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ZFZ

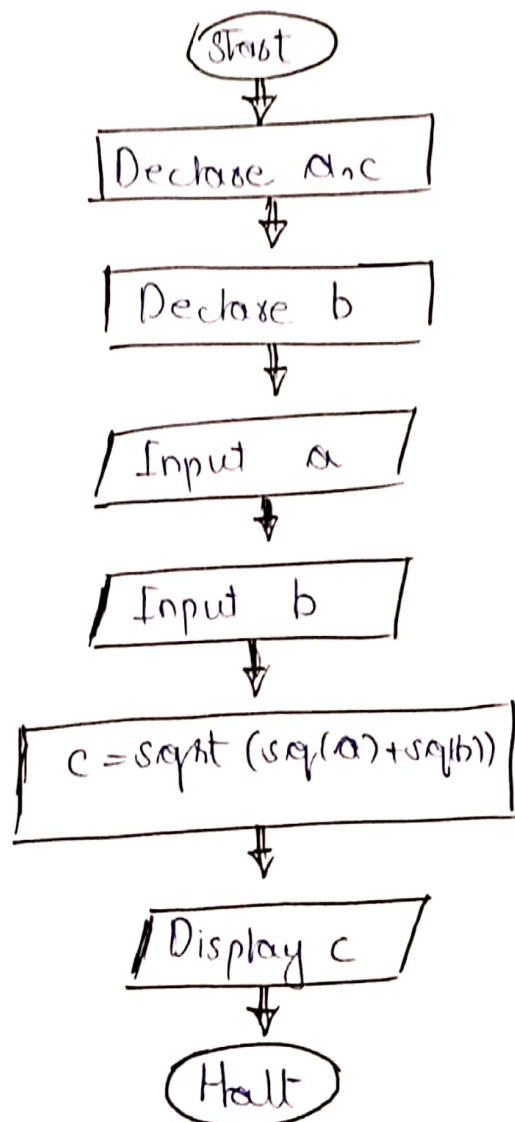
(1)

Roll Number 22F-3441.

### Pseudocode 1:-

1. Declare a, c
2. Declare b.
3. Input a.
4. Input b.
5.  $c = \text{Sqrt}(\text{sq}(a) + \text{sq}(b))$
6. Display c.
7. Halt.

∴ #include <cmath>  
library is used  
for sqrt() function.



# Pseudocode 2:-

(2)

1. Declare A, S, M, D.
2. Declare int 1, int 2.      • Input int 1, int 2.
3. Declare letter, choice
4. Print "Enter a letter"
5. Input letter
6. If (letter == A || letter == S || letter == M || letter == D)
- 6.1 Input choice
7. Else
- 7.1 Print "An inappropriate input has taken"
8. If (choice == 1)
- 8.1 A = int 1 + int 2
- Else 8.2 display "A"
9. If (choice == 2)
- 9.1 If int 2 > int 1
- 9.1.1 S = int 2 - int 1
- 9.2 Else if int 1 > int 2
- 9.2.1 S = int 1 - int 2
- Else 9.3 Display "S"
10. If (choice == 3)
- 10.1 M = int 1 \* int 2
- 10.2 Display "M"
- Else
11. If (choice == 4)
- 11.1 If int 2 > int 1
- 11.1.1 D = int 2 / int 1

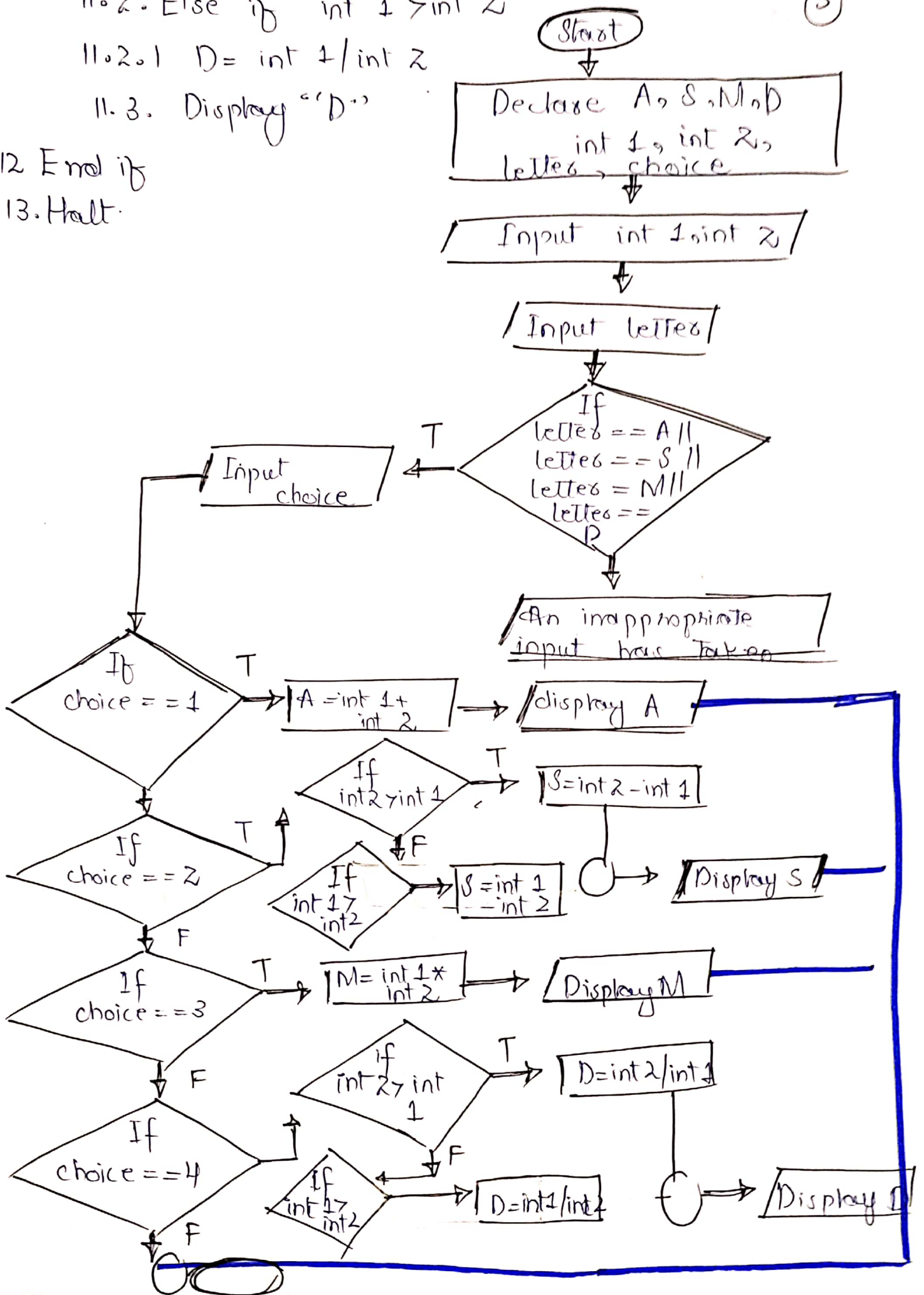
11.2. Else if  $\text{int } 1 > \text{int } 2$

11.2.1  $D = \text{int } 1 / \text{int } 2$

11.3. Display "D"

12. End if

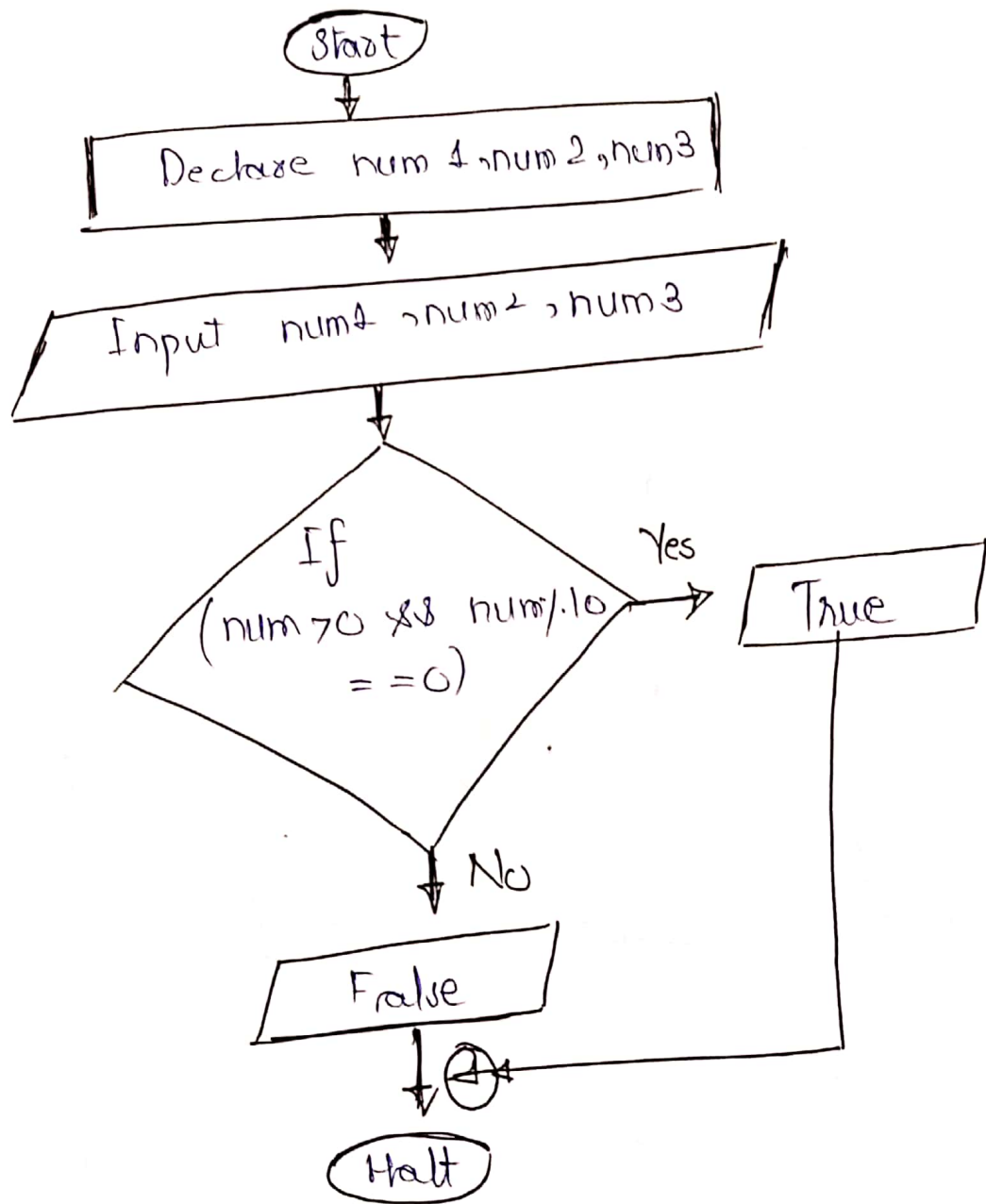
13. Halt.



## Pseudocode 3:-

(4)

1. Declare num1, num2, num3.
2. Input num1, num2, num3.
3. If (num > 0 && num % 10 == 0)
  - 3.1 Display "True"
4. Else
  - 4.1 Display "False"
5. Halt.



#### ④ Pseudocode 4:-

⑤

① declare grades, average

② count = 0, sum = 0

③ While (count < 5)

3.1. Input grades

3.2. count = count + 1

3.3 sum = sum + grades.

④ average = sum / 5

⑤ Display average

⑥ Halt.

(b) ① declare M1, M2, M3, M4, Sum.

② declare average, grade

③ Input M1, M2, M3, M4.

④ Sum = M1 + M2 + M3 + M4

⑤ average = Sum / 400

⑥ If (average >= 50)

6.1. Display "Passing"

⑦ Else

7.1 Display "Failing"

⑧ Halt.

(c) 1. Declare children = 28.

2. Declare girls<sup>no</sup>, boys<sup>no</sup>

3. girls no = (28 \* 3) / 4

4. boys no = (28 \* 1) / 4

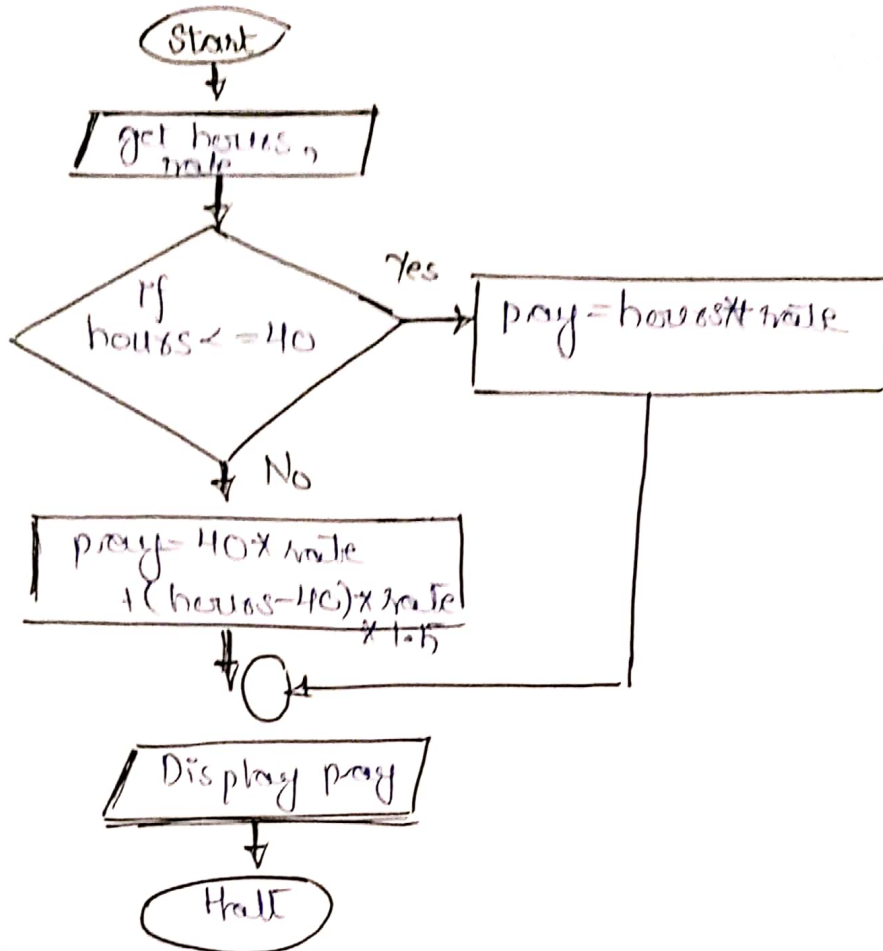
5. Display girls no. ⑥ Display boys no. ⑦ Halt.



## Pseudocode 3:-

num 1, num 2, num 3.

(5)



(6)

(6) 1) Declare num 1, num 2.

(2) Input num 1, num 2.

(3) Declare count = 1

(4) Declare result = 0

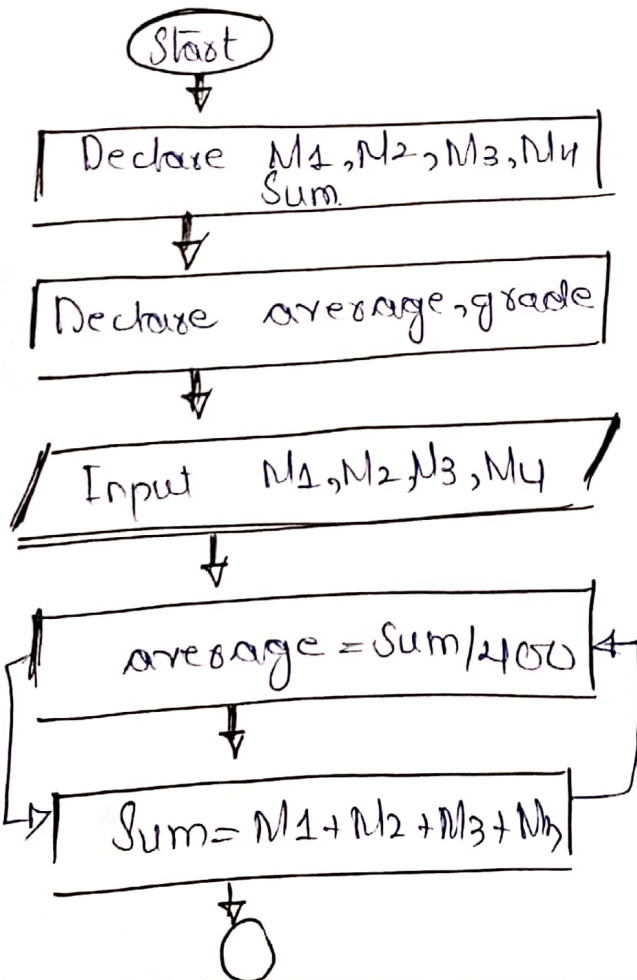
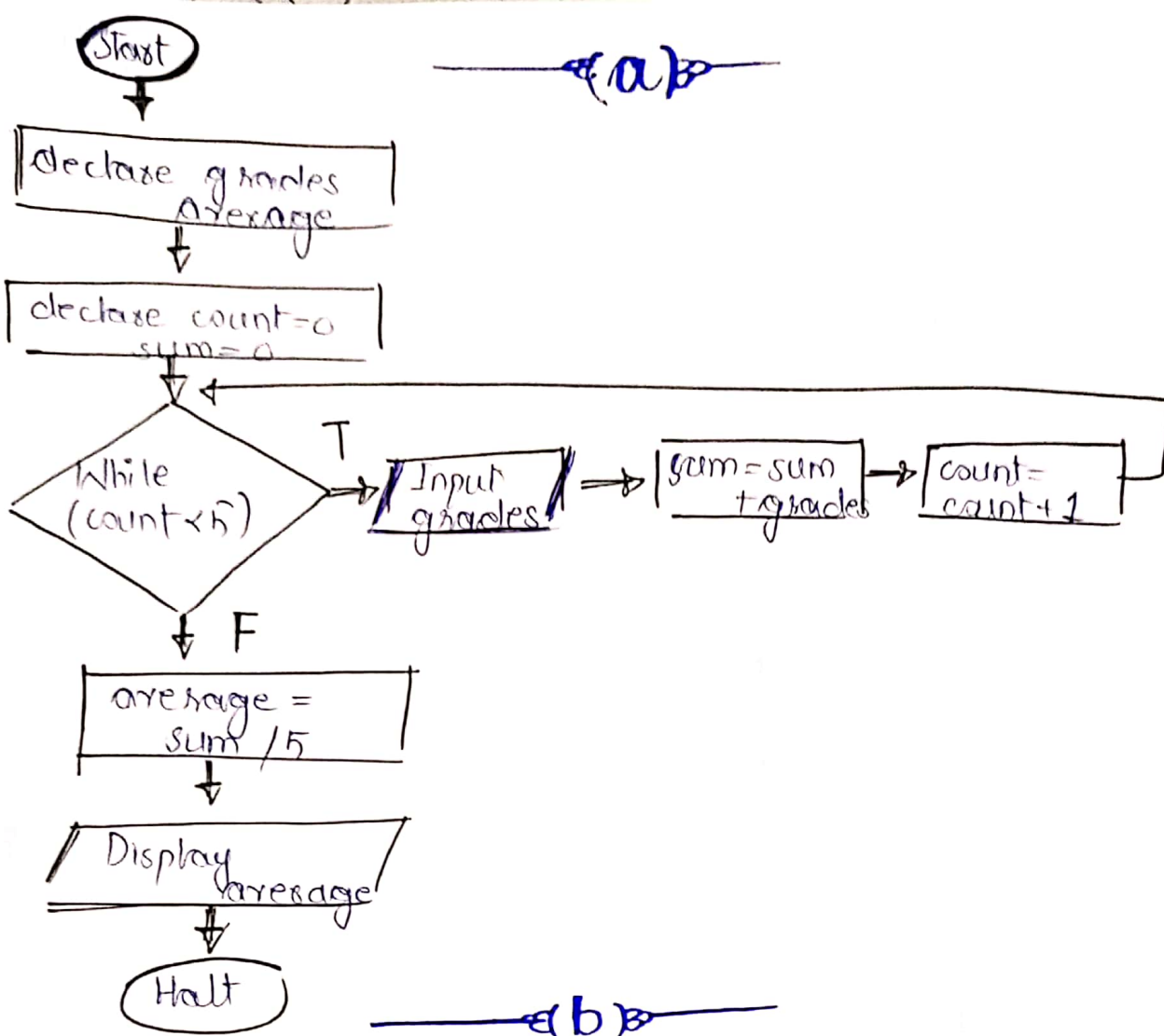
(5) While (count <= num 2)

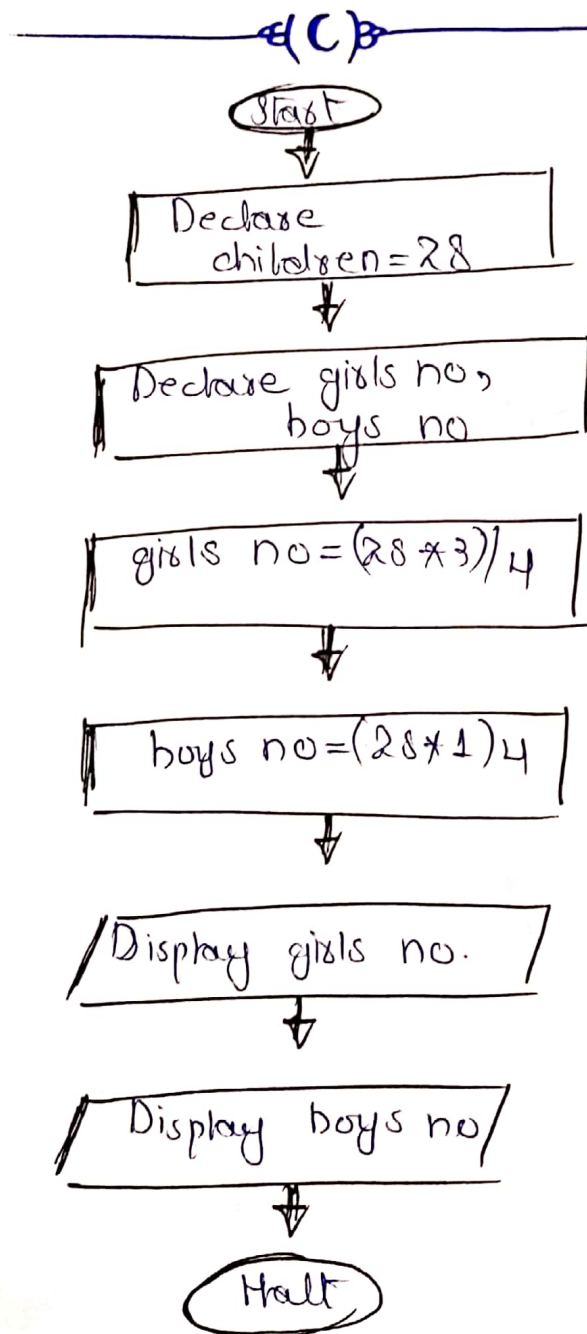
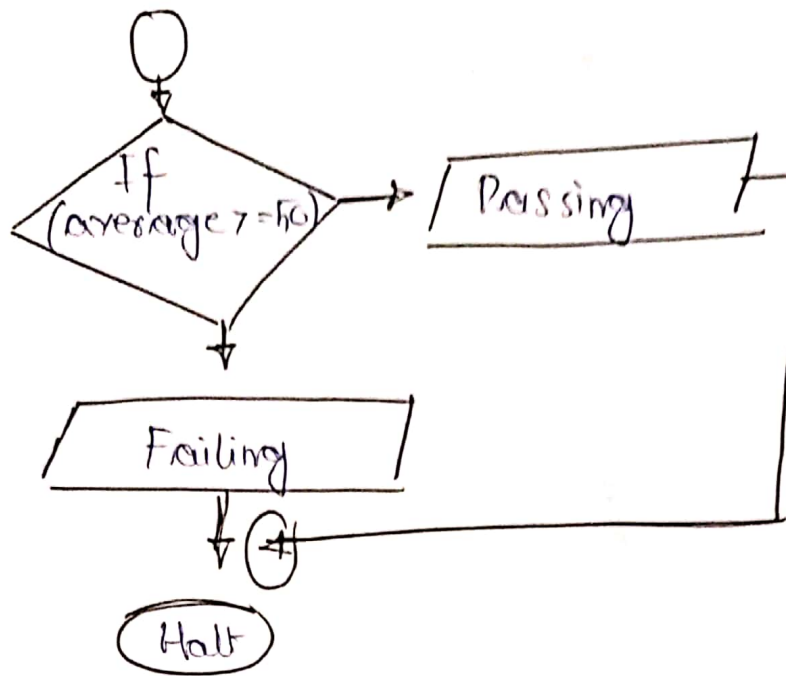
5.1 result = result + num 1

5.2 count = count + 1.

(6) Display "result"

(7) Halt.

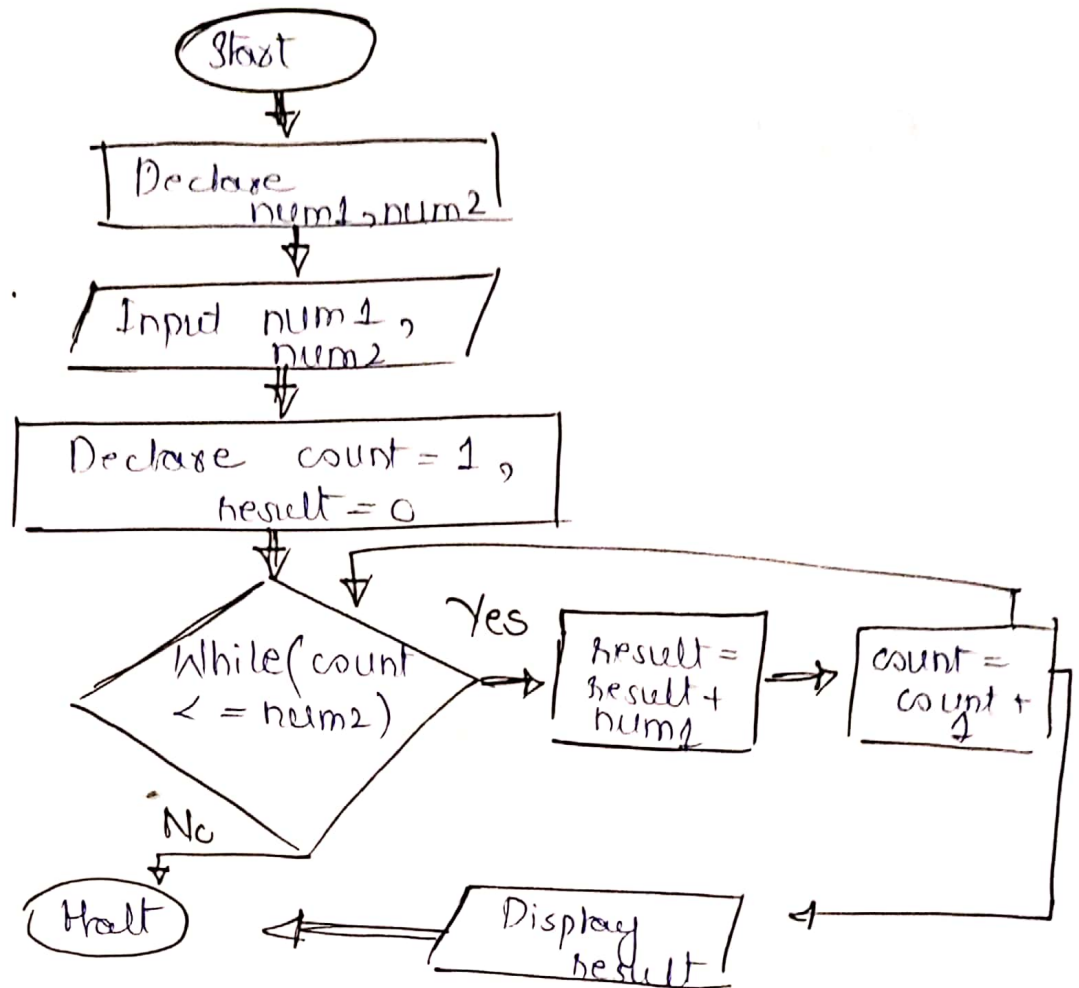






# FlowChart 6:-

9



① Start

② Declare num

③ Declare temp=0, count=2

④ Input num.

⑤ If (num == 0 || num == 1)

5.1. Print "Not Prime"

⑥ Else if (count <= num/2)

6.1 If (num % count == 0)

6.1.1 temp = temp + 1

6.1.2 count = count + 1

⑦ If (temp == 0)

7.1 Print "Prime Number"

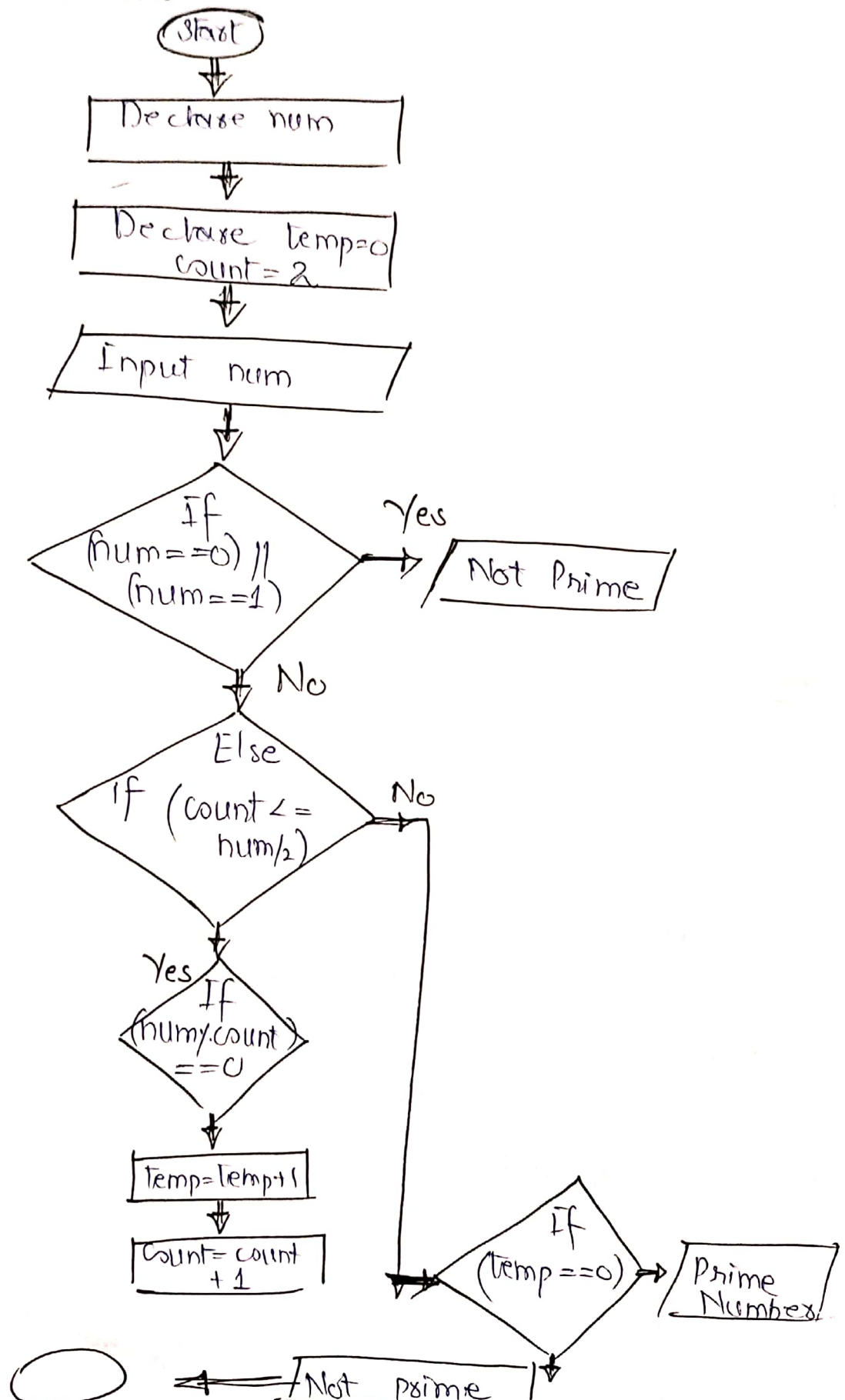
8. Else

8.1 Print "Not Prime"

(8)

(19)

FlowChart 11:-



# Pseudocode 10:-

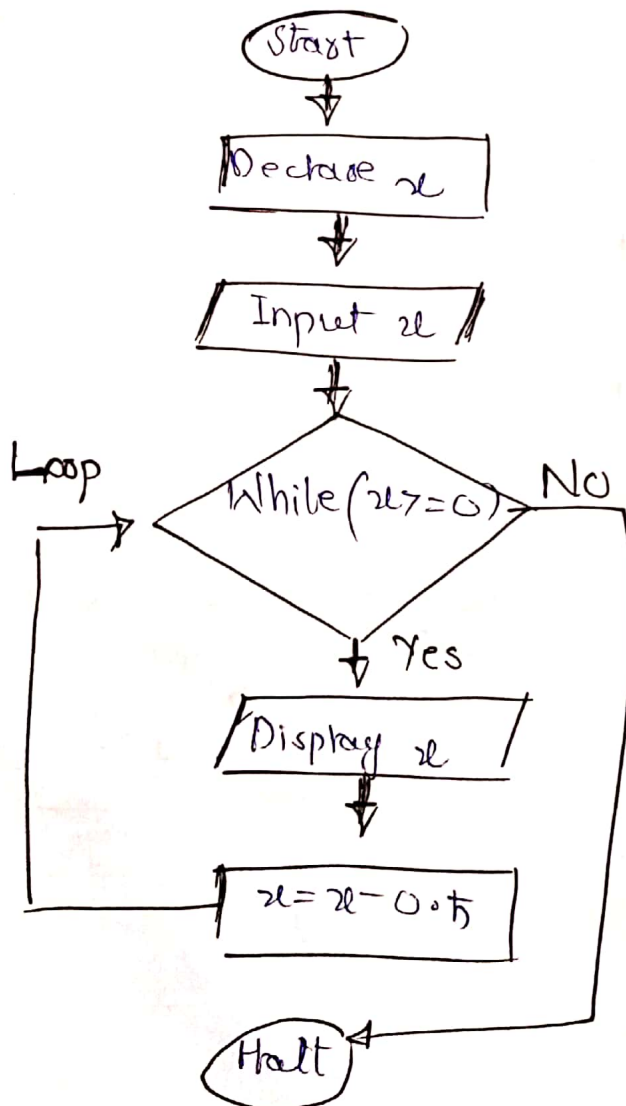
13

11

## Pseudocode 8:-

- ① Start
- ② Declare  $x$
- ③ Input  $x$ .
- ④ While ( $x \geq 0$ )
  - 4.1 Display  $x$
  - 4.2  $x = x - 0.5$

⑥ Halt.



# Pseudocode 9:-

(12)

① Start

② Declare integers, odd

③ Input integers

③ While ( $\text{integers} \leq 25$ )

3.1

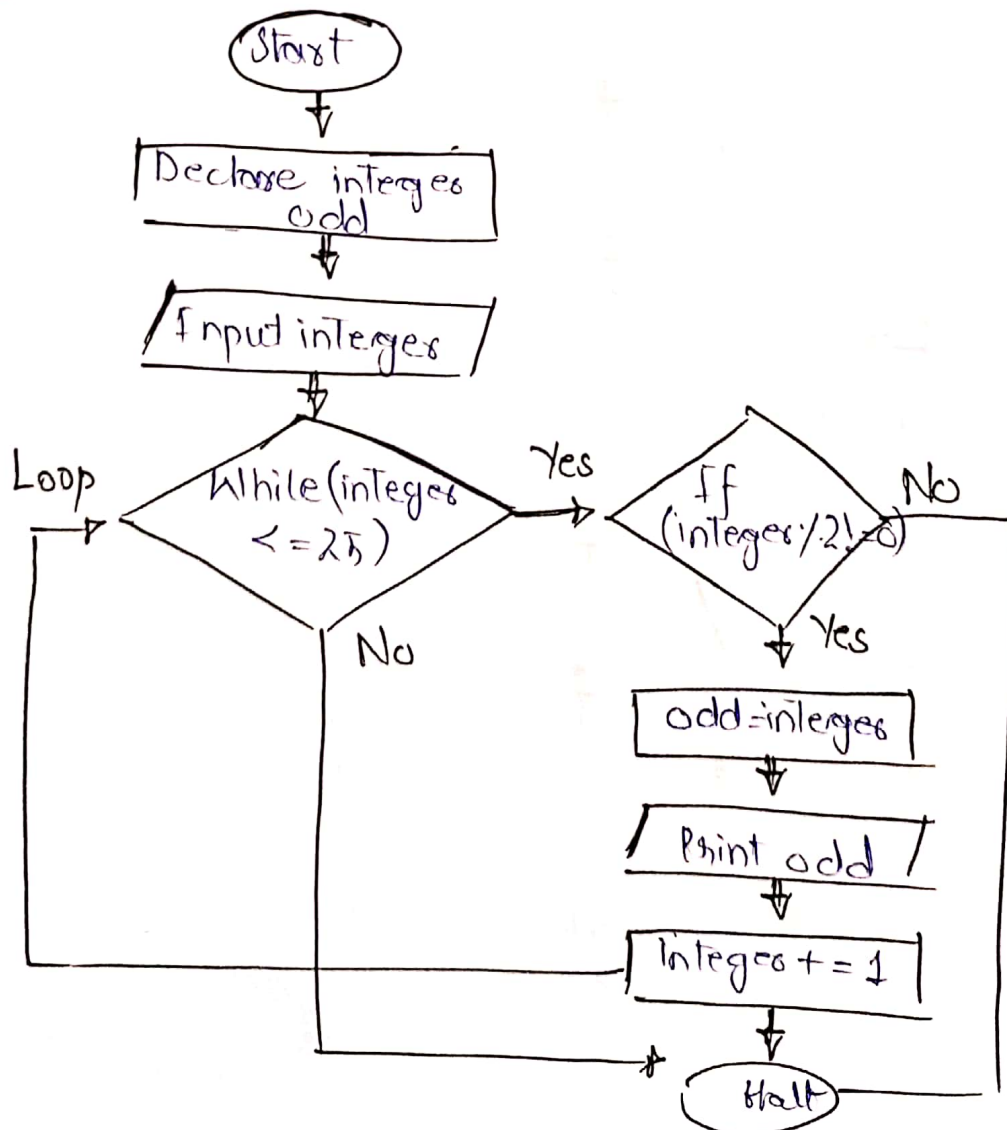
If ( $\text{integers} \% 2 \neq 0$ )

3.2 odd = integers

3.3. Print odd

3.4. integers = integers + 1

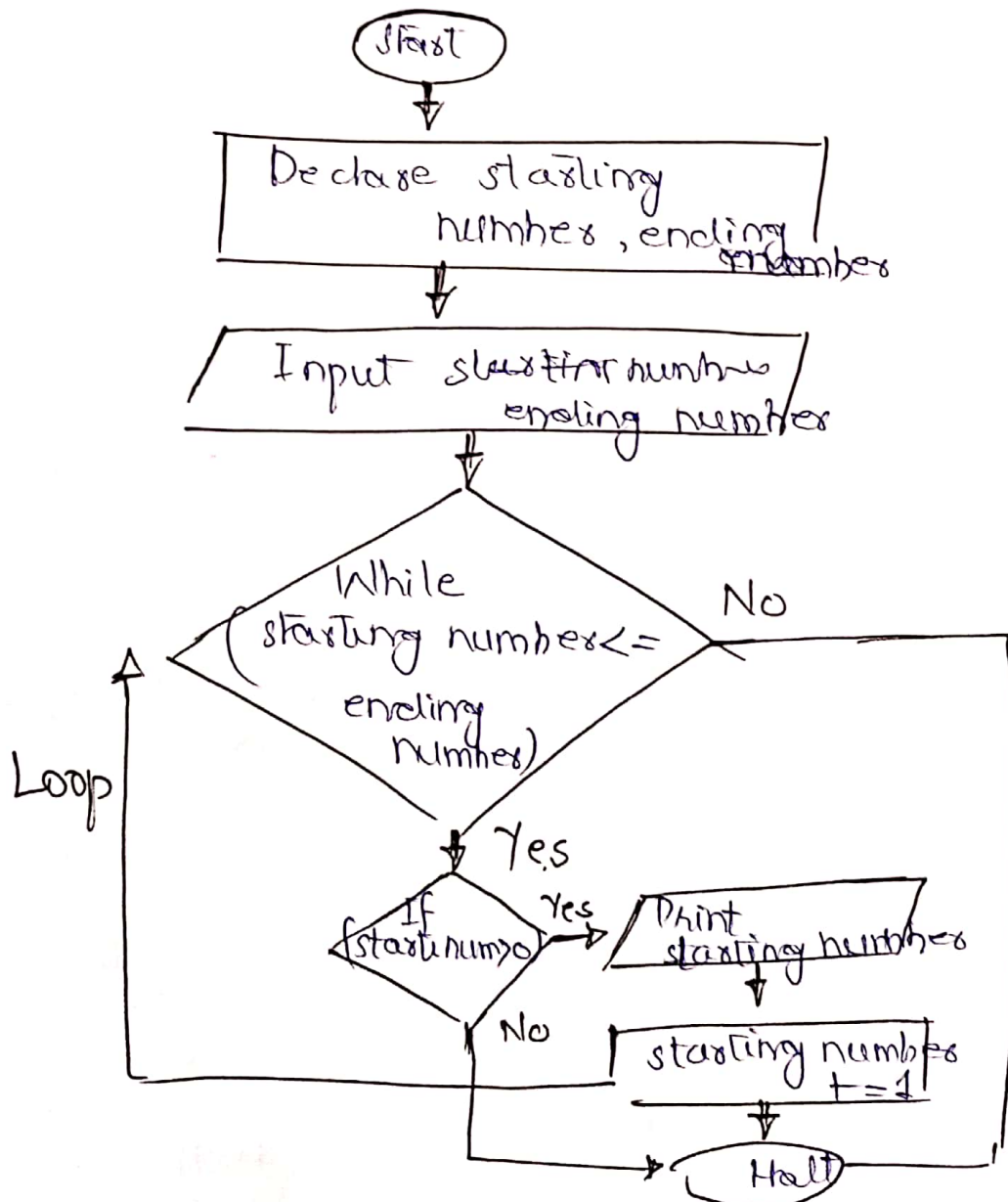
④ Halt.



# Pseudocode 10:-

(13)

- (1) Start
- (2) Declare starting number
- (3) Declare ending number.
- Input starting number, ending number
- (4) While (starting number  $\leq$  ending number)
  - 4.1 If (starting number  $> 0$ )
    - 4.1.1 Print starting number
    - 4.1.2. starting number = starting number + 1
- (5) Halt.





# Pseudocode :-

- (1) Declare  $a, b, \text{max}, \text{gcd}$
- (2) Input  $a, b$ .
- (3) If  $(a > b)$   
3.1  $\text{max} = a$
- (4) Else if  $(b > a)$   
4.1  $\text{max} = b$
- (5) While  $(a \neq b)$   
5.1 If  $(a \% \text{max} == 0 \ \&\& \ b \% \text{max} == 0)$   
5.1  $\text{gcd} = (a - b, b)$
- (6) Display  $\text{gcd}$
- (7) Halt

