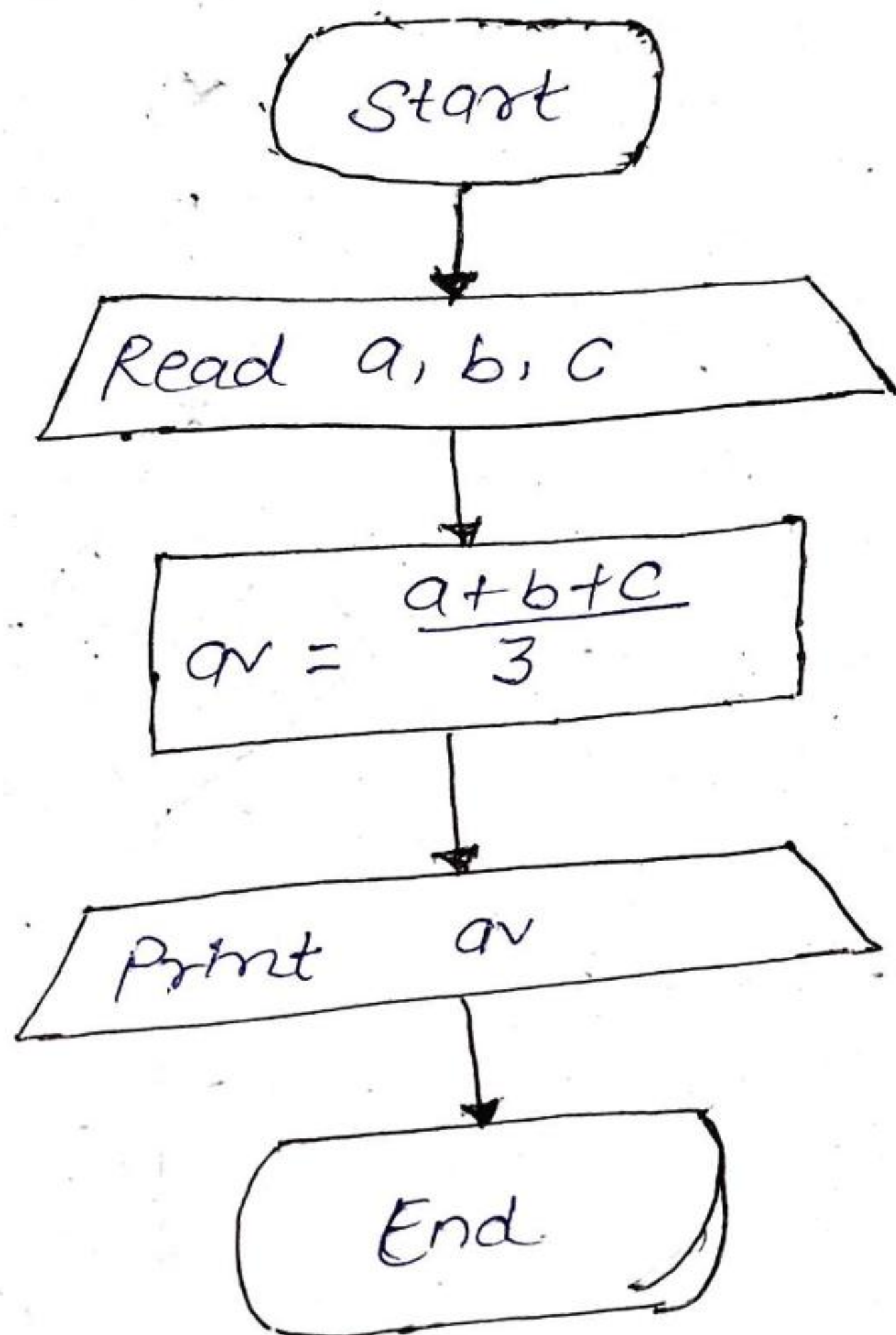* Write the Algorithm and draw the flowcharts for the following :-

[a] Find the average of three numbers a, b and c

Solution :-
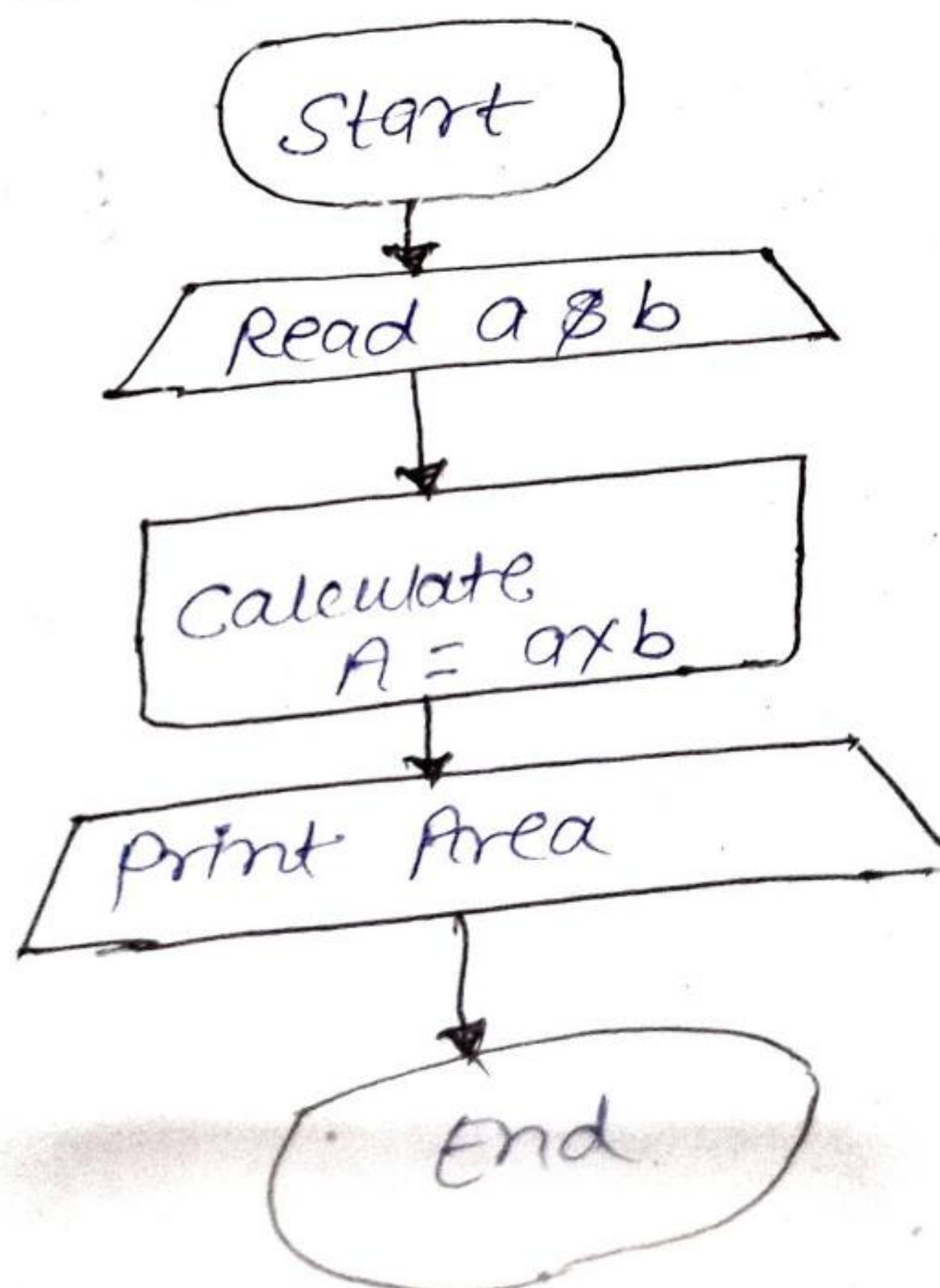
1- Start
2- Read three num
3- Calculation $\left(\dfrac{a+b+c}{3}\right)$
4- Print average
5. End

```
        Start
          |
          v
     Read  a, b, c
          |
          v
     av = a+b+c / 3
          |
          v
     Print    av
          |
          v
         End
```

[b] Find the area of a rectangle whose length and breath are given.

Solution s

1- Start
2- Read length and breath
3- Calculation (A = a × b)
4- Print Area
5- End

```
        Start
          |
          v
      Read  a & b
          |
          v
     Calculate
       A = a×b
          |
          v
     Print  Area
          |
          v
         End
```

2. Draw the flowcharts for the following :

[a] Read age of person. If age less than 60 then print "Not a senior citizen" otherwise print "Senior Citizen".

```
        ┌─────────────┐
        │    Start     │
        └──────┬──────┘
               │
        ┌──────▼──────┐
        │  Read  age   │
        └──────┬──────┘
               │
            ╱──▼──╲
           ╱   if   ╲
          ╱ (age<60) ╲──── false ────┐
           ╲         ╱                │
            ╲──┬──╱                   │
               │                      │
             True                     │
               │                 ┌────▼────────┐
               │                 │ Senior Citizen │
               │                 └────┬────────┘
        ┌──────▼──────────┐           │
        │ Not Senior Citizen │        │
        └──────┬──────────┘           │
               │◄─────────────────────┘
        ┌──────▼──────┐
        │    End       │
        └─────────────┘
```
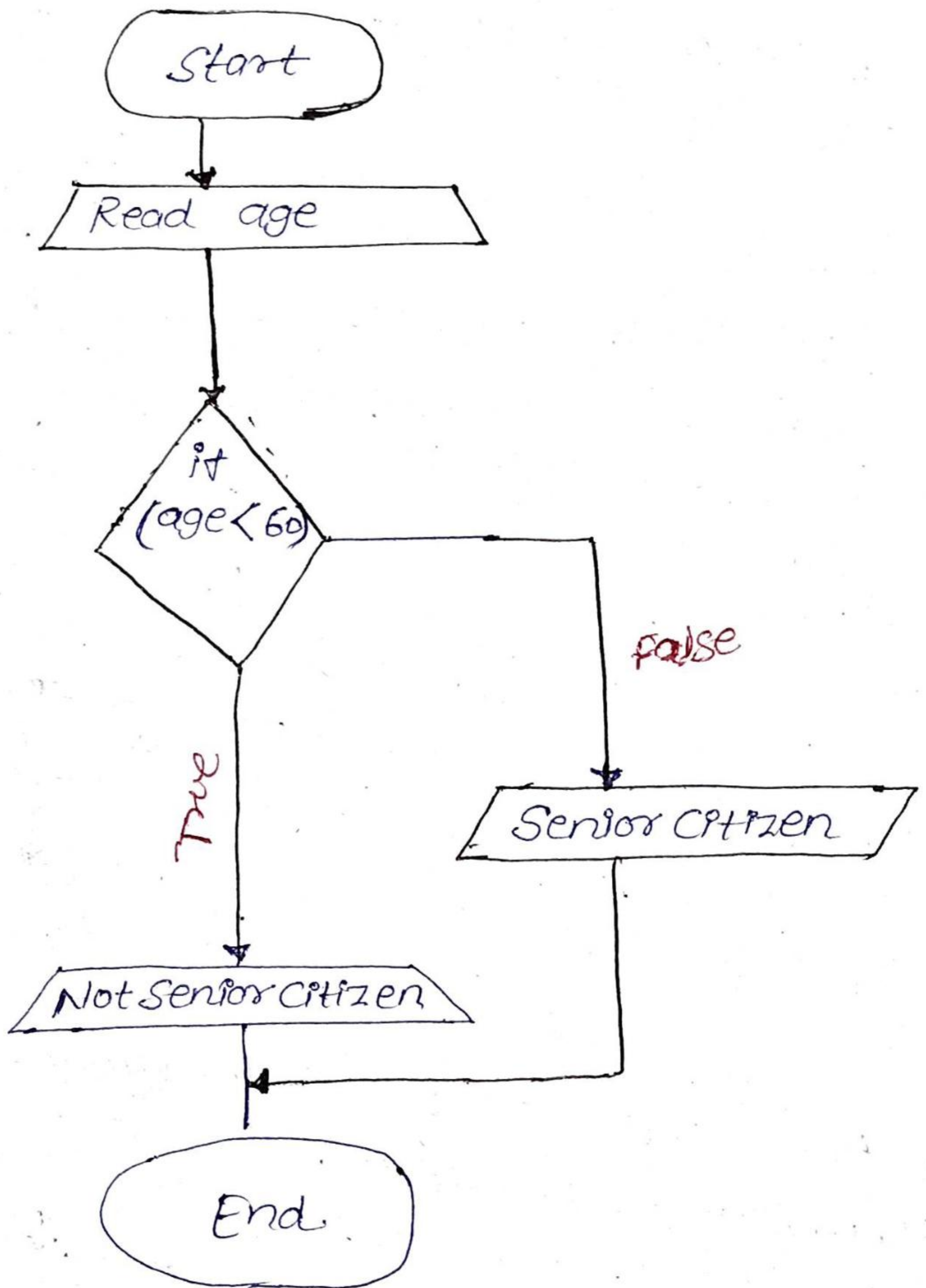
[b] Read two numbers and print maximum of 2 numbers.

```
        Start
          |
     Read a & b
          |
     if (a>b)
     (a,b).
     True /   \ False
         |      |
   Print "a"  Print "b"
         |      |
         +---+--+
           End
```
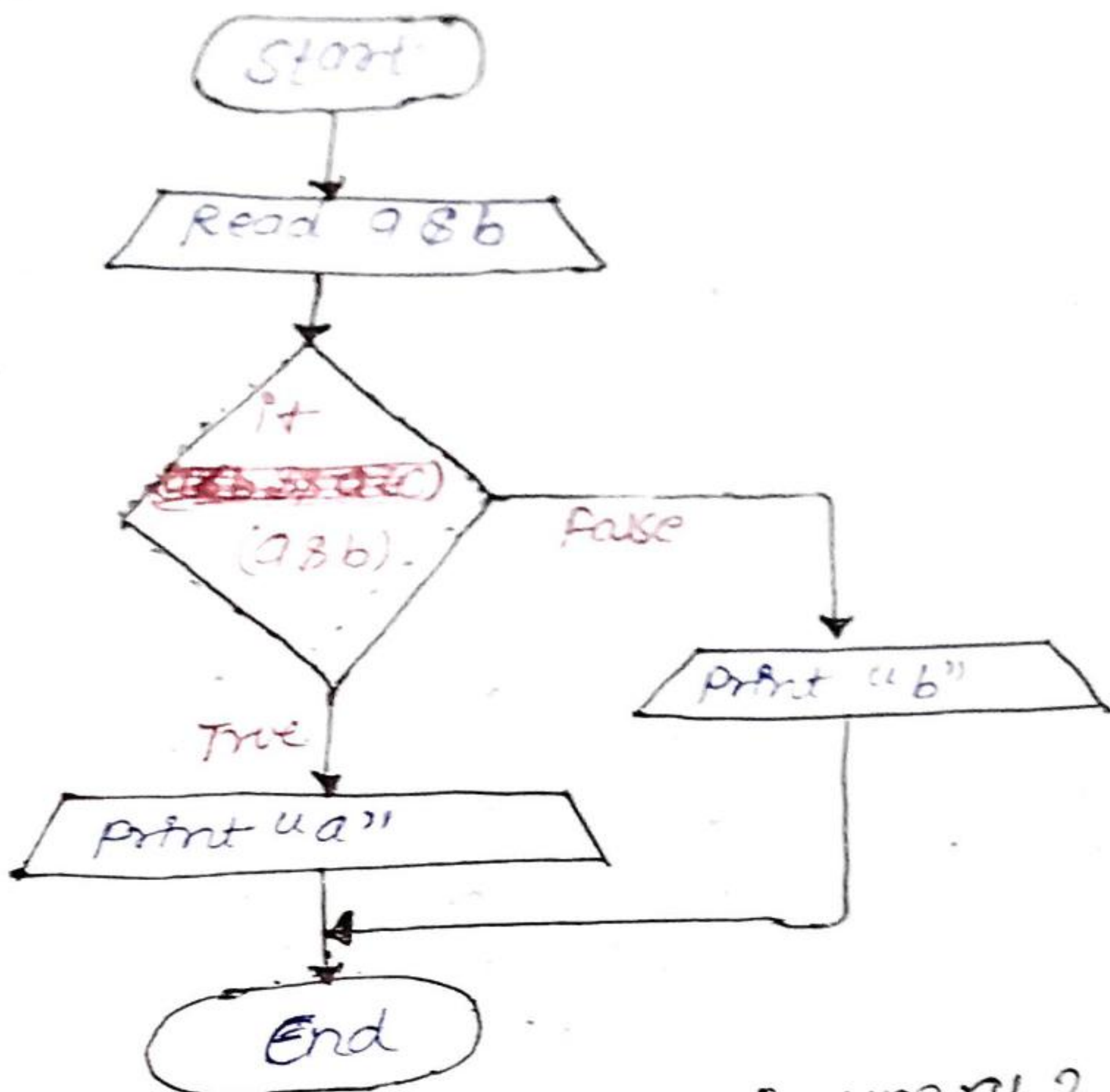
[C] Read three numbers and print maximum of 2 numbers.

```
             Start
               |
          Read a, b, C
               |
    if(a<b && a<c)      False    if(b<a && b<c)   False
               |                      |
          True |                 True |           Print 'c'
          print 'a'              print 'b'
               |                      |
               +----------+-----------+
                         End
```
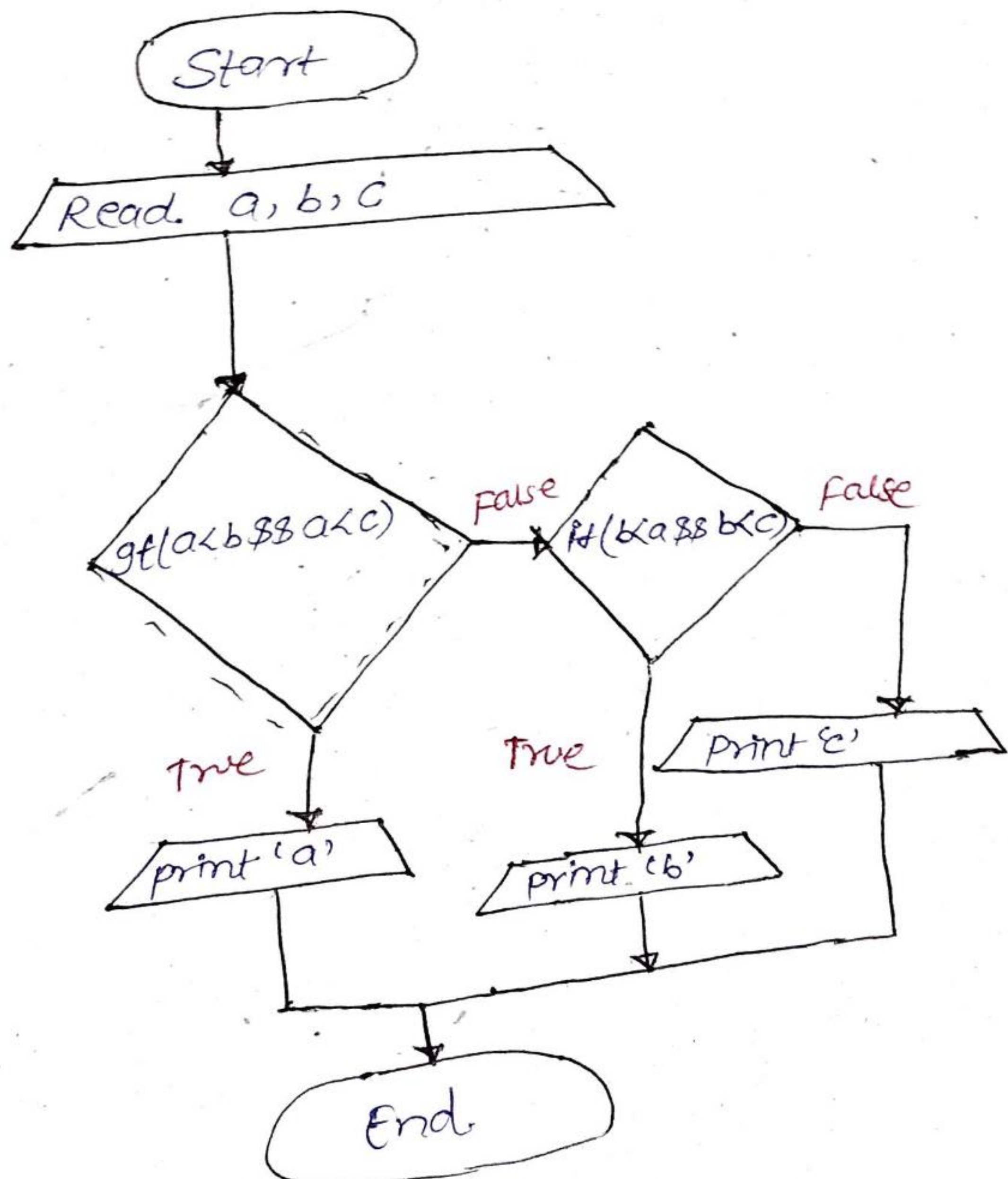
[d] Read a number in inches and convert it into numbers.

```
        ┌──────────┐
        │  Start   │
        └────┬─────┘
             ▼
    ╱────────────────────╲
    ╲ Read num in inch   ╱
     ╲──────────────────╱
             ▼
        ┌──────────────────┐
        │   Calculation    │
        │ inch = 0.0254 m  │
        └────────┬─────────┘
                 ▼
        ╱──────────────────╲
        ╲    Print m       ╱
         ╲────────────────╱
                 ▼
        ┌──────────┐
        │   End    │
        └──────────┘
```

[e] Print 2, 4, 6, 8, 10

```
          ┌──────────┐
          │  Start   │
          └────┬─────┘
               ▼
      ╱──────────────────╲
      ╲      i = 2        ╱
       ╲──────────────────╱
               ▼
               ◆ for(i<=10) ──────────►  ╱ i = i+2 ╱
              ╱ ╲                        (loops back up)
             ╱   ╲ True
        ┌───┘     └───┐
        ▼             ▼
   ┌──────────┐   ╱──────────────╲
   │   End    │   ╲  Print "i"   ╱
   └──────────┘    ╲────────────╱
```