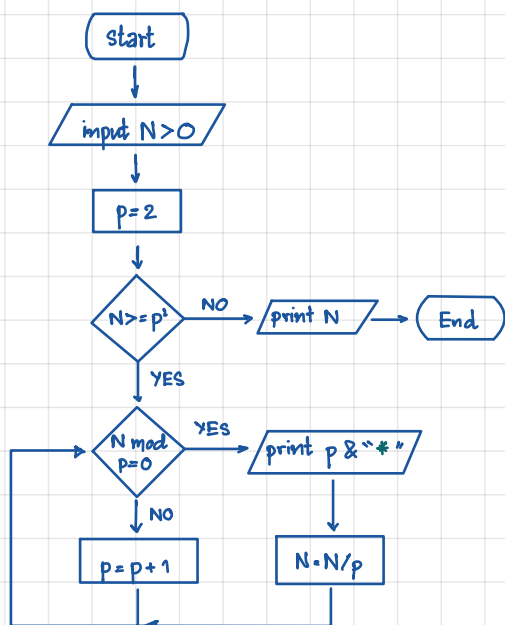1) Write Flowchart for a program to "Output the Factorization of the input number"

```
        ( start )
           ↓
      / input N>0 /
           ↓
        [ p=2 ]
           ↓
        < N>=p² >  —NO→  / print N /  →  ( End )
           ↓
          YES
           ↓
        < N mod    >  —YES→  / print p & "*" /
        < p=0      >                ↓
           ↓                    [ N•N/p ]
          NO
           ↓
      [ p=p+1 ]
```

2) Write Flowchart for a program to "Output Square root of the input number"

```
        ( start )
           ↓
     [ int number ]
           ↓
    [ double root = 1 ]
           ↓
      [ int i = 0 ]
           ↓
   / printf("Enter a number : ") /
           ↓
    / input "number" /
           ↓
   [ i = i+1;
     root = (number/root+root)/2; ]
           ↓
   < i == number+1 >  —False→
           ↓
          True
           ↓
   / printf("%.2f", root) /
           ↓
        ( End )
```
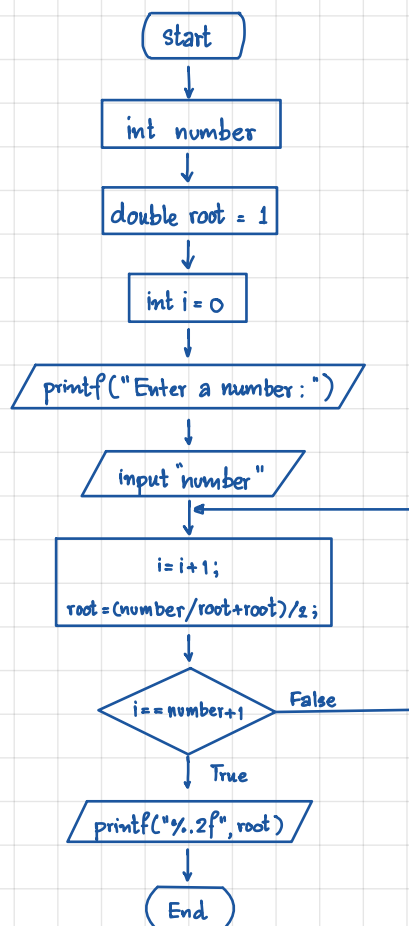
3) Write Flowchart for a program to "Check if a number is a multiple of another?"

```
           ( Start )
              ↓
        / Read Number, /
        / No_of_multiples /
              ↓
        [ Set count = 1 ]
              ↓
          < if count
False ←    <=No_of_multiples >
  ↓              ↓ True
(Stop)    [ Result = Count * number ]
              ↓
        / print Result /
              ↓
        [ Count = Count + 1 ] → (back to if count)
```
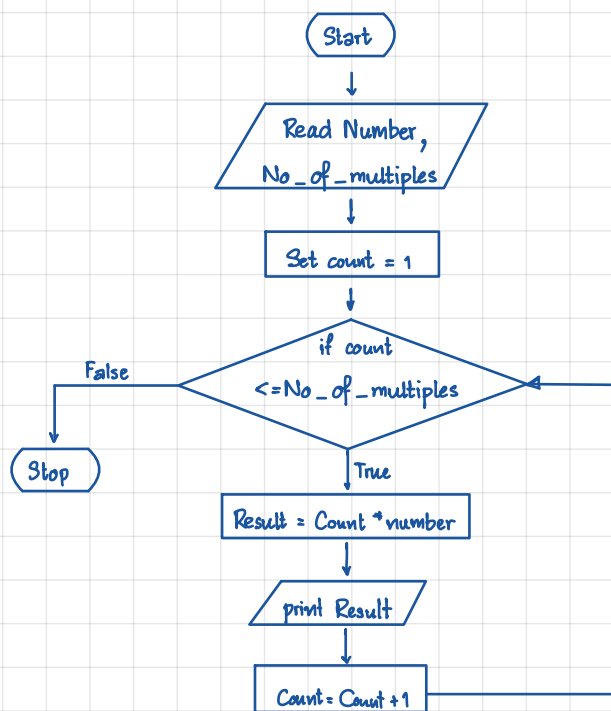
4) Write Flowchart for a program to "Check if three sides of a triangle form a right triangle or Not ?"

```
        ( Start )
           ↓
  / Enter three numbers: A, B, C /
           ↓
     < Is A²+B² = C² ? >  --True→  / print "It's a right triangle" /
           ↓ False
     < Is A²+C² = B² ? >  --True→  / print "It's a right triangle" /
           ↓ False
     < Is B²+C² = A² ? >  --True→  / print "It's a right triangle" /
           ↓ False
  / print "Not a right triangle" /
           ↓
        ( End )
```
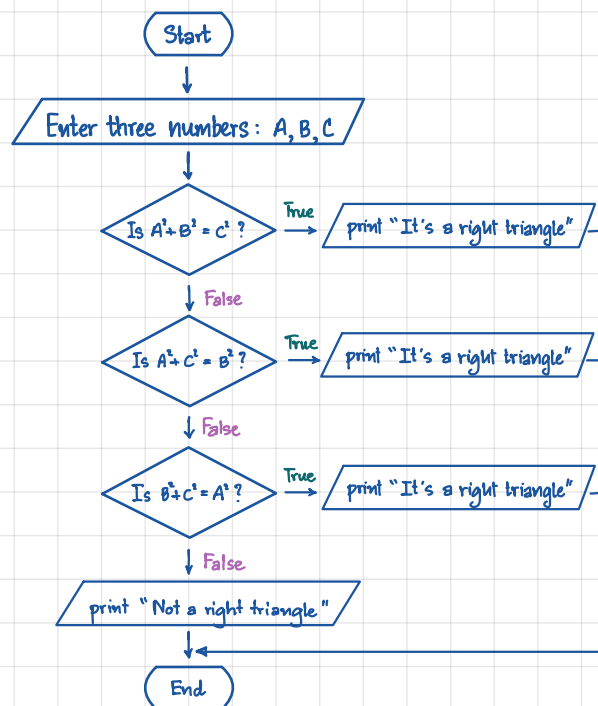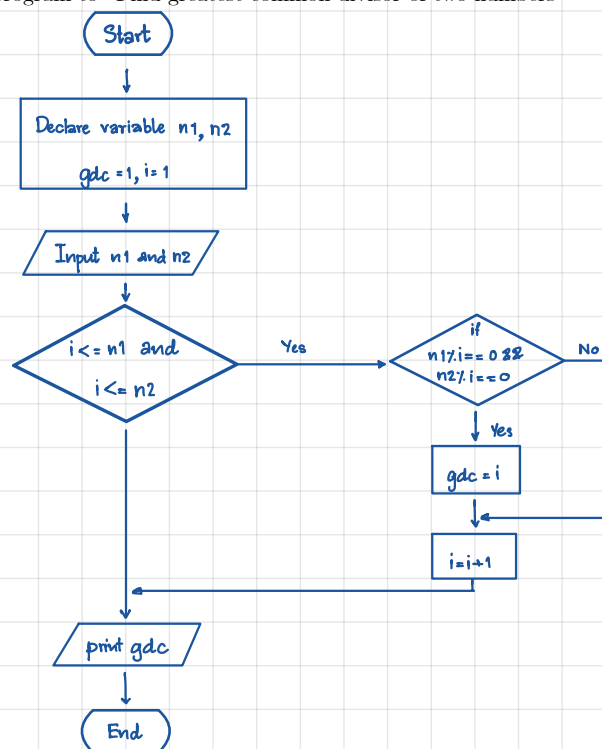
5) Write Flowchart for a program to "Output the first 10 square series"
**Square series example (1,4,9,16,25,36.......)

Start

int i, n, sum = 0

i = 1

input n = 10

printf ("The first %d square series are : ", n);

i=1
i<= n   → YES → print ("%d ", "i * i);
i++

↓ NO

End
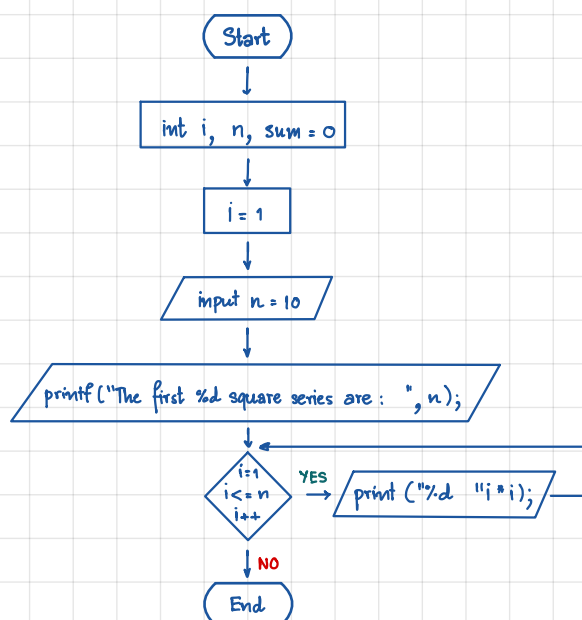
6) Write Flowchart for a program to "Find greatest common divisor of two numbers"

Start

Declare variable n1, n2

gdc = 1, i = 1

Input n1 and n2

i <= n1 and
i <= n2   → Yes →   if
                    n1%i == 0 &&   → No
                    n2% i == 0

↓ Yes

gdc = i

i = i+1

print gdc

End

7) Write Flowchart for a program to "Check Whether a Number is Prime or Not ?"

Start

Read n.

i = 2

i < n → False

True

n%i==0 → True

False

i = i+1

i==n

True → print "Prime"

print "not prime"

End