

Assignment Number:- 1

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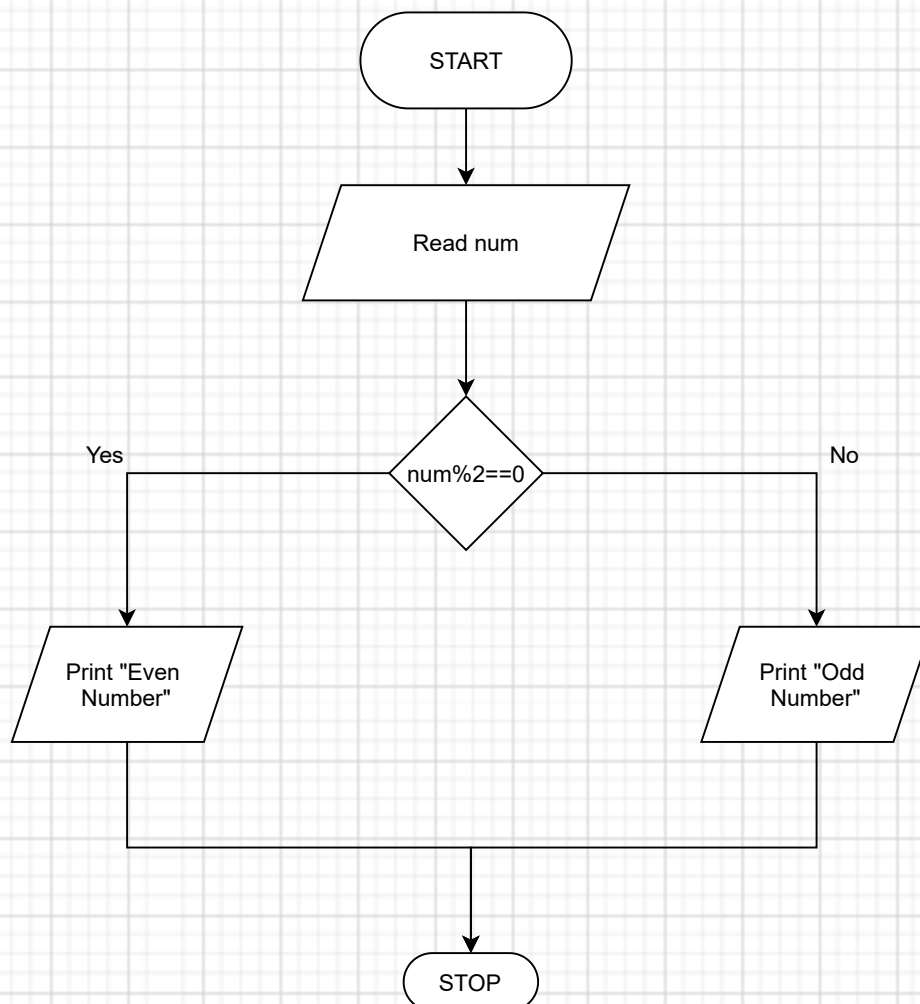
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Q.1. Write an algorithm and Flowchart for Even / Odd

Algorithm:-

1. START
2. Get a number from user num
3. if($\text{num} \% 2 == 0$) Print Even Number
4. else Print Odd Number
5. STOP

Flow Chart:-

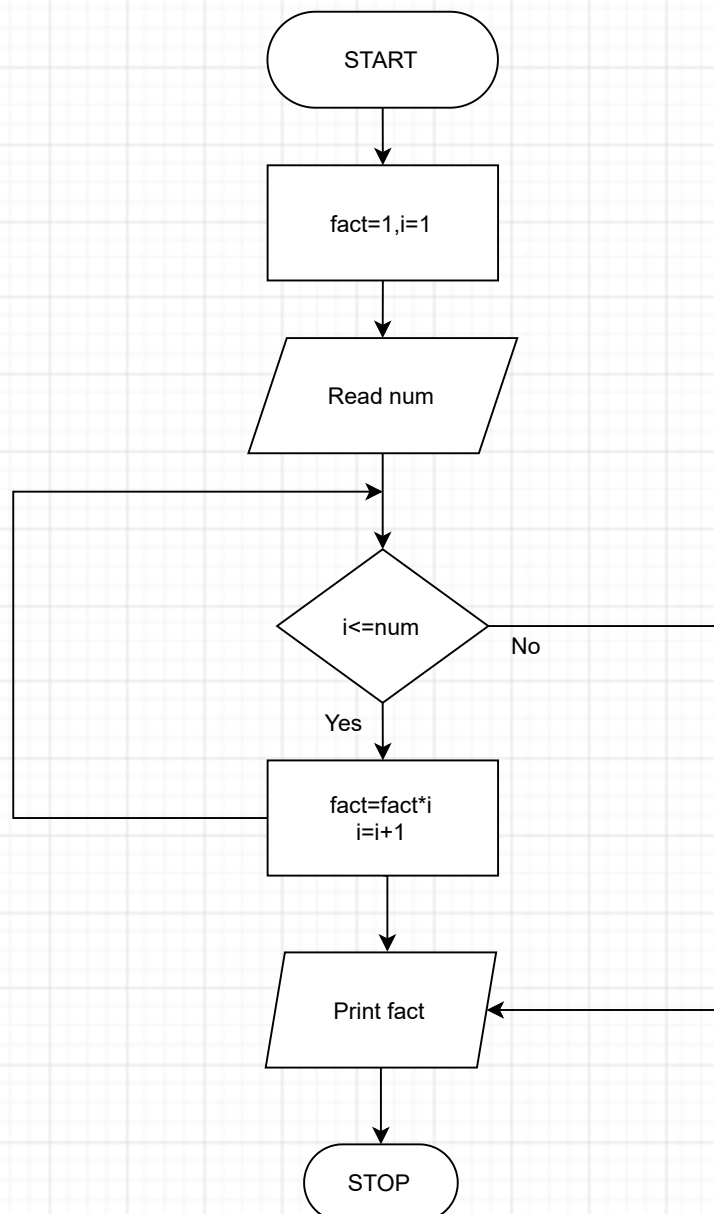


Q.2. Write an algorithm and Flowchart for Factorial of a number

Algorithm:-

1. START
2. Initialize $f = 1$ and $i = 1$
3. Get a number from user num
4. Repeat until ($i \leq \text{num}$)
5. $\text{fact} = \text{fact} * i$
6. $i = i + 1$
7. Print fact
8. STOP

Flow Chart:-

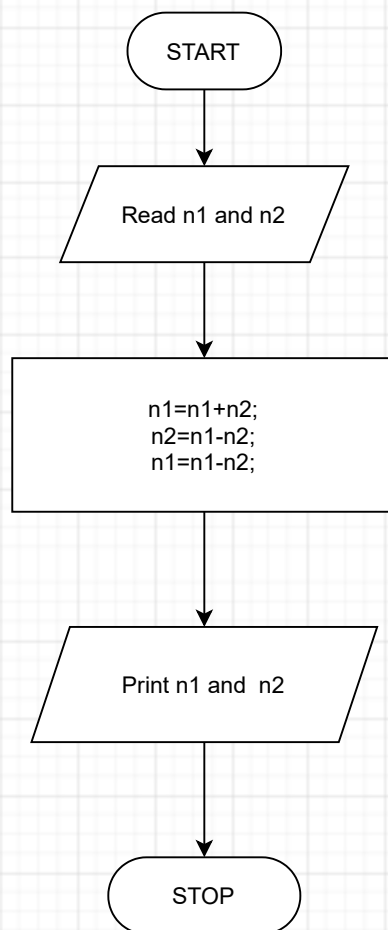


Q.4. Write an algorithm and Flowchart to Swap number without using third variable

Algorithm:-

1. START
2. Get two number from user n1 and n2
3. $n1 = n1 + n2$
4. $n2 = n1 - n2$
5. $n1 = n1 - n2$
6. Print n1 and n2
7. STOP

Flow Chart:-

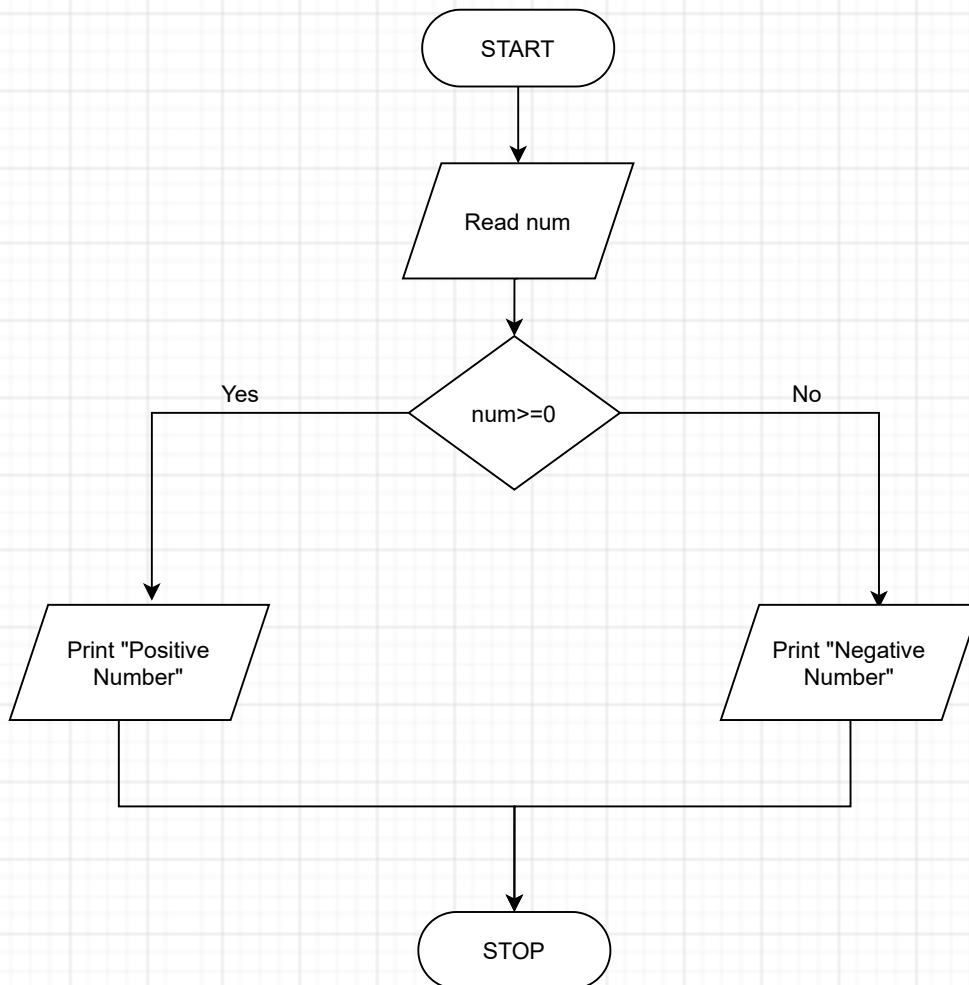


Q.5. Write an algorithm and Flowchart to know the given number is positive or negative

Algorithm:-

1. START
2. Get a number from user num
3. if (num \geq 0) Print Postive Number
4. else Print Negative Number
5. STOP

Flow Chart:-

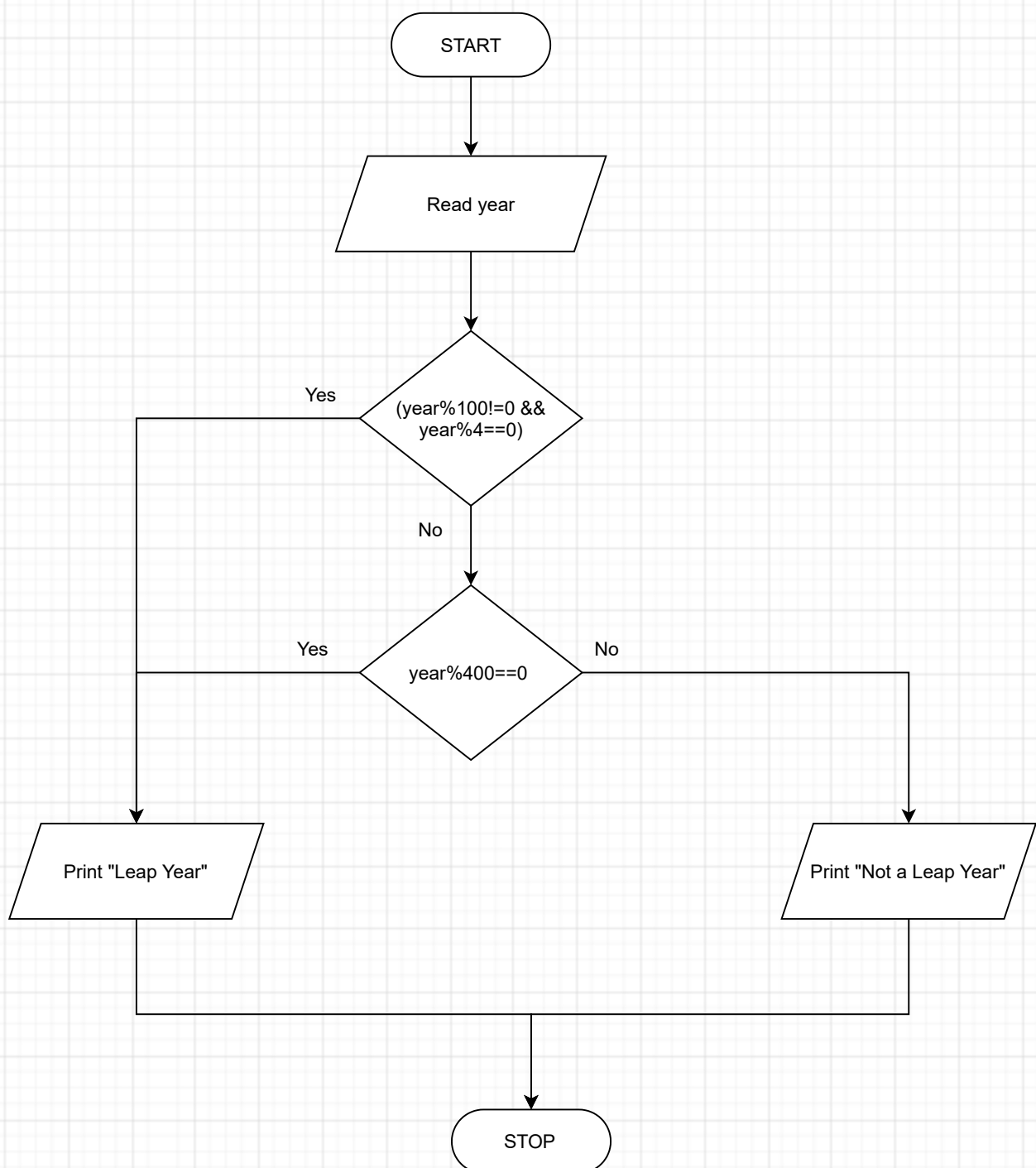


Q.6. Write an algorithm and Flowchart to find the given year is a leap year or not

Algorithm:-

1. START
2. Get a input from user year
3. if $(\text{year} \% 100 \neq 0 \ \&\& \ \text{year} \% 4 == 0) \ || \ \text{year} \% 400 == 0$ Print Leap Year
4. else Print Not a Leap Year
5. STOP

Flow Chart:-

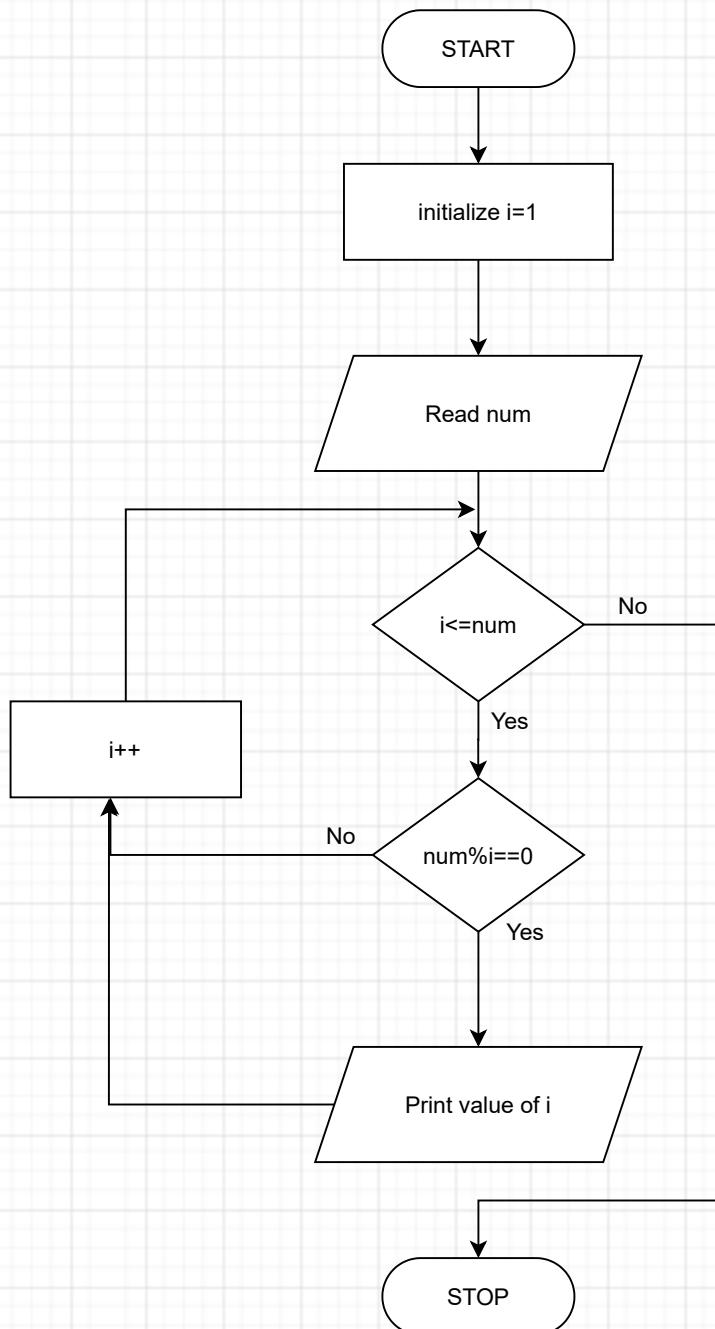


Q.9. Write an algorithm and Flowchart to find the factors of a given number

Algorithm:-

1. START
2. Initialize $i=1$
3. Get a input from user num
4. check $\text{num}\%i==0$ if true print i and increment value of i
5. repeat step 4 until $i\leq\text{num}$
6. STOP

Flow Chart:-

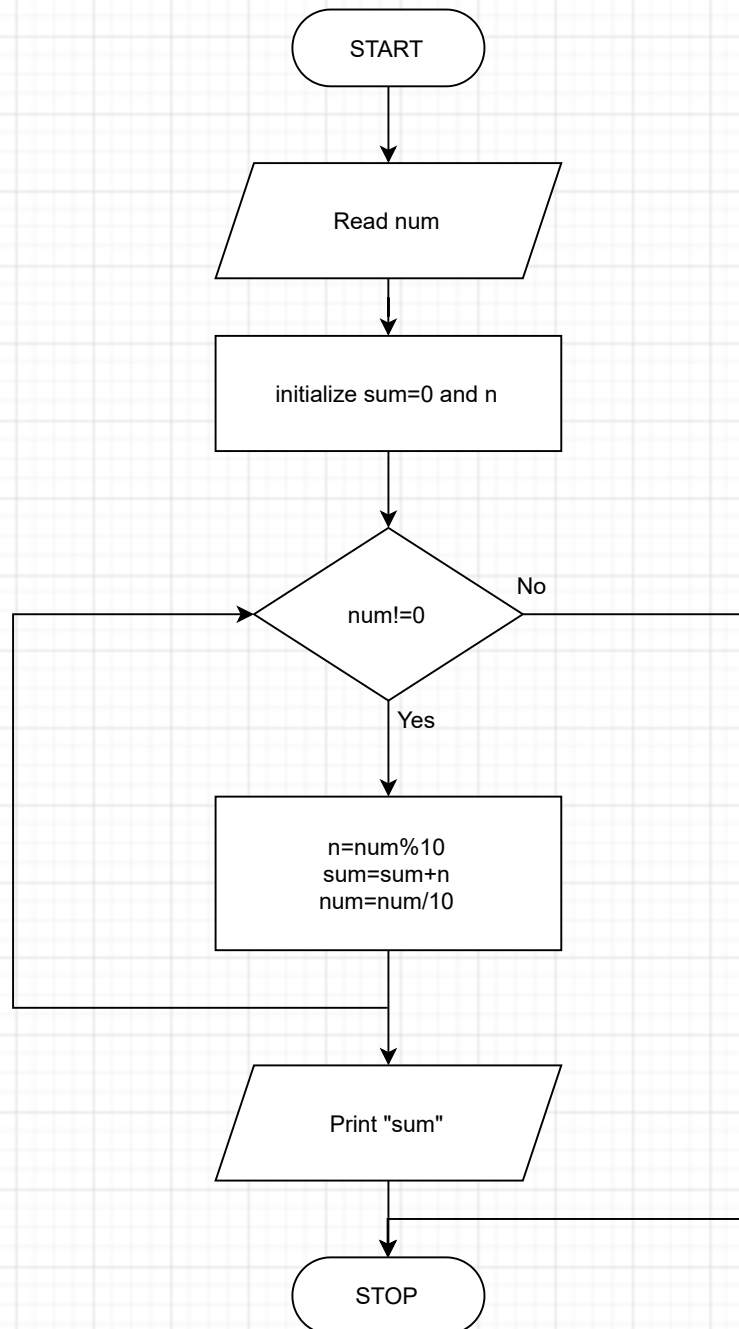


Q.10. Write an algorithm and Flowchart to find sum of the digit of a given number

Algorithm:-

1. START
2. Initialize sum=0 and n
3. Get a input from user num
4. $n = \text{num} \% 10$
5. $\text{sum} = \text{sum} + n$
6. $\text{num} = \text{num} / 10$
7. repeat step 4,5 and 6 until $\text{num} \neq 0$
8. Print sum
9. STOP

Flow Chart:-

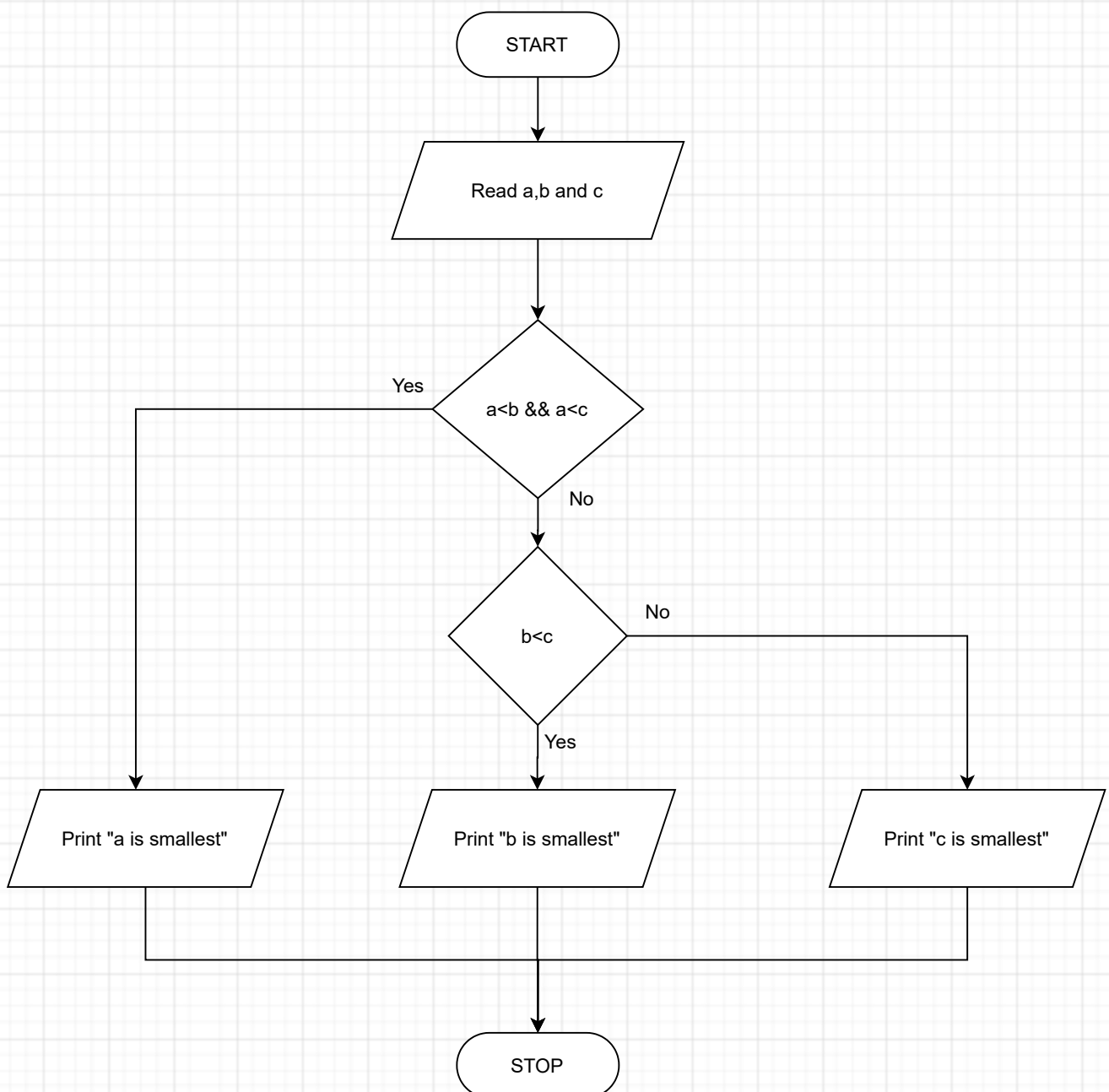


Q.11. Write an algorithm and Flowchart to find smallest of three digit

Algorithm:-

1. START
2. Get a input from user n1,n2 and n3
3. if ($a < b$ && $a < c$) print a is smallest
4. if above is false check ($b < c$) print b is smallest
5. else print c is smallest
6. STOP

Flow Chart:-

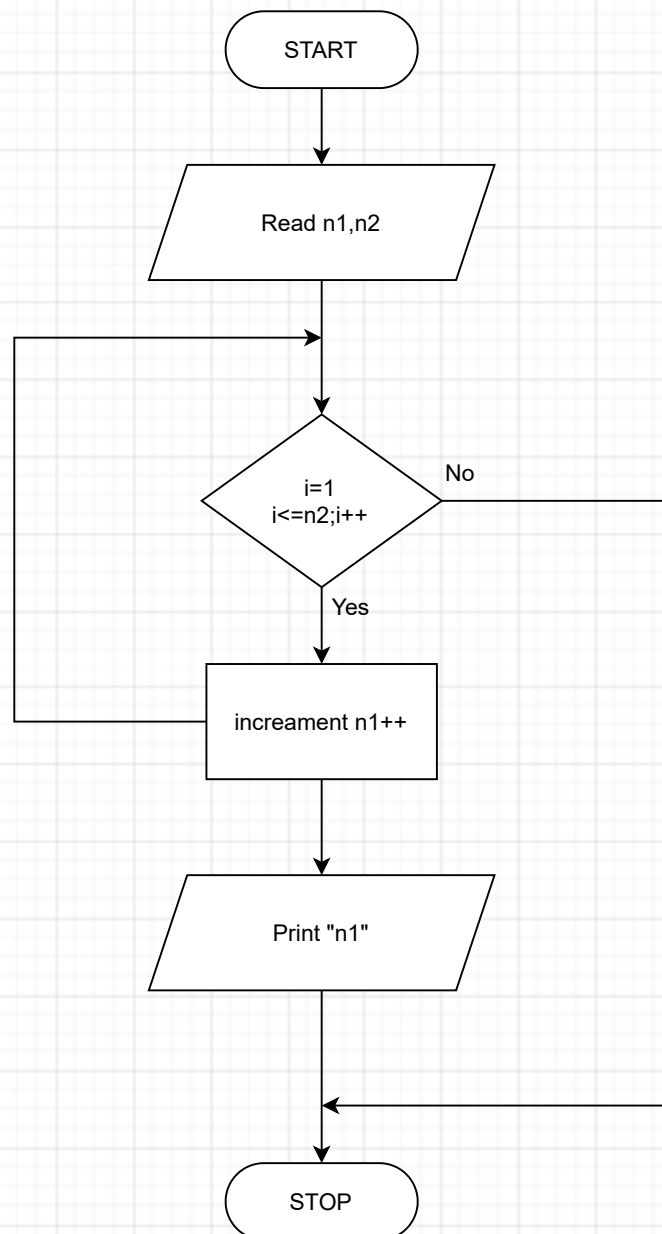


Q.12. Write an algorithm and Flowchart to add two number without arithmetic operators

Algorithm:-

1. START
2. Get a input from user n1 and n2
3. Initialize i=1
4. check $i \leq n2$ if true then increment $n1++$
5. increment $i++$ until above condition false
6. print n1
7. STOP

Flow Chart:-

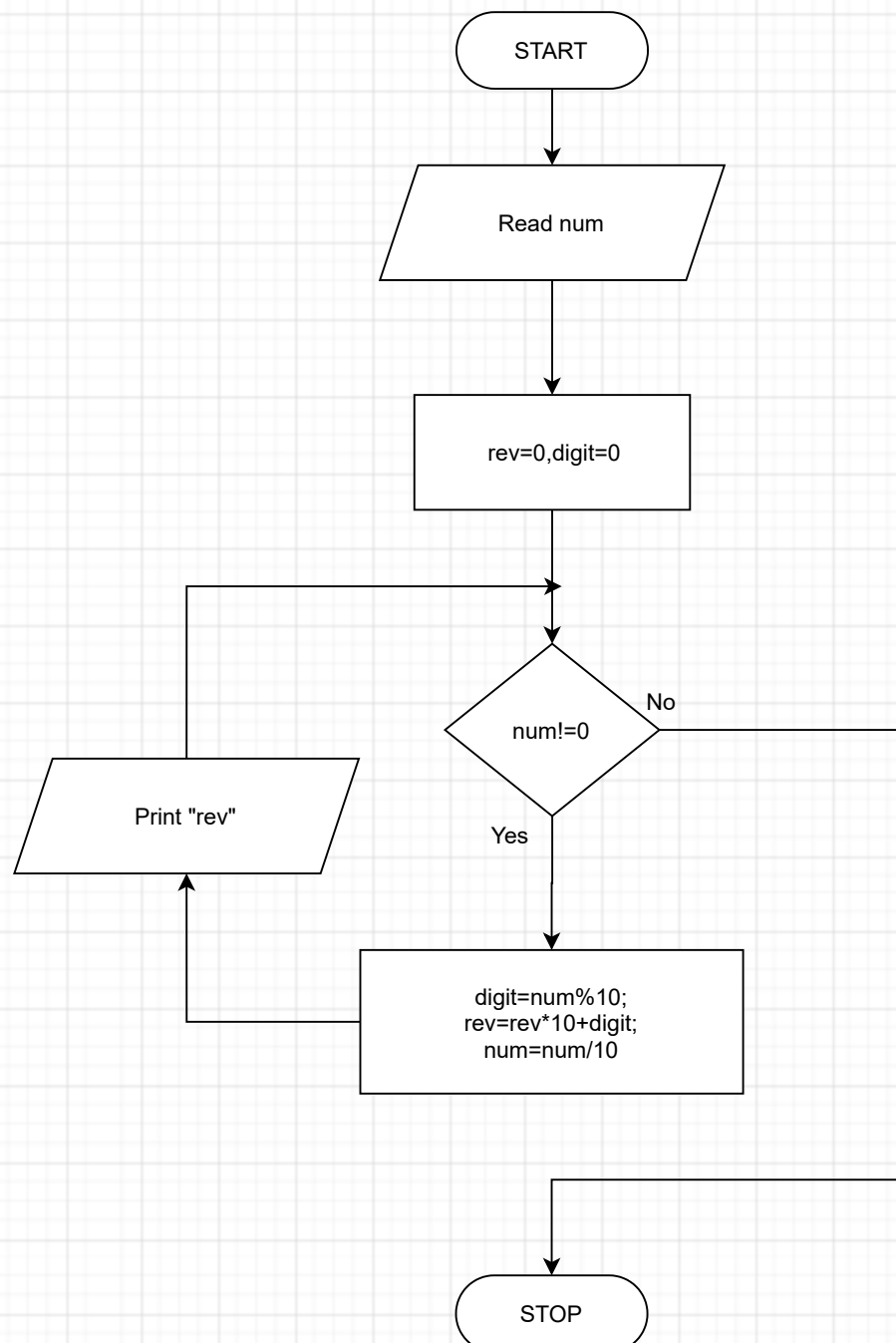


Q.13. Write an algorithm and Flowchart to Reverse a given number

Algorithm:-

1. START
2. Initialize $rev=0$ and $digit=0$
3. Get a input from user num
4. $digit=num\%10$
5. $rev=rev*10+digit$
6. $num=num/10$
7. Print rev
8. repeat step 4,5 and 6 until $num!=0$
9. STOP

Flow Chart:-

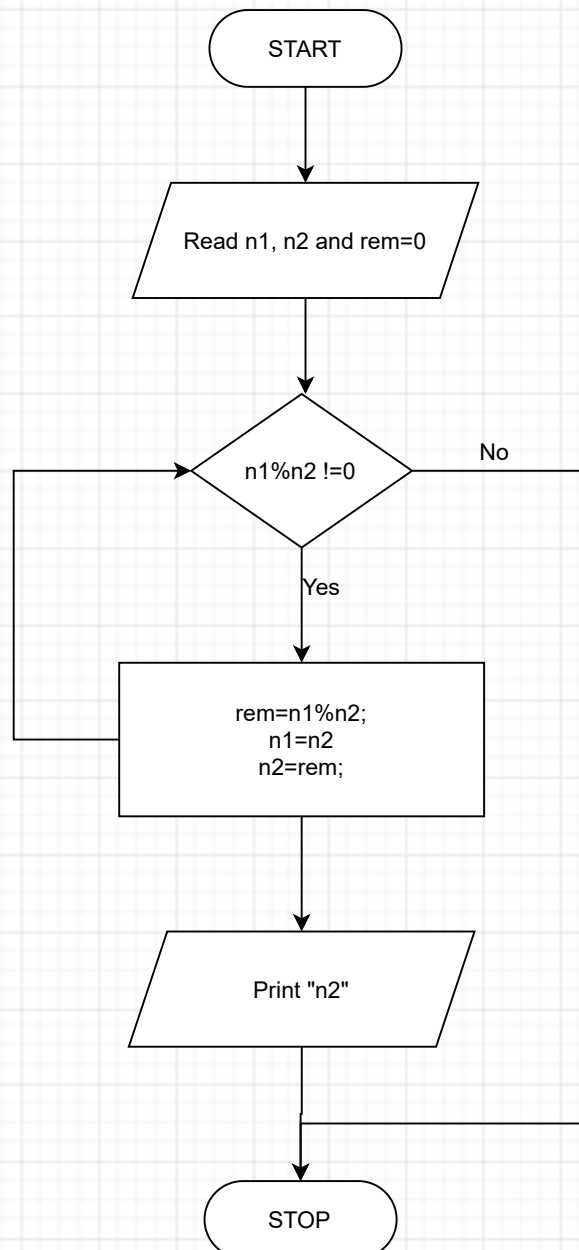


Q.14. Write an algorithm and Flowchart to find the GCD of two numbers

Algorithm:-

1. START
2. Initialize rem=0
3. Get two input from user n1 and n2
4. $rem = n1 \% n2$
5. $n1 = n2$
6. $n2 = rem$
7. repeat step 4,5 and 6 until $n1 \% n2 \neq 0$
8. Print n2
9. STOP

Flow Chart:-

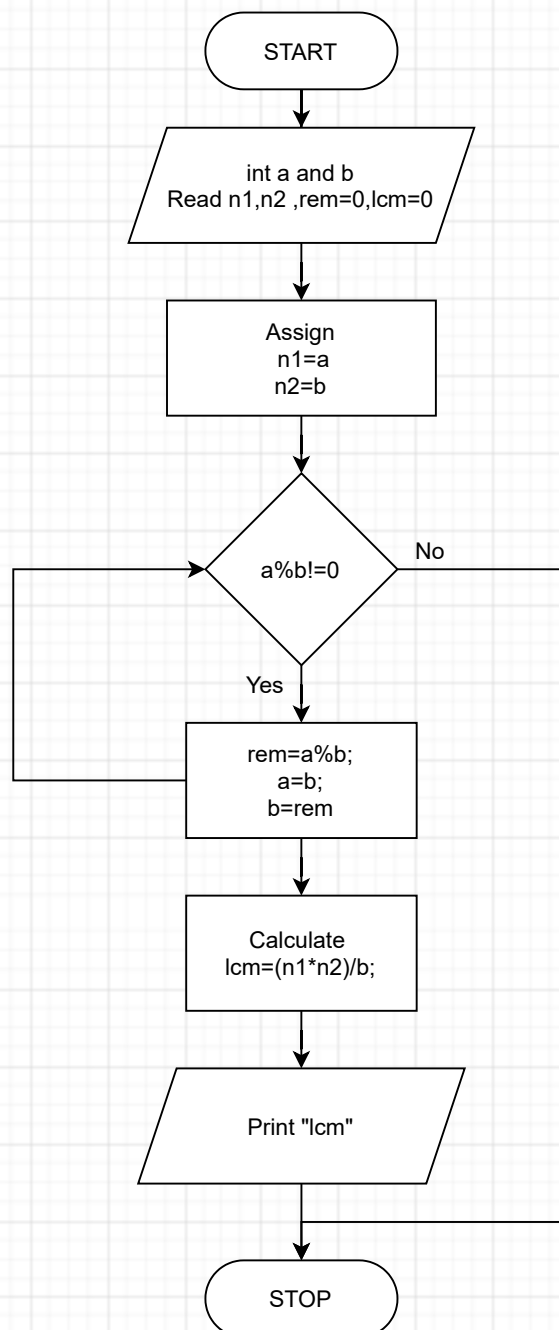


Q.15. Write an algorithm and Flowchart to find the LCM of two numbers

Algorithm:-

1. START
2. Initialize rem=0, lcm=0, a and b
3. Get two input from user n1 and n2
4. Assign n1=a and n2=b
5. $rem = a \% b$
6. $a = b$
7. $b = rem$
8. repeat step 4,5 and 6 until $a \% b \neq 0$
9. $lcm = (n1 * n2) / b$
10. Print lcm
11. STOP

Flow Chart:-

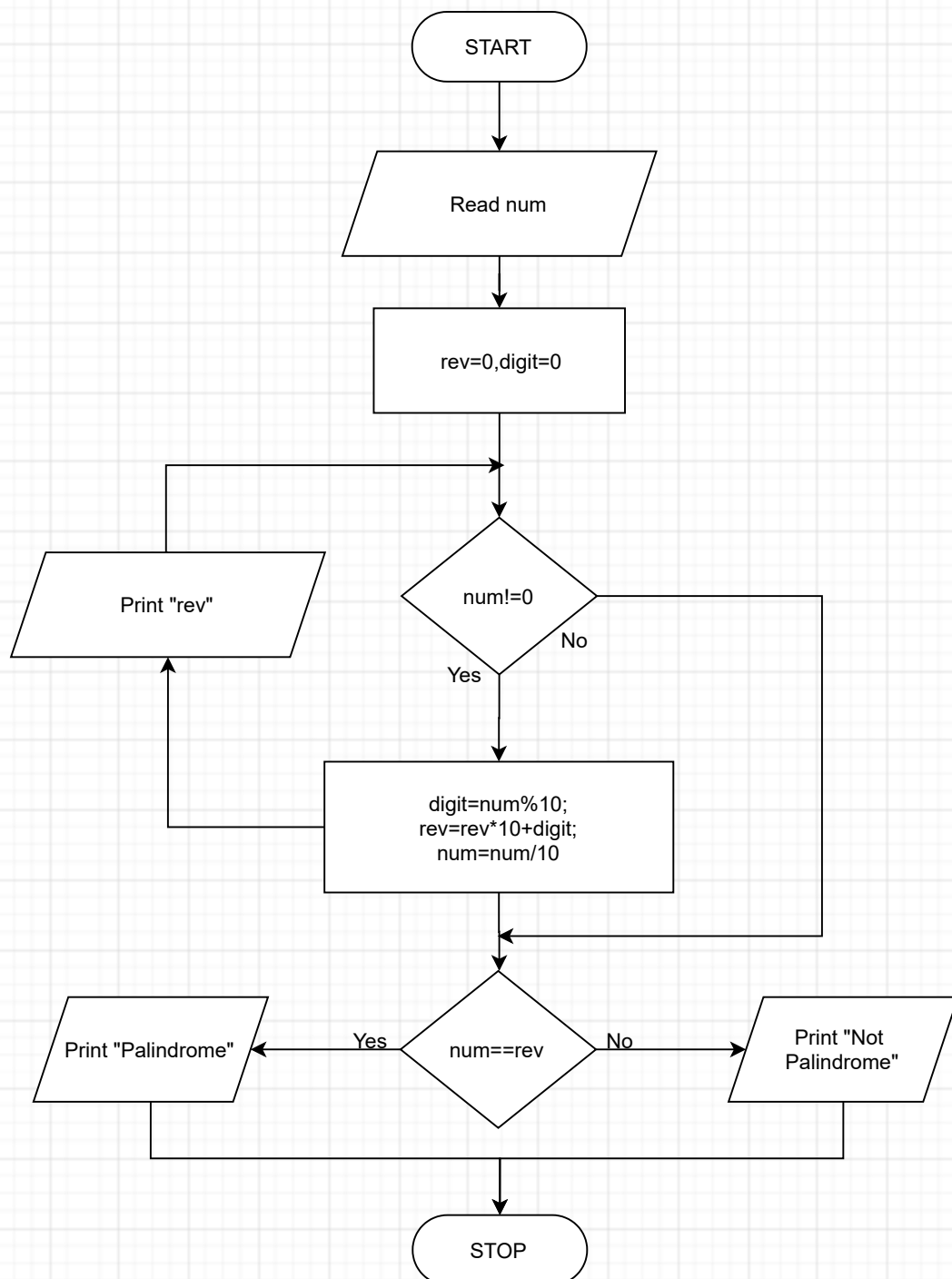


Q.17. Write an algorithm and Flowchart to find a given number is Palindrome or not

Algorithm:-

1. START
2. Initialize rev=0 and digit=0
3. Get a input from user num
4. $\text{digit} = \text{num} \% 10$
5. $\text{rev} = \text{rev} * 10 + \text{digit}$
6. $\text{num} = \text{num} / 10$
7. Print rev
8. repeat step 4,5 and 6 until $\text{num} \neq 0$
9. if $\text{num} == \text{rev}$ print Palindrome
10. else print Not Palindrome
11. STOP

Flow Chart:-

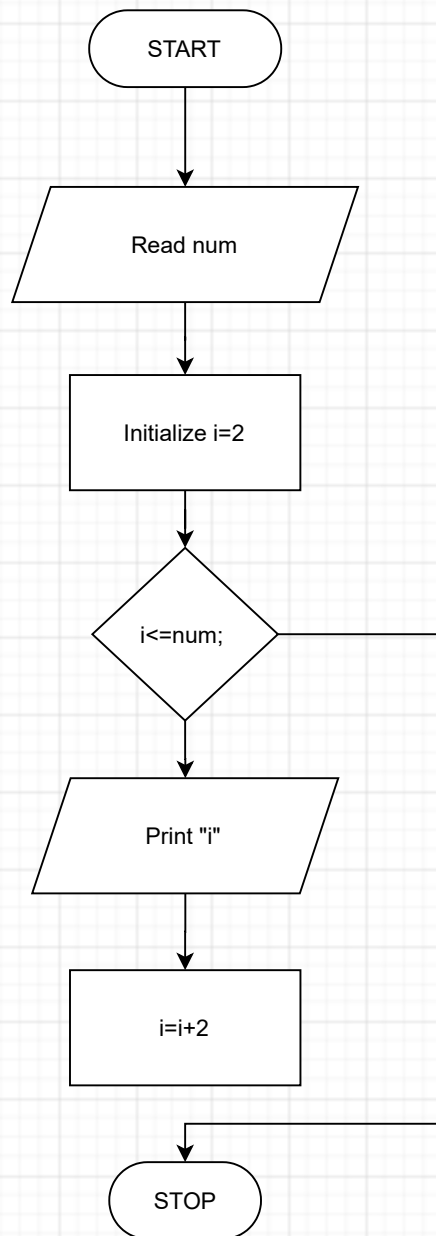


Q.19. Write an algorithm and Flowchart to print the Even Series

Algorithm:-

1. START
2. Initialize $i=2$
3. Get a input from user num
4. $i \leq \text{num}$
5. print i
6. $i=i+2$ until $i \leq \text{num}$
7. STOP

Flow Chart:-



Q.20. Write an algorithm and Flowchart to print the Odd Series

Algorithm:-

1. START
2. Initialize $i=1$
3. Get a input from user num
4. $i \leq \text{num}$
5. print i
6. $i=i+2$ until $i \leq \text{num}$
7. STOP

Flow Chart:-

