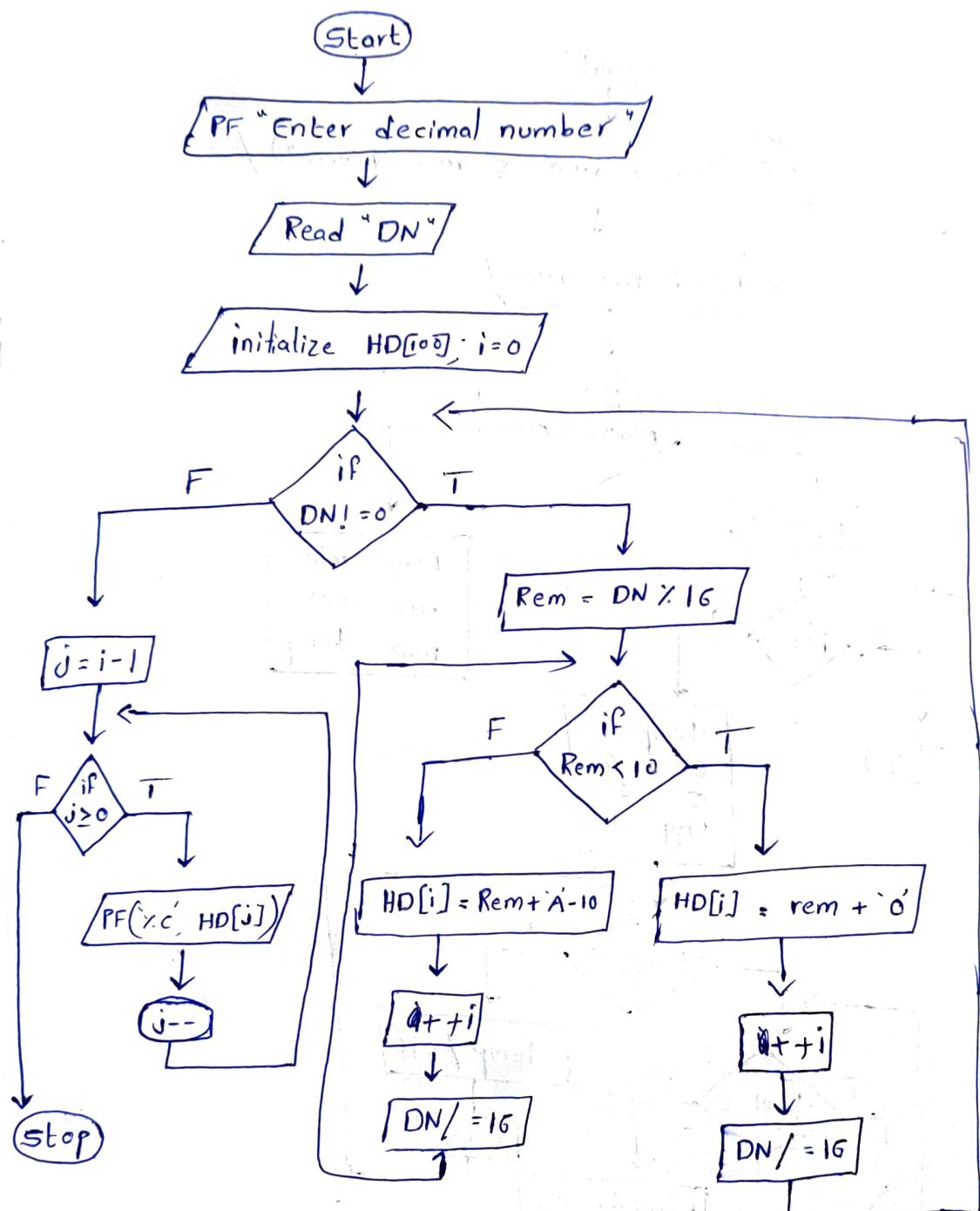
36) Binary to octal Conversions



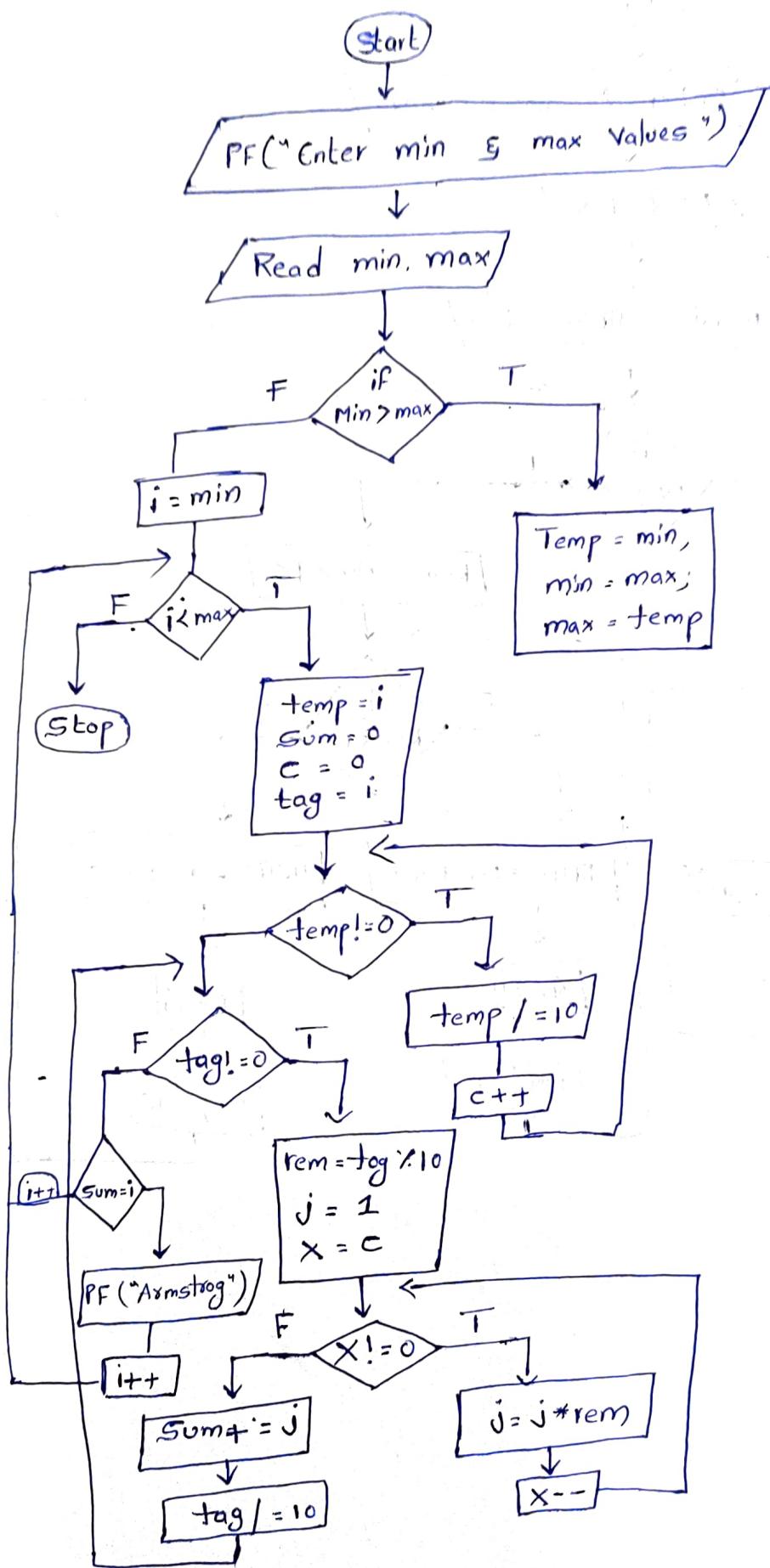
### 37) Binary to hexa-decimal Conversion.



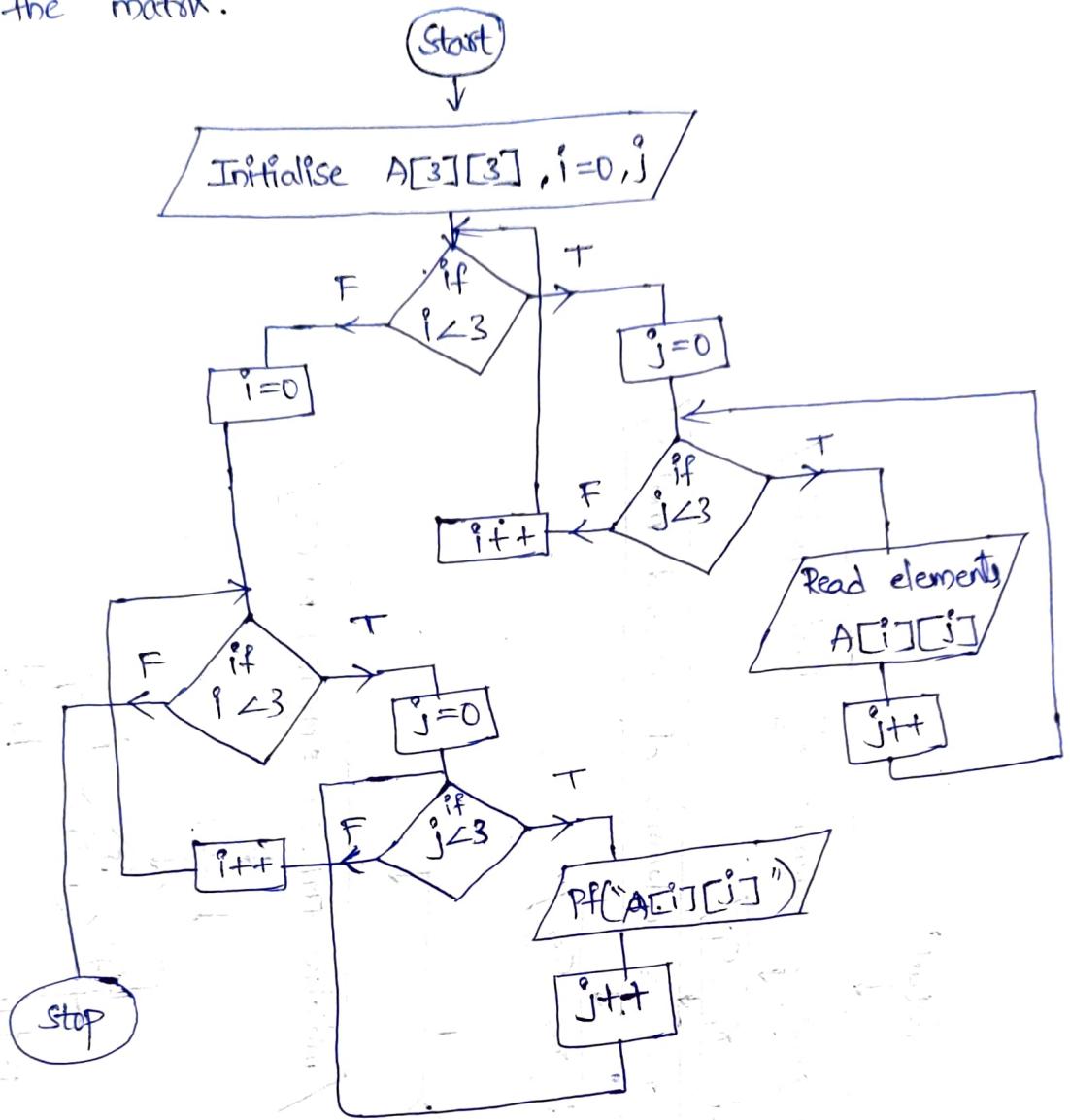
38) Decimal to Hexa-decimal Conversion.



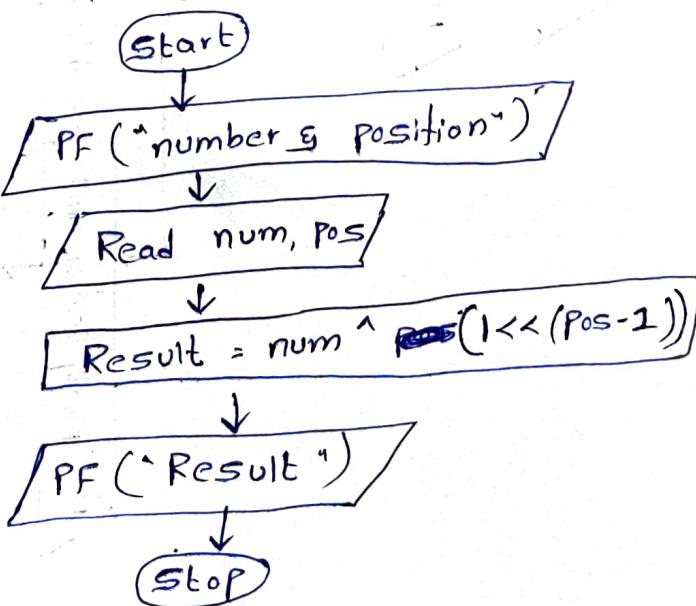
39) Armstrong numbers between 'two' intervals



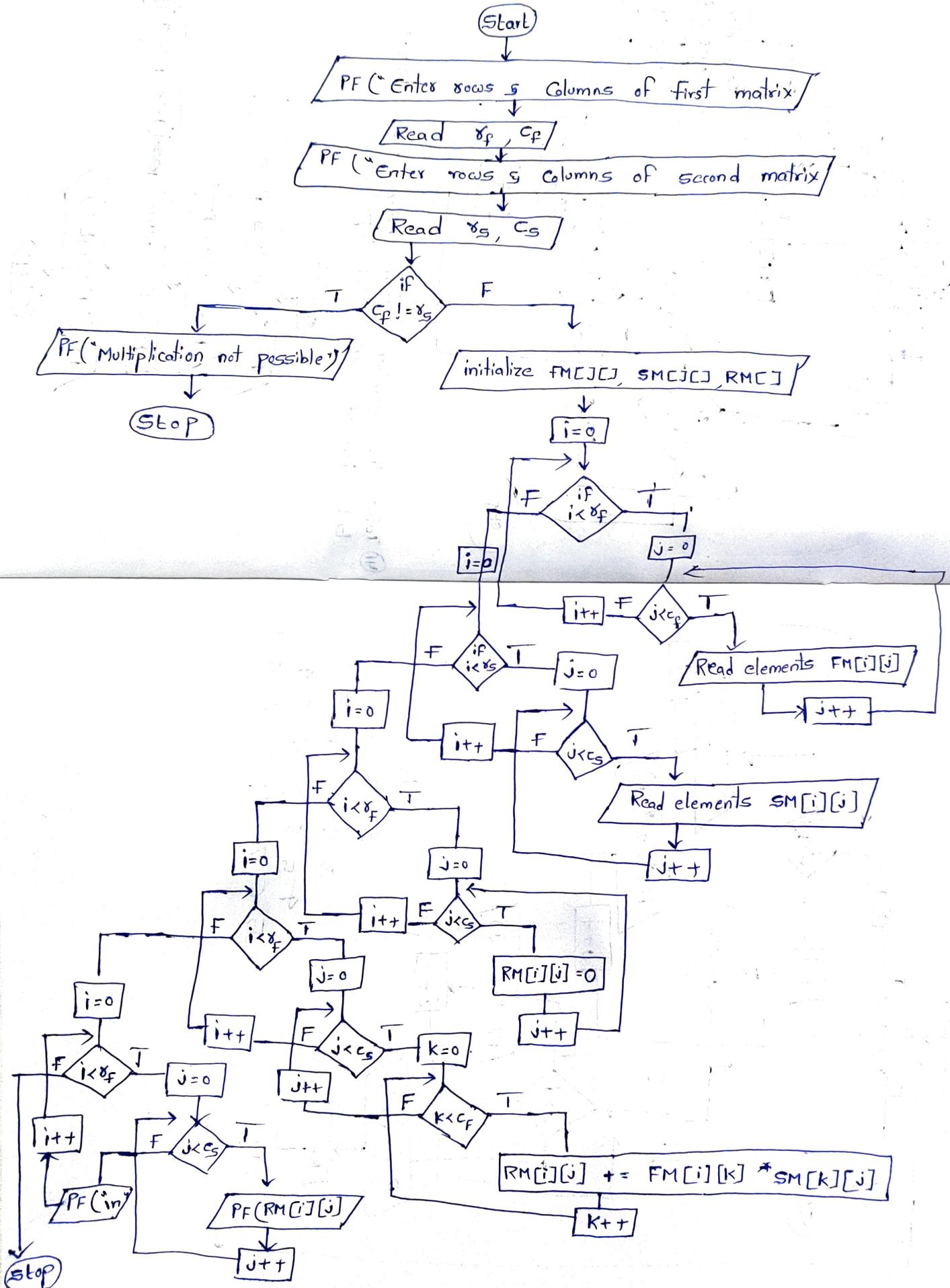
④ Take matrix elements from the user and display the matrix.



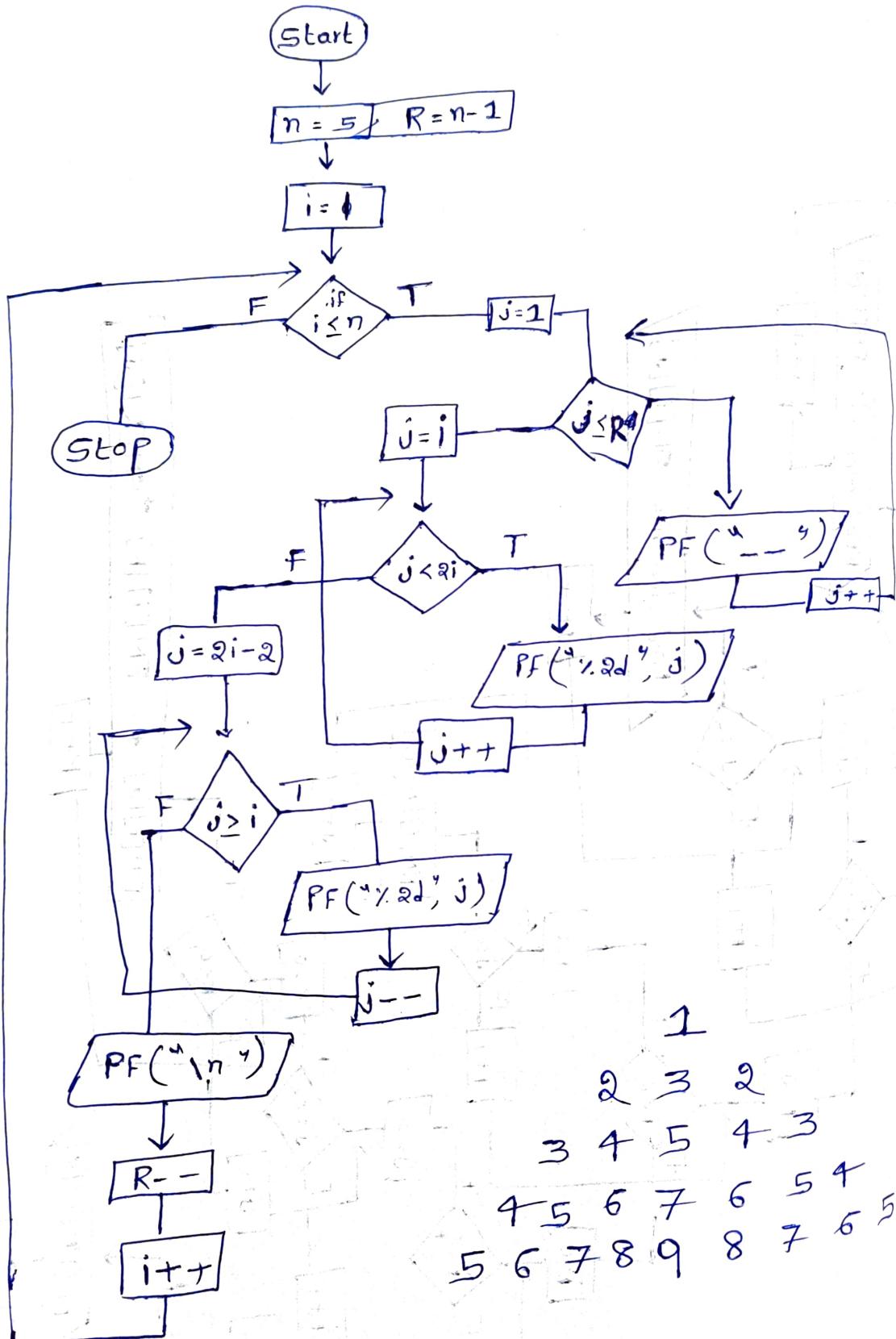
④ Take the number based on bit from user and toggle the user input.



## 42) Matrix Multiplication

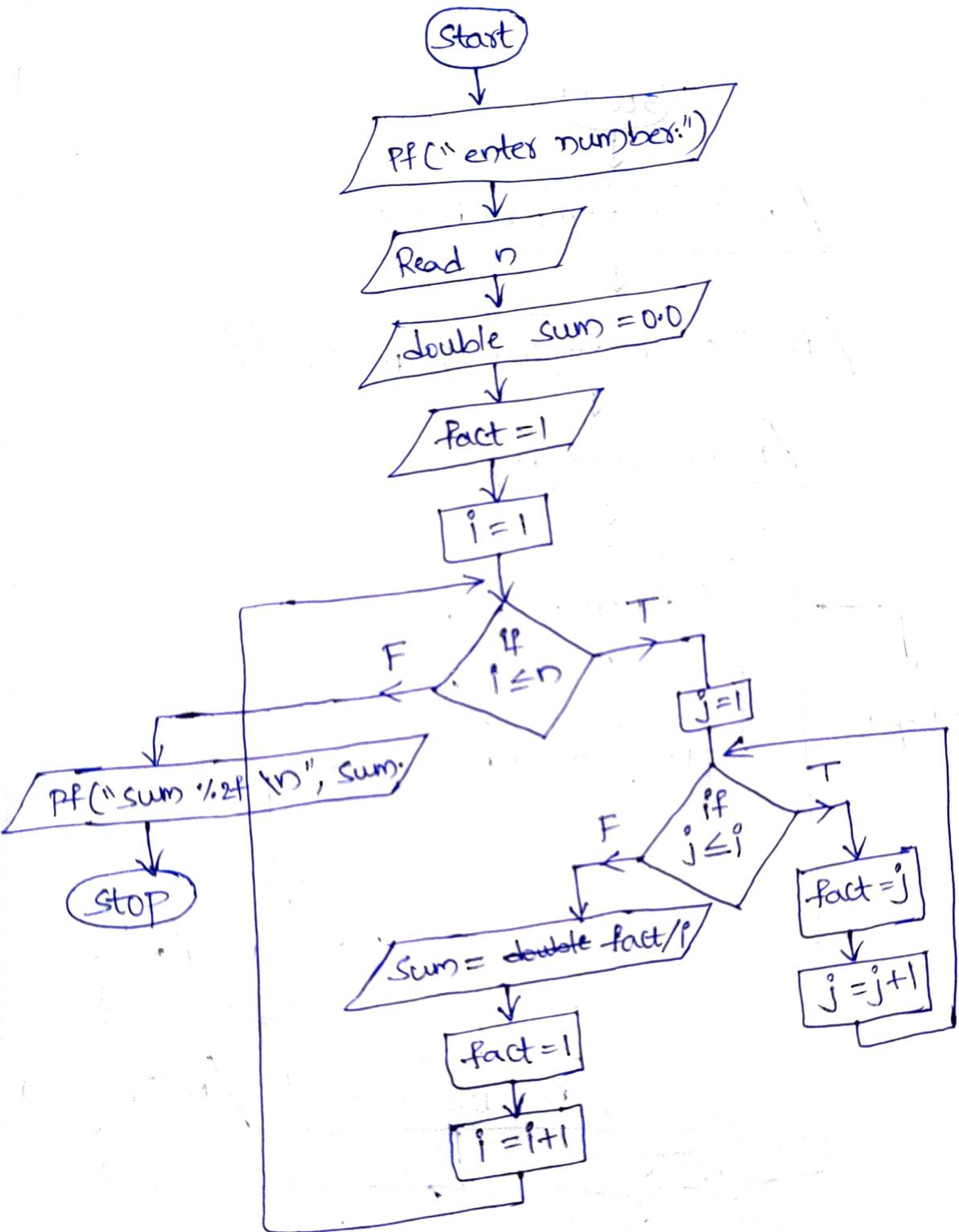


43

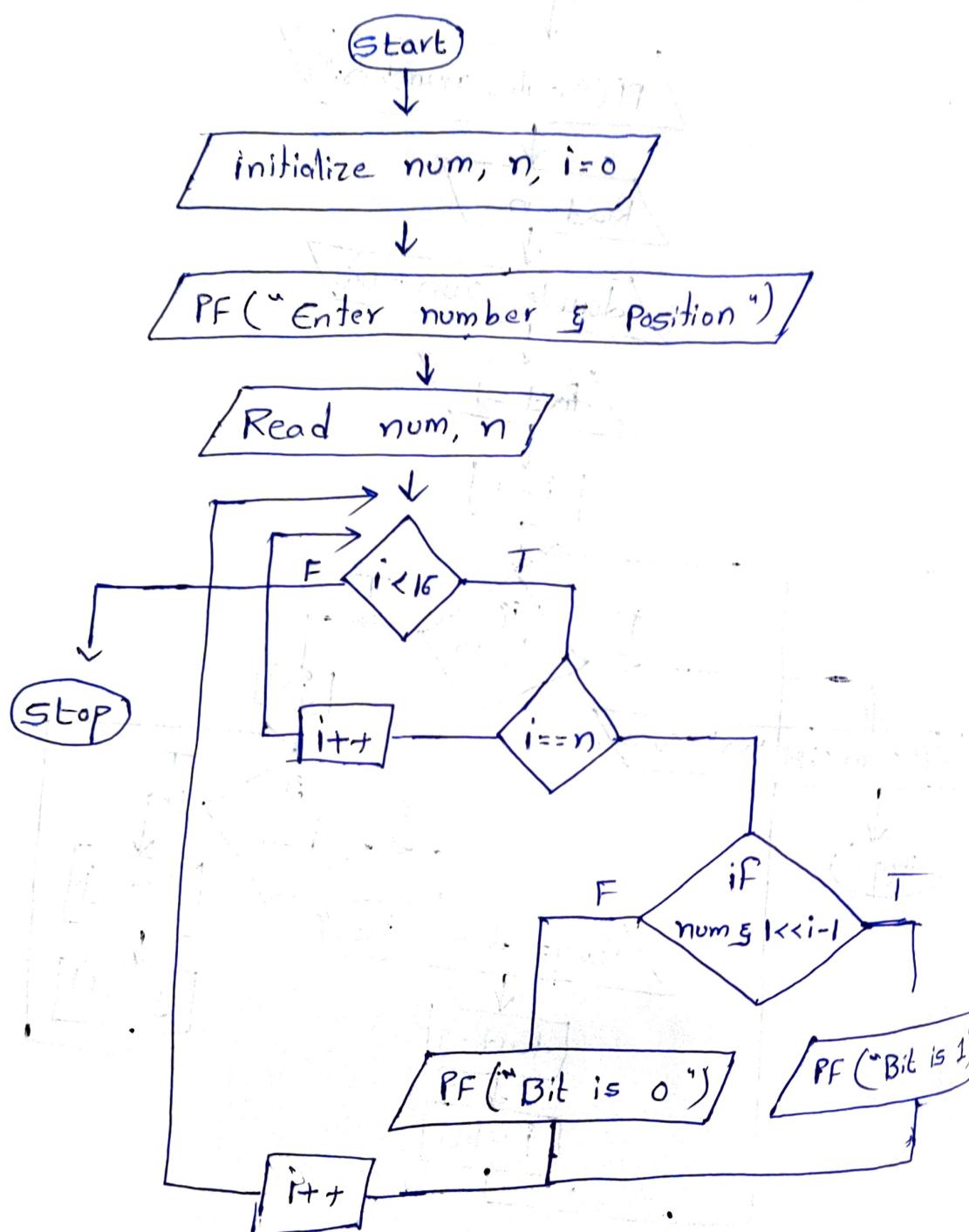


44

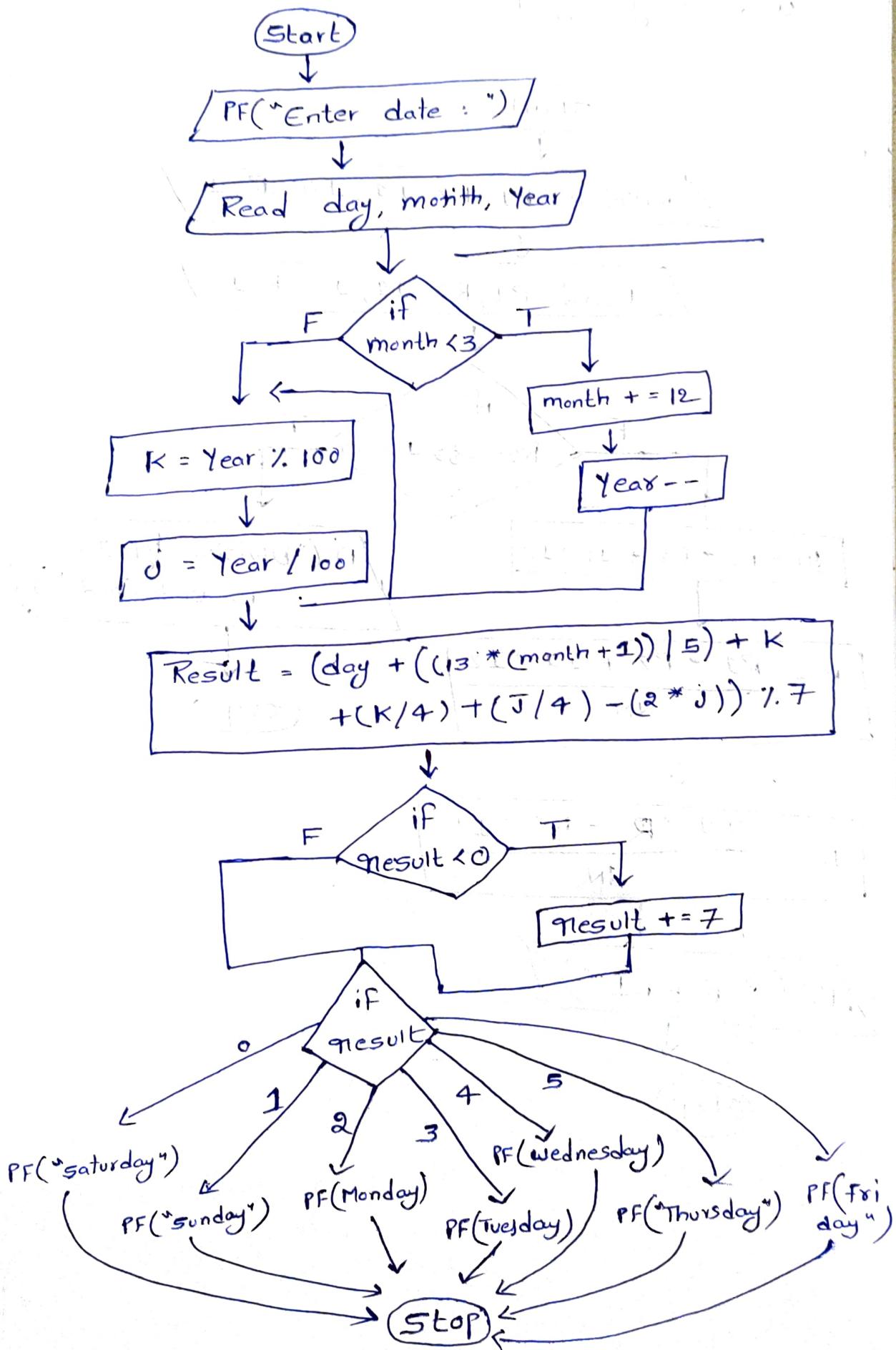
$$\frac{1!}{1} + \frac{2!}{2} + \frac{3!}{3} + \dots + \frac{n!}{n}$$



45 Take number from user and display the  $n^{\text{th}}$  bit.



46) Take the date from user and find the day of that date.



47 Take 2 Complex numbers from user and divide and print the real part and imaginary part.

