# 1.1 Homework

Made By:

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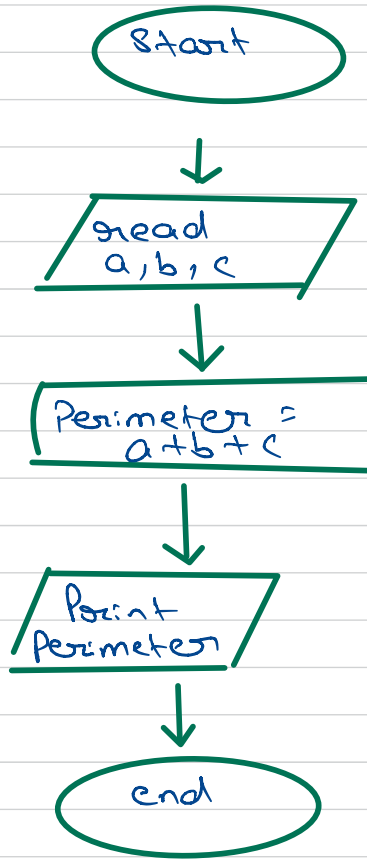
# Multiply two number by taking user input

```
        ( Start )
            |
            v
      / Read a, b /
            |
            v
   [ Product = a * b ]
            |
            v
     / print
       product /
            |
            v
        ( end )
```
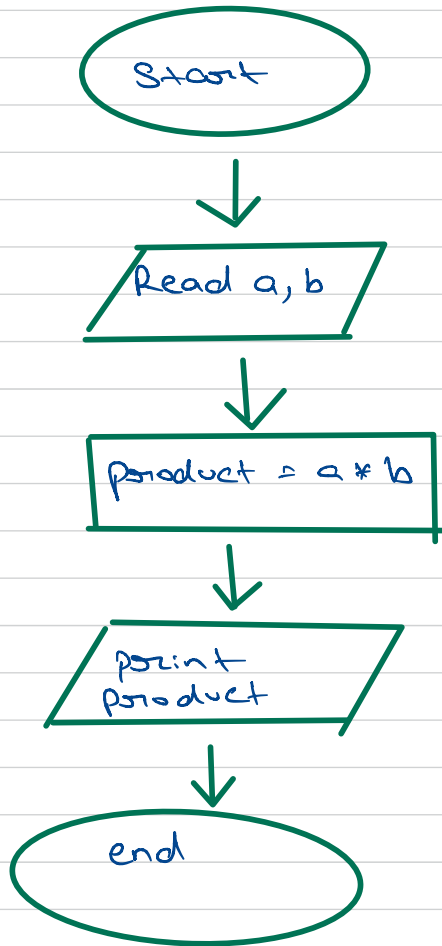
# find perimeter of a triangle

perimeter of a $\Delta$ = $a+b+c$



```
        ( Start )
            │
            ▼
        / read  /
        / a,b,c /
            │
            ▼
      [ Perimeter =    ]
      [   a+b+c        ]
            │
            ▼
      / Print      /
      / Perimeter  /
            │
            ▼
         ( end )
```

find simple interest

$$SI = (P \times R \times T)/100$$

P = Principal
R = Rate of Interest
T = time

```
    ( Start )
       |
       v
   / read   /
   / P, r, t /
       |
       v
  | SI =           |
  | (P*r*t)/100    |
       |
       v
   / Print  /
   /  SI   /
       |
       v
   ( end )
```
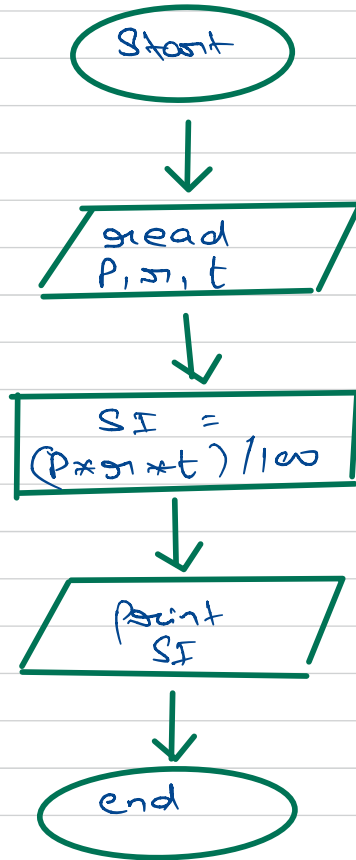
# Print Compound Interest
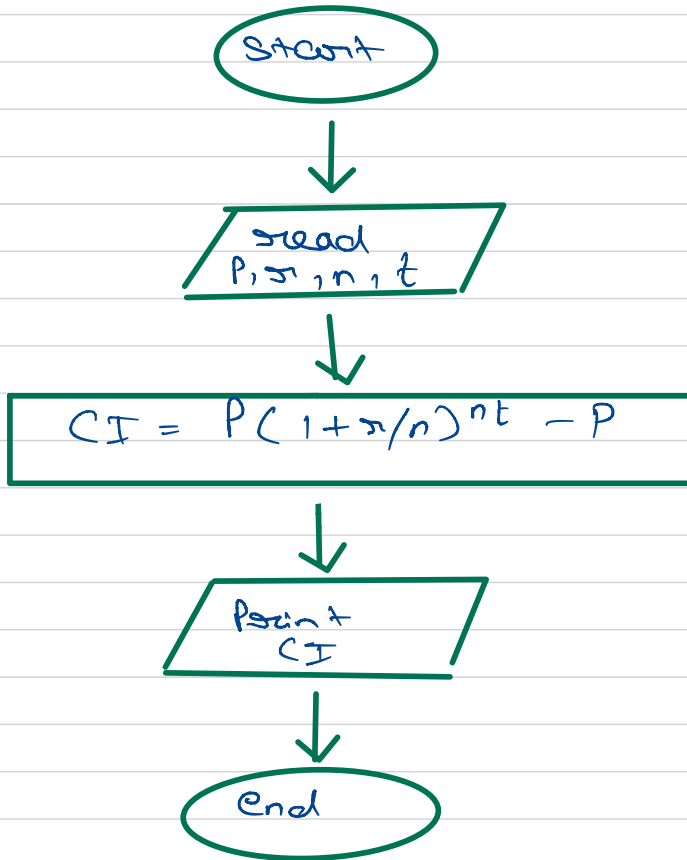
$$CI = P(1 + r/n)^{nt} - P$$

P = principal
r = rate of interest
n = no. of times interest is compound per year
t = time (in yrs)

```
        ( Start )
            |
            v
      / read      /
     / P, r, n, t /
            |
            v
  [ CI = P(1 + r/n)^{nt} - P ]
            |
            v
      / Print   /
     /   CI    /
            |
            v
        ( end )
```

# Print Counting from N to 1

```
        ( Start )
            │
            ▼
        / read /
        /  n   /
            │
            ▼
        < n >= 1 >────false────→ ( end )
            │
          true
            │
            ▼
        / Print /
        /  n    /
```

n = n - 1
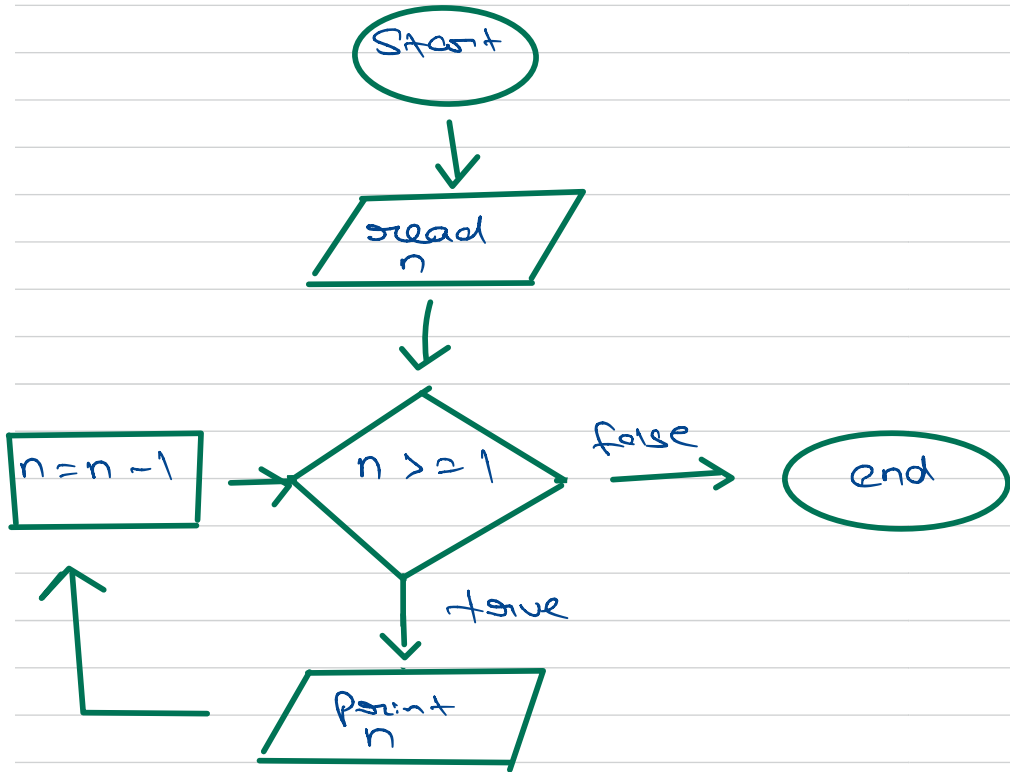
# find factorial of a number

$$factorial = n(n-1)(n-2)\cdots 1$$
$$= n \times (n-1)!$$

```
        ( start )
            |
            v
        / read  /
       /   n    /
            |
            v
      | i = 1      |
      | fact = 1   |
            |
            v
        < i <= n >  --false-->  / print /
            |                   /  fact /
          true                      |
            |                       v
      | fact = fact * i |      ( end )
      | i = i + 1       |
            |
   (loops back to i <= n)
```
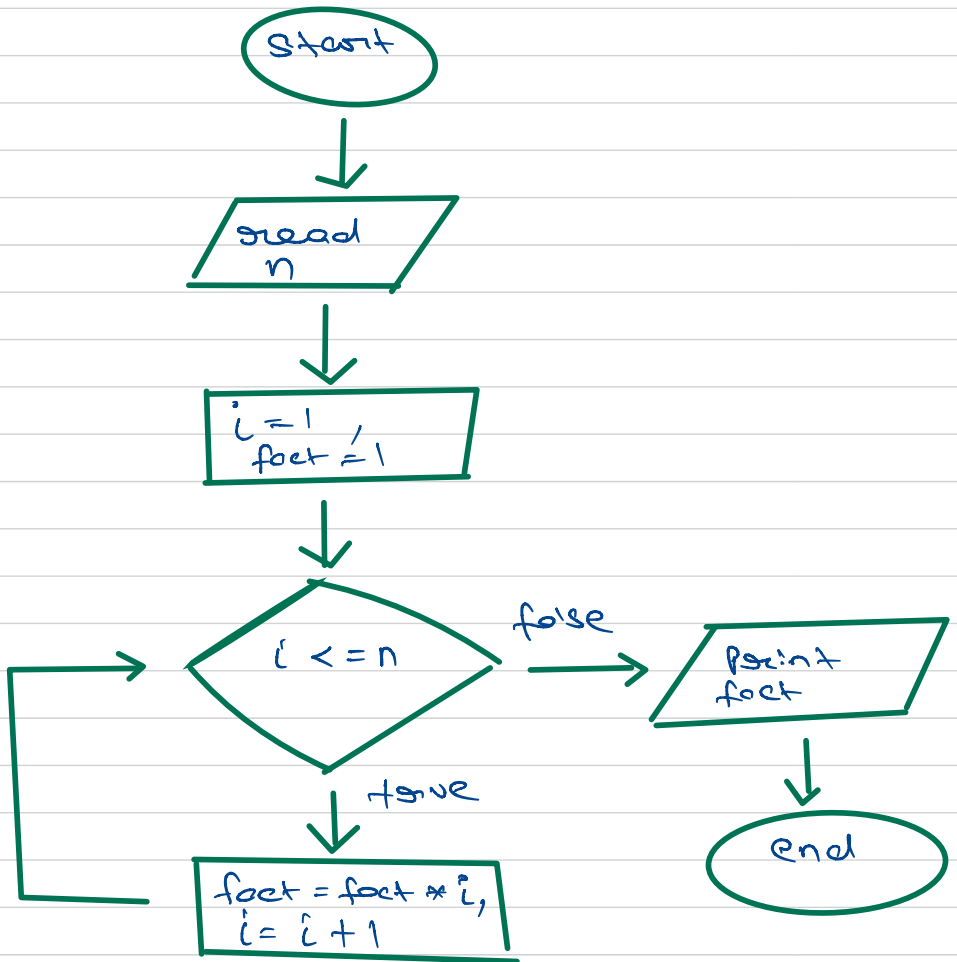
# Check if number is prime or not

Prime no → greater then 1 & divide
by 1 or itself
for Ex         2, 3, 5, 7, 11, 13 ...

```
        ( Start )
            │
            ▼
       / read  /
      /   n   /
            │
            ▼
       < n == 1 > ──────► / print      /
            │            / "not prime" /
            ▼                   │
       [ i = 2 ]                │
            │                   │
            ▼                   │
       < i < n >  ─false─► / print  /  │
            │             / "prime"/   │
            │true               │      │
            ▼                   ▼      ▼
       < n % i == 0 > ─true─► / print      / ( end )
            │                / "not prime"/    ▲
            │false                │           │
            ▼                     └───────────┘
       [ i = i + 1 ]
            │
            └──────► (back to i < n)
```
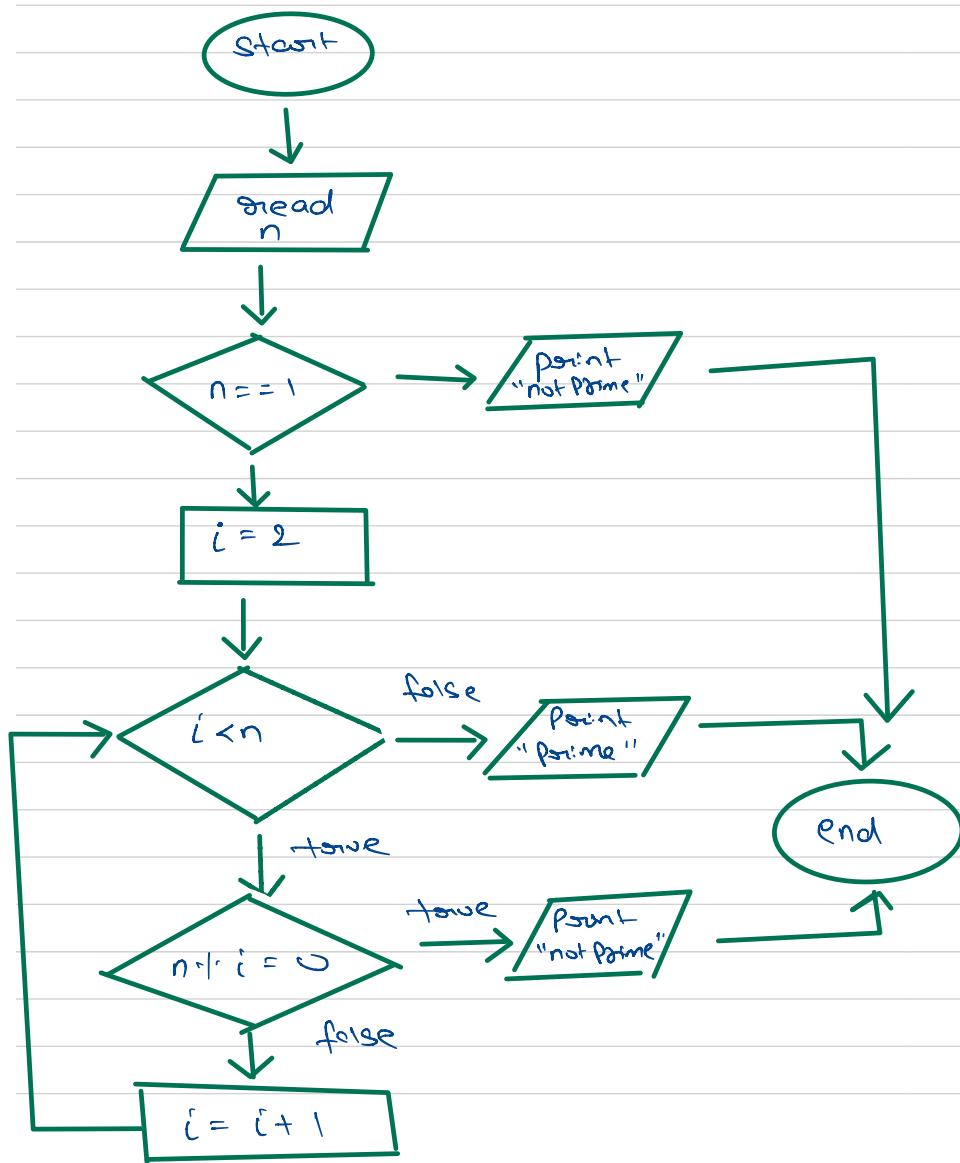
# Print max of three number

```
Start
  │
  ▼
read a, b, c
```

```
a > b ──true──▶ a > c ──true──▶ Print a
  │                │                │
false            false              ▼
  │                │               end
  ▼                ▼
b > c ──false──▶ Print c ──────────▶
  │
true
  │
  ▼
Print b ────────────────────────────▶
```
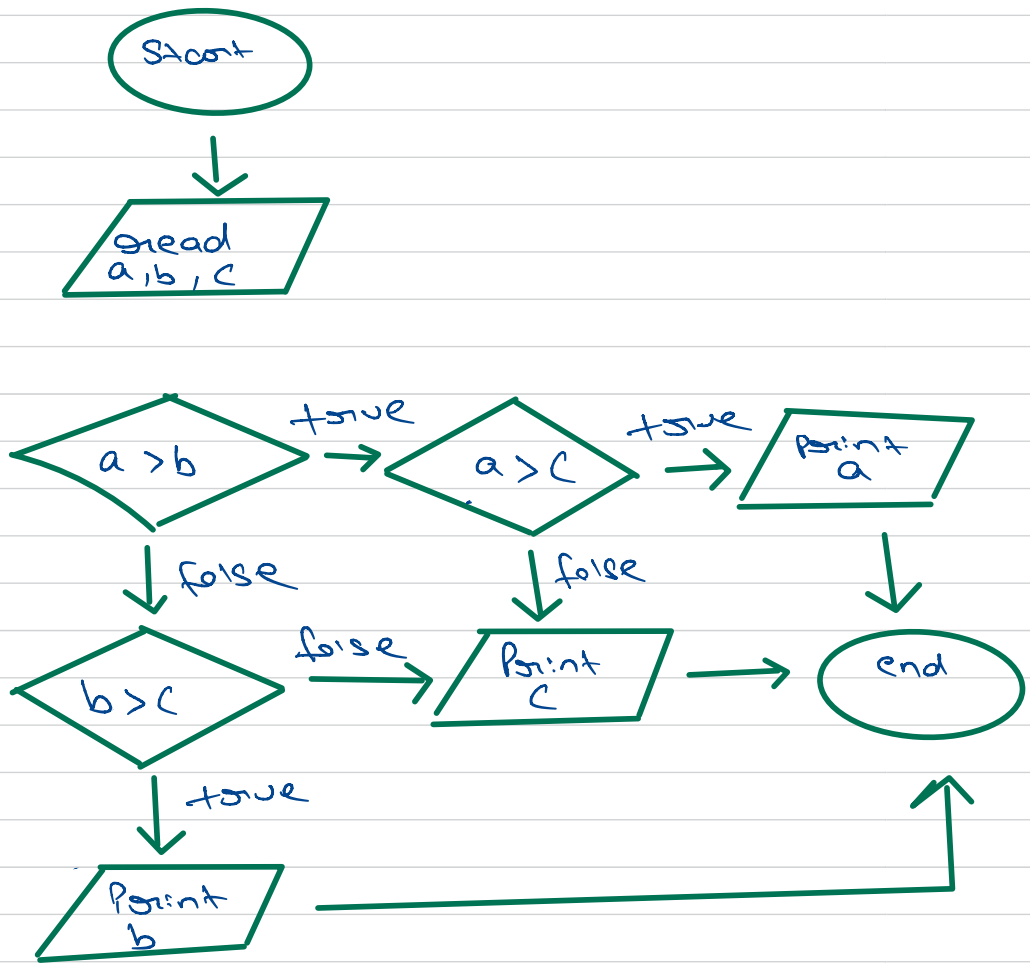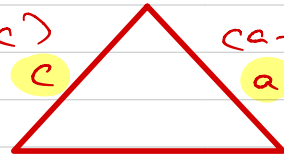
# Check valid triangle or not

valid △ => Sum of two sides greater than the third side

$(a+b > c)$

$(a+c > b)$

c    a

b

$(b+c > a)$

```
        ( Start )
            |
            v
      /read a,b,c/
            |
            v
      < a+b > c >  ---- false ---->
        |                          |
       true                        v
        |                    /print
        v                    "not valid"/  ----> ( end )
      < a+c > b > -- false -->       ^              ^
        |                            |              |
       true                          |              |
        |                            |              |
        v                            |              |
      < b+c > a > ---- false --------'              |
        |                                           |
       true                                         |
        |                                           |
        v                                           |
  /Print "valid"/ ------------------------------'
```