Assignment Number:- 1

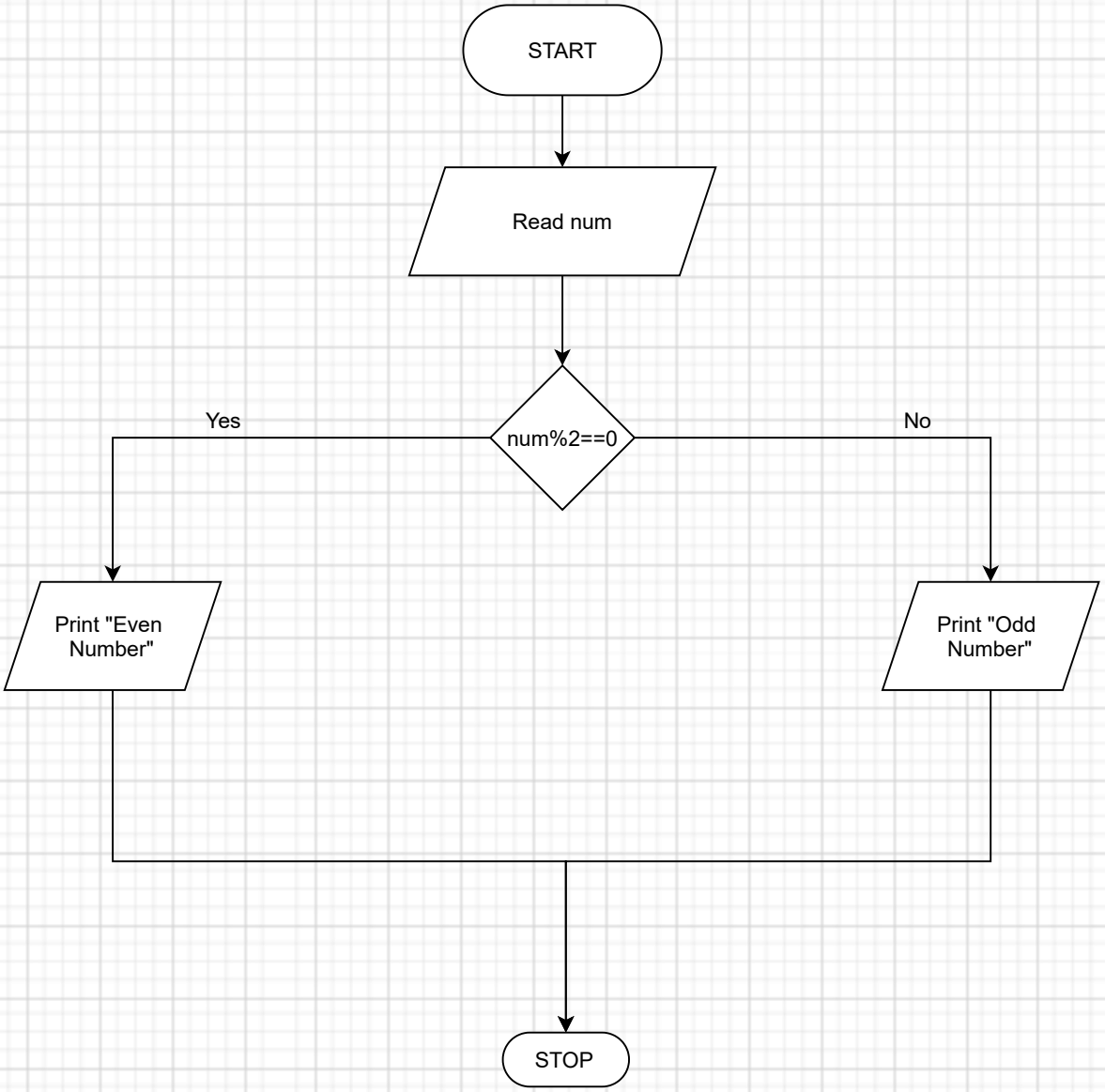
Name:- Harshit Singh Chandel (PG-DAC KHARGHAR)

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

Algorithm:-

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

Flow Chart:-

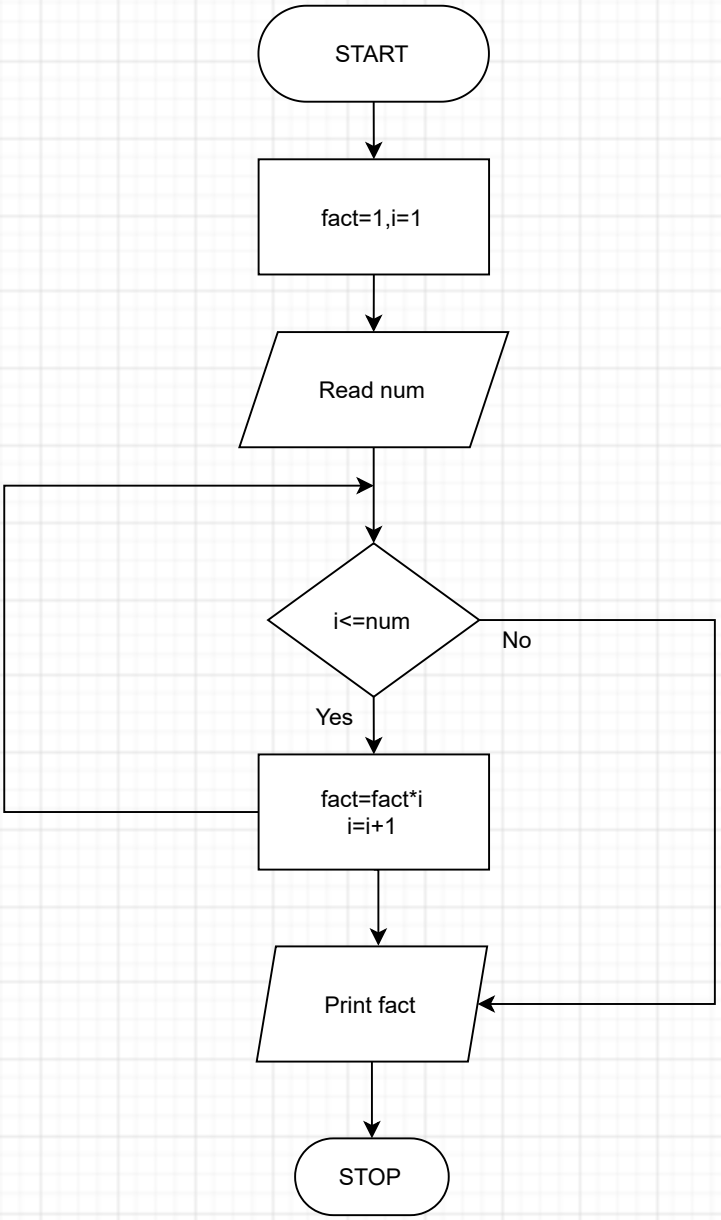


Q.2. Write an algorithm and Flowchart for Factorial of a number

Algorithm:-

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

Flow Chart:-

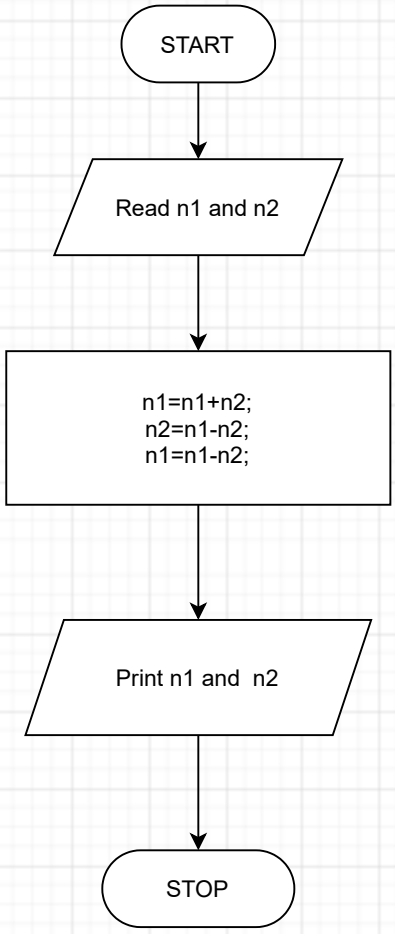


Q.4. Write an algorithm and Flowchart to Swap number without using third variable

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:-

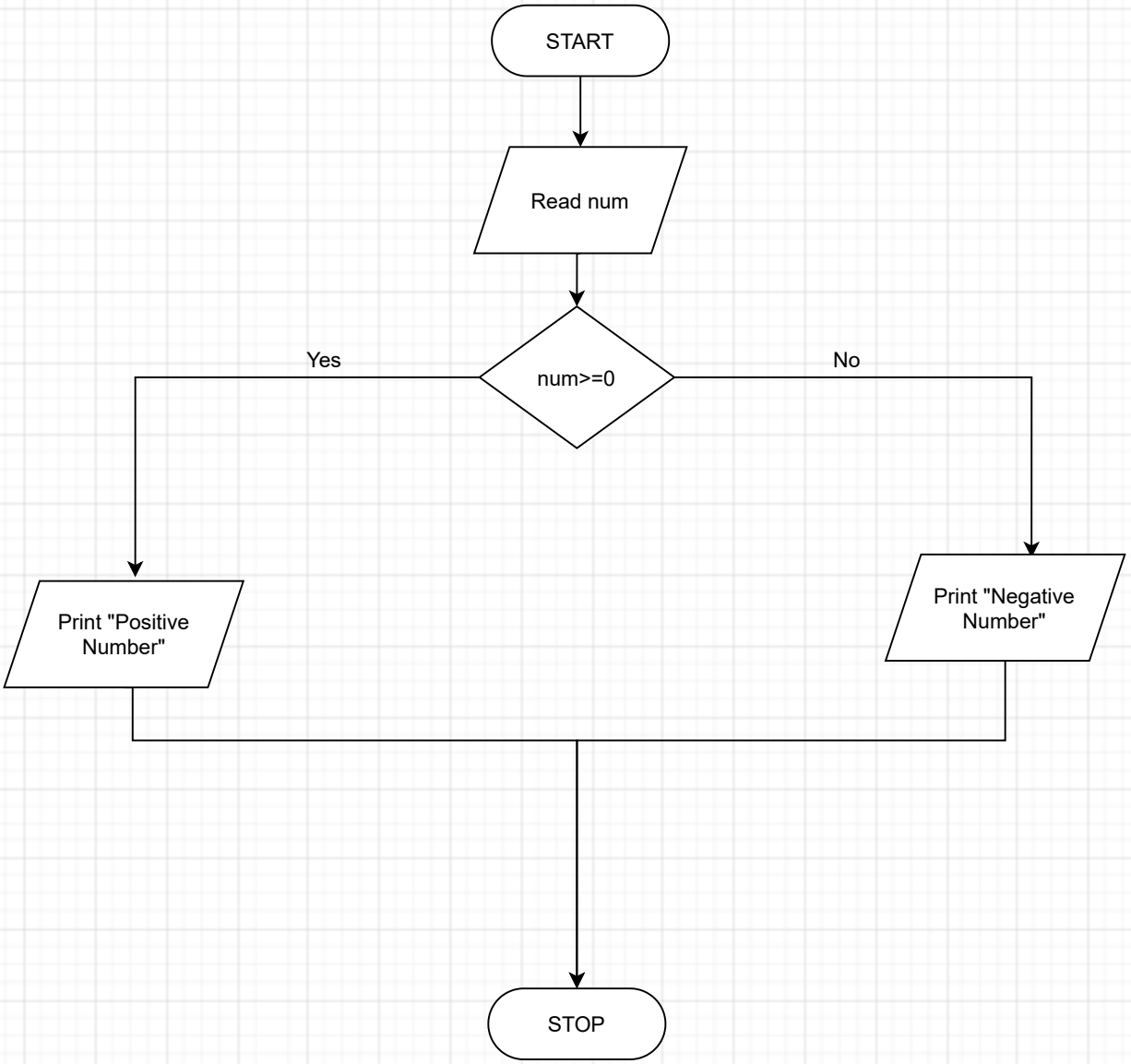


Q.5. Write an algorithm and Flowchart to know the given number is positive or negative

Algorithm:-

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

Flow Chart:-

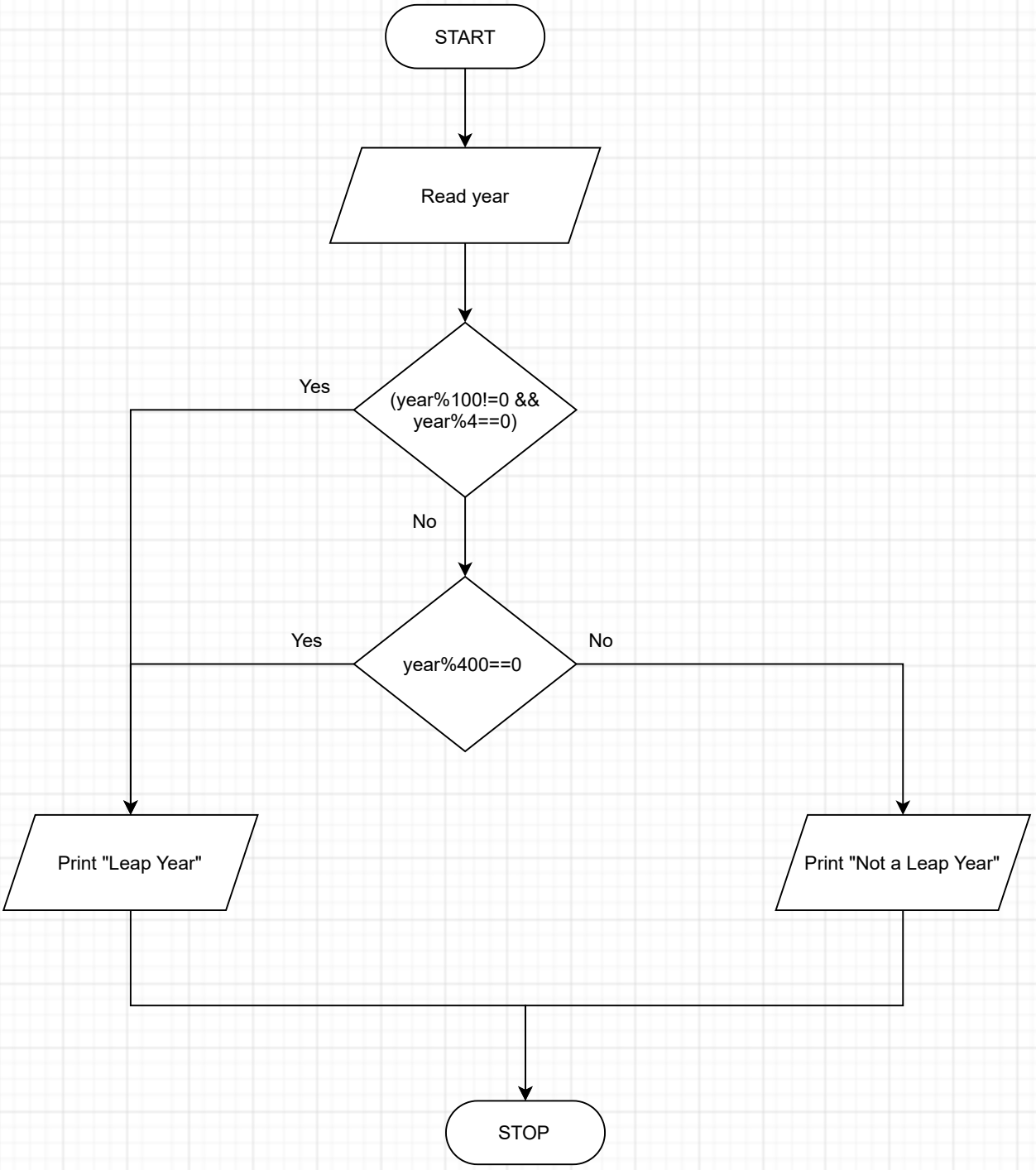


Q.6. Write an algorithm and Flowchart to find the given year is a leap year or not

Algorithm:-

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

Flow Chart:-

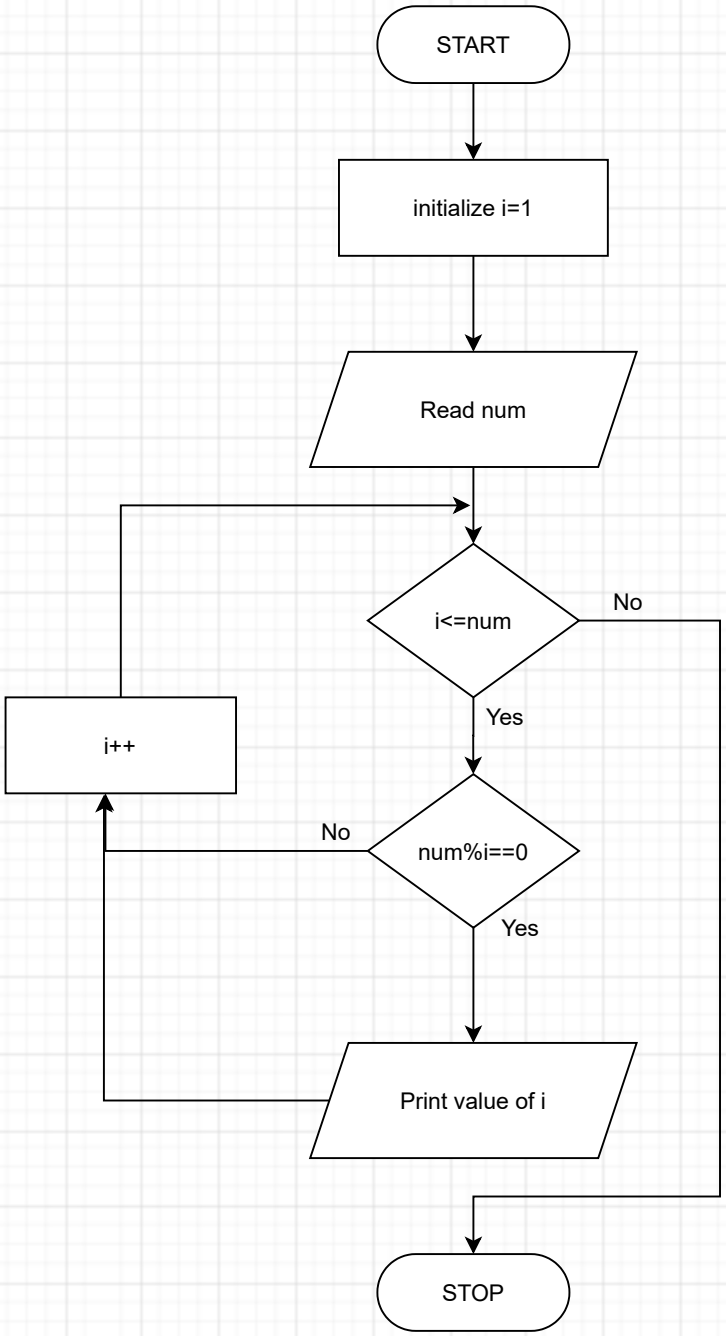


Q.9. Write an algorithm and Flowchart to find the factors of a given number

Algorithm:-

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

Flow Chart:-

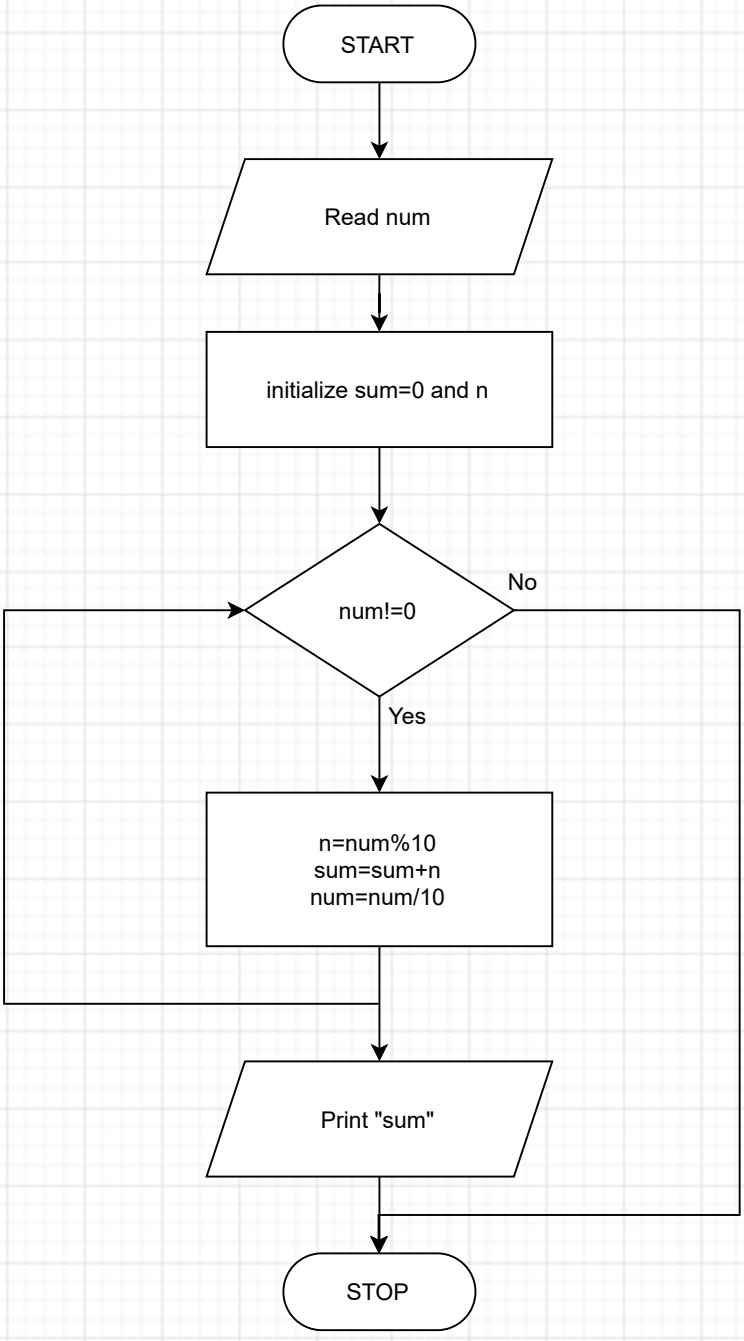


Q.10. Write an algorithm and Flowchart to find sum of the digit of a given number

Algorithm:-

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

Flow Chart:-

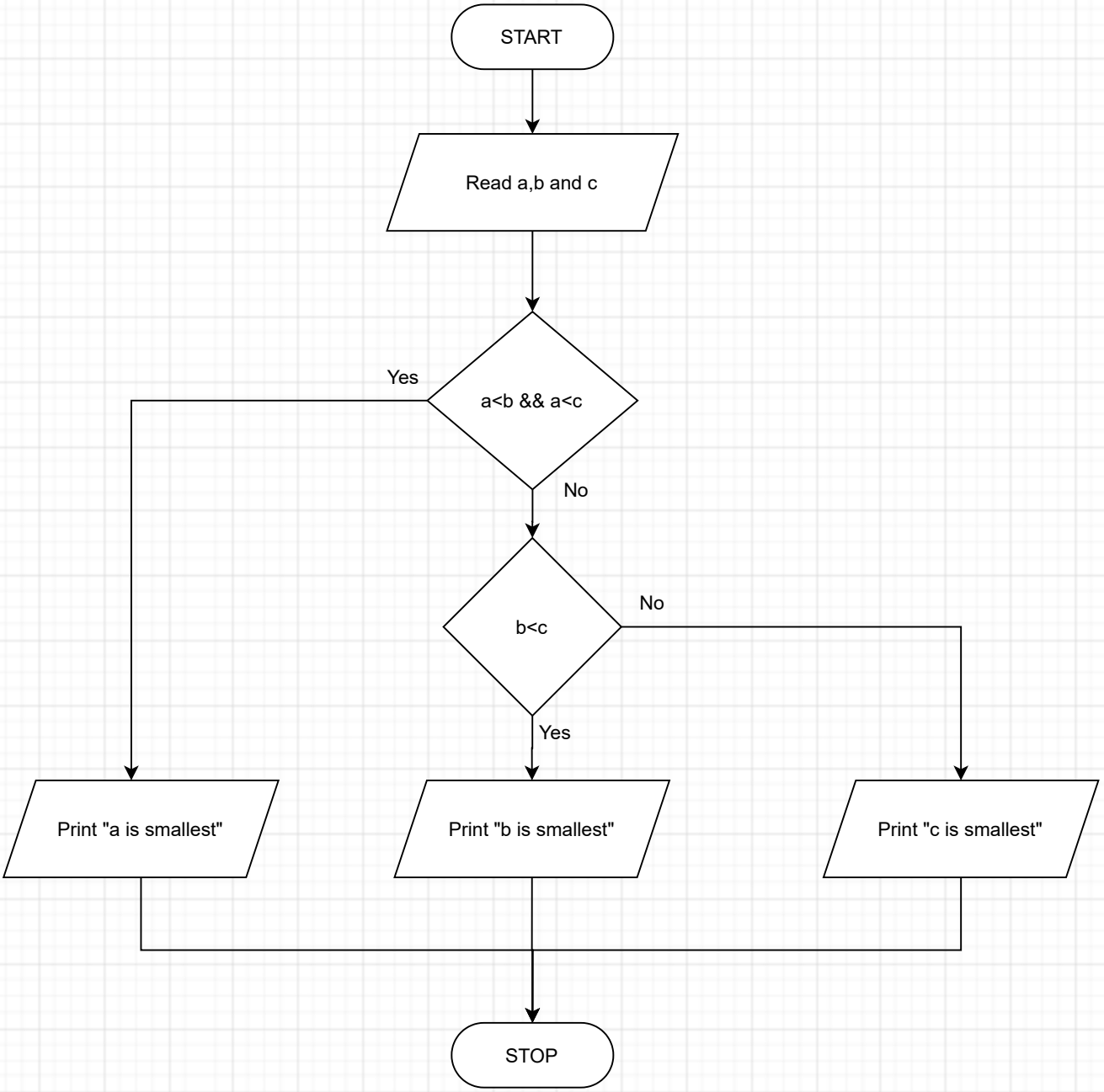


Q.11. Write an algorithm and Flowchart to find smallest of three didgit

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:-

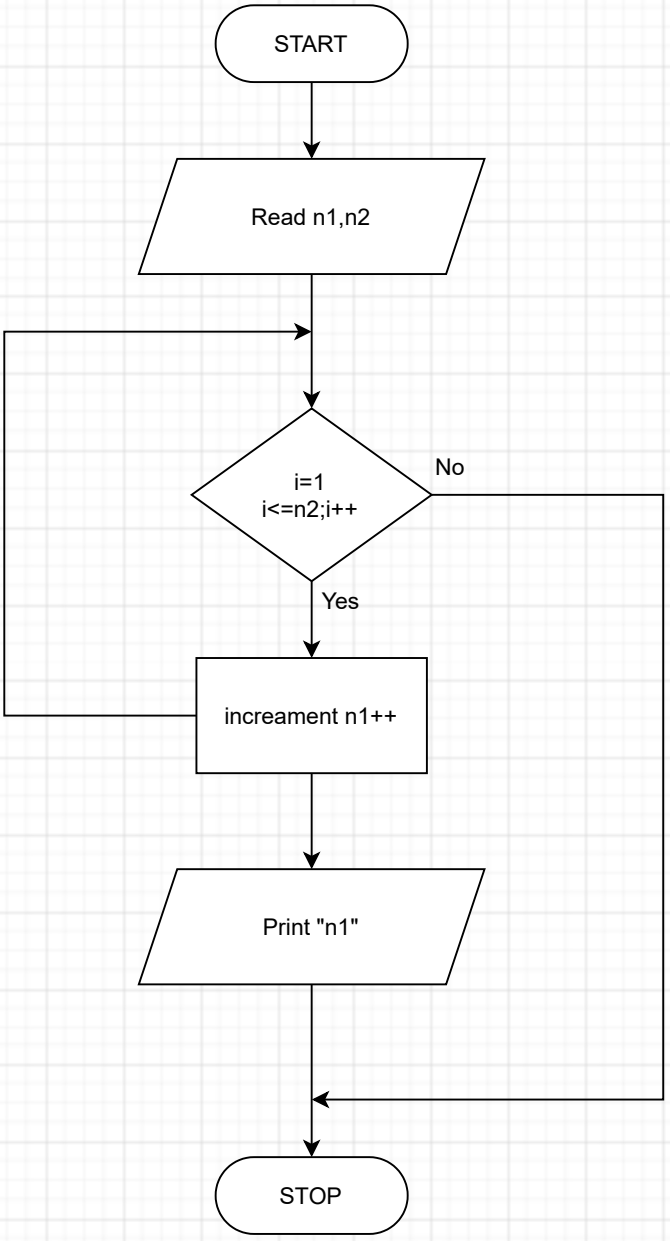


Q.12. Write an algorithm and Flowchart to add two number without arithmetic opreators

Algorithm:-

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

Flow Chart:-

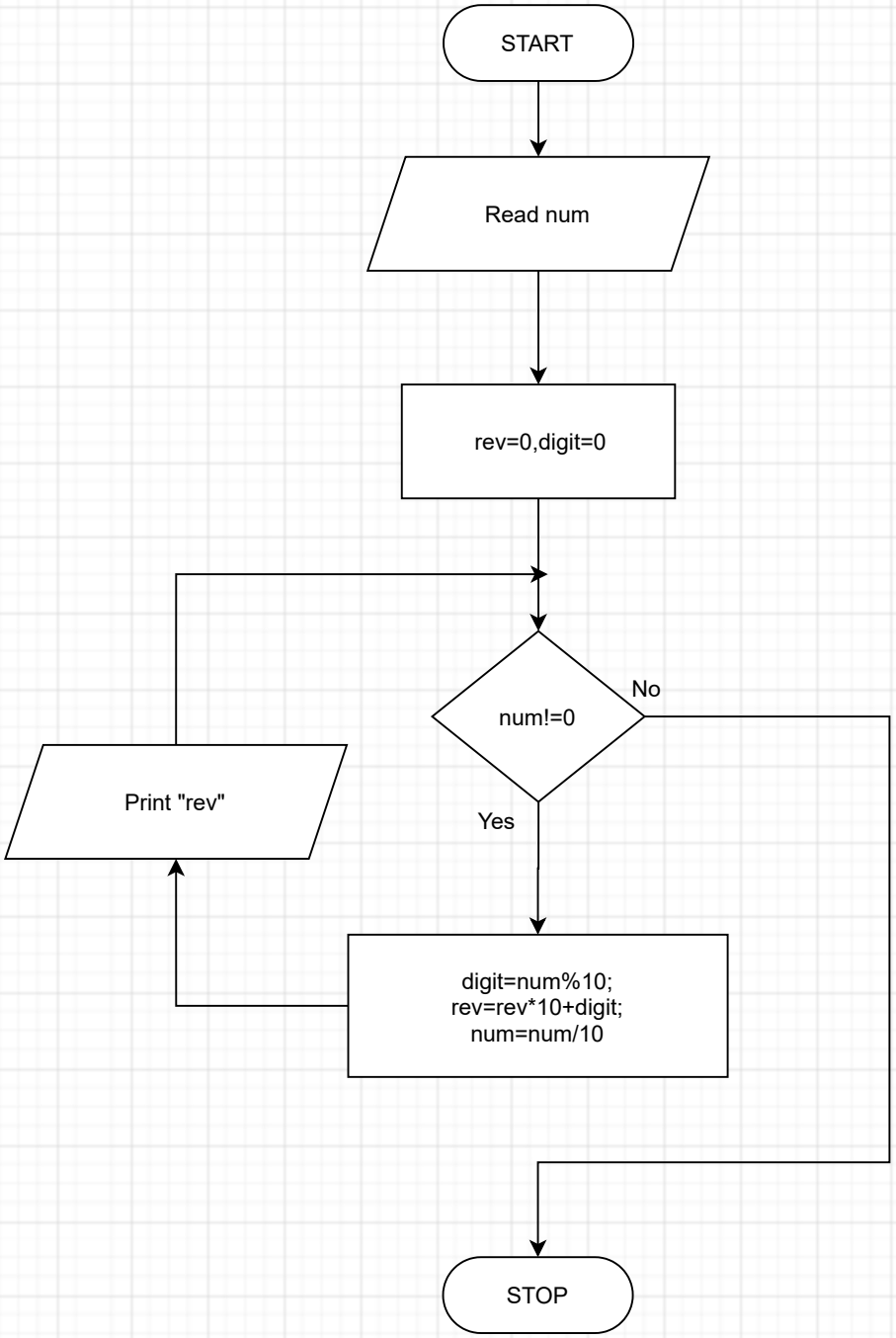


Q.13. Write an algorithm and Flowchart to Reverse a given number

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:-

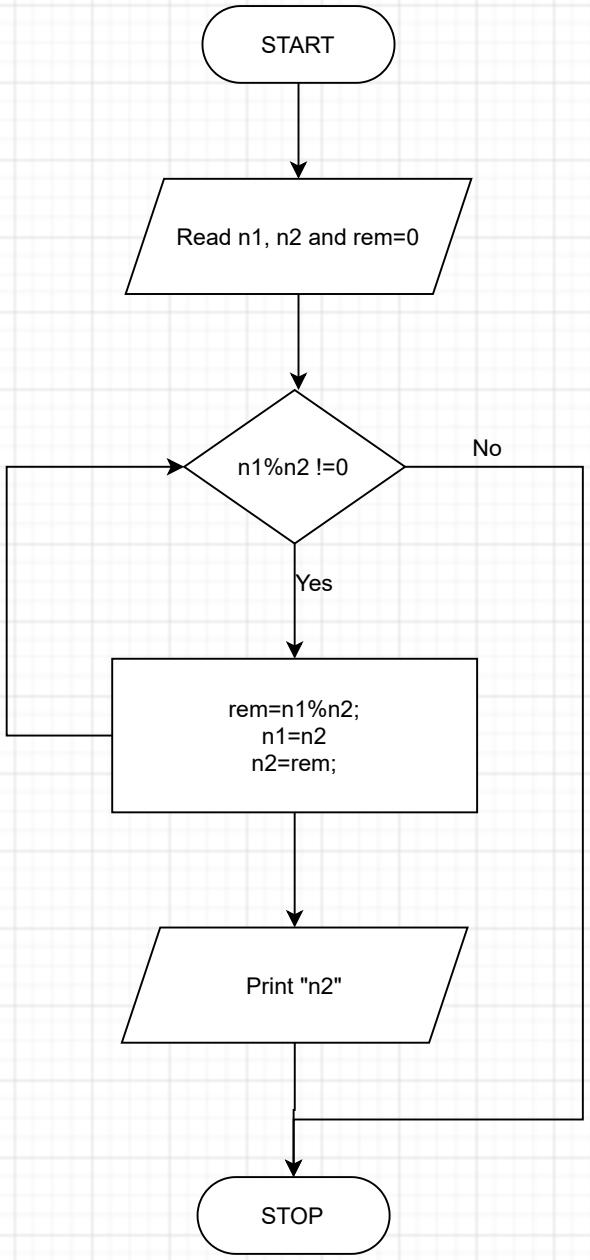


Q.14. Write an algorithm and Flowchart to find the GCD of two numbers

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!=0
8. Print n2
9. STOP

Flow Chart:-

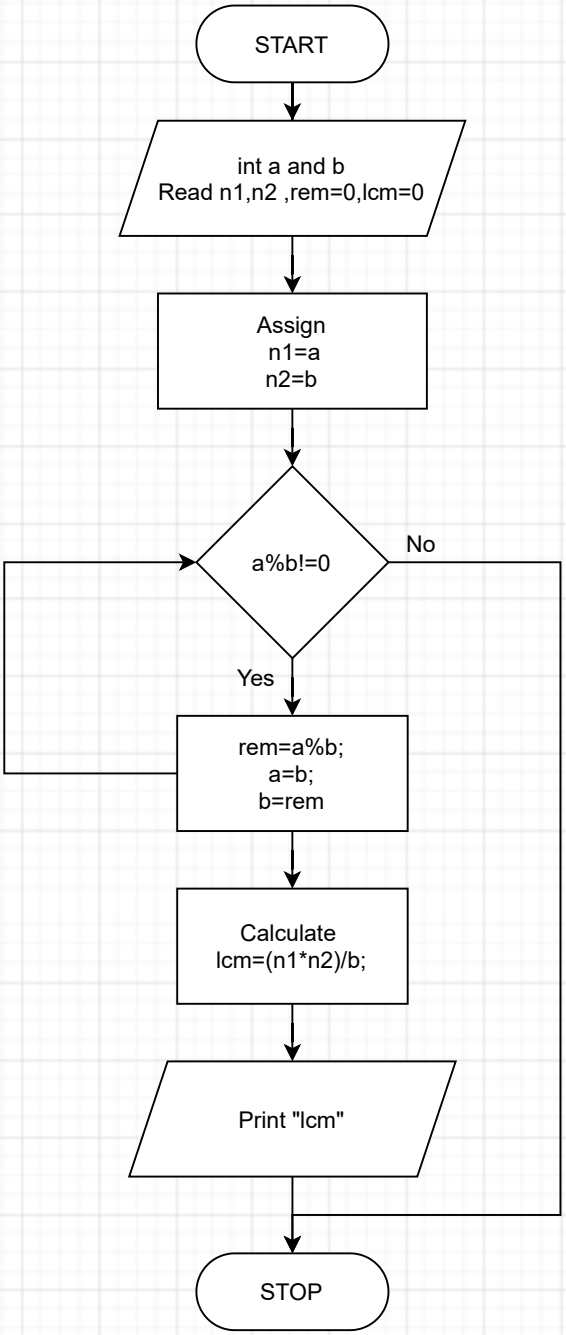


Q.15. Write an algorithm and Flowchart to find the LCM of two numbers

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!=0
9. lcm=(n1*n2)/b
10. Print lcm
11. STOP

Flow Chart:-

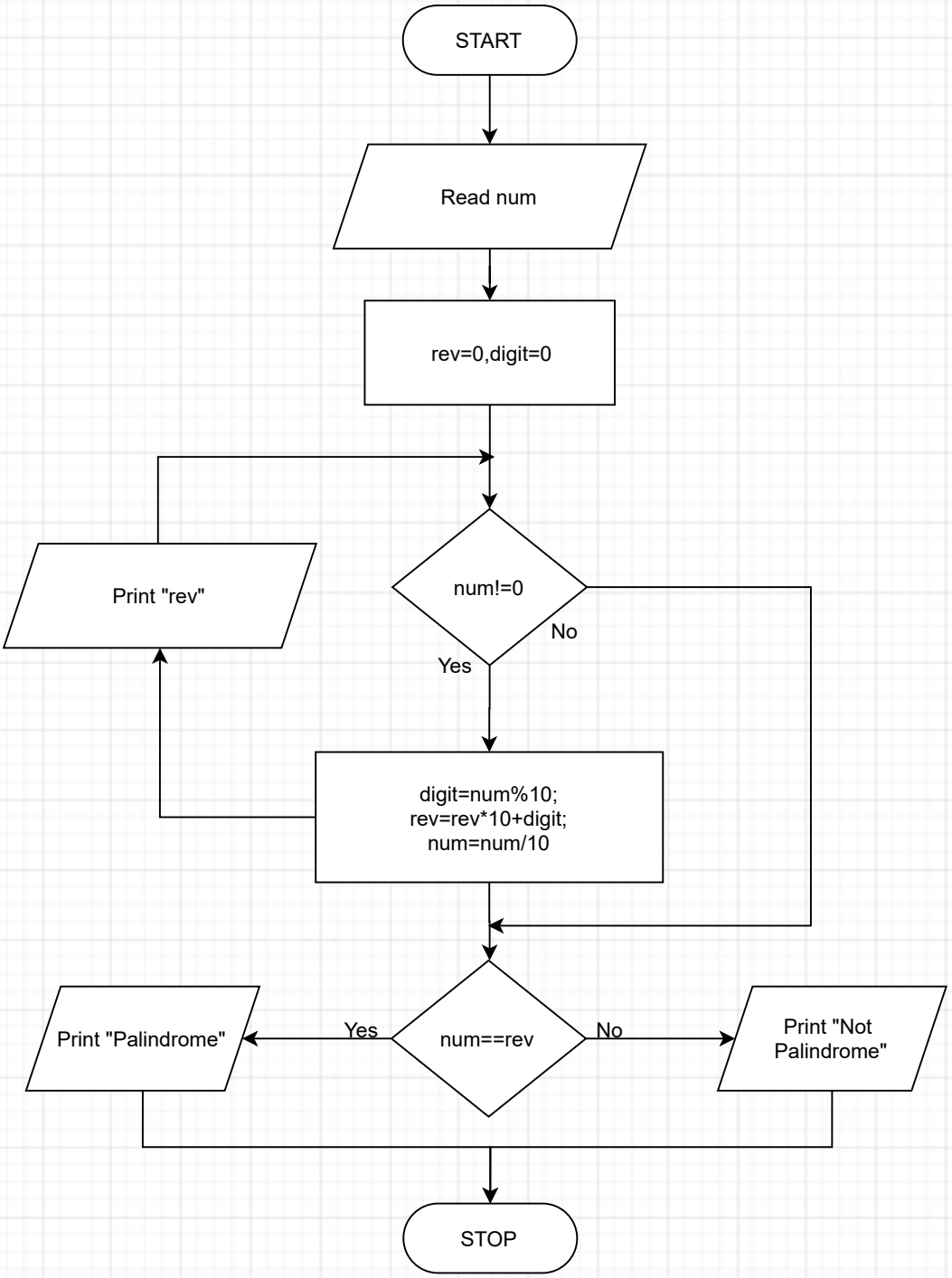


Q.17. Write an algorithm and Flowchart to find a given number is Palindrome or not

Algorithm:-

1. START
2. Initialize rev=0 and digit=0
3. Get a input from user num
4. 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. if num==rev print Palindrome
10. else print Not Palindrome
11. STOP

Flow Chart:-

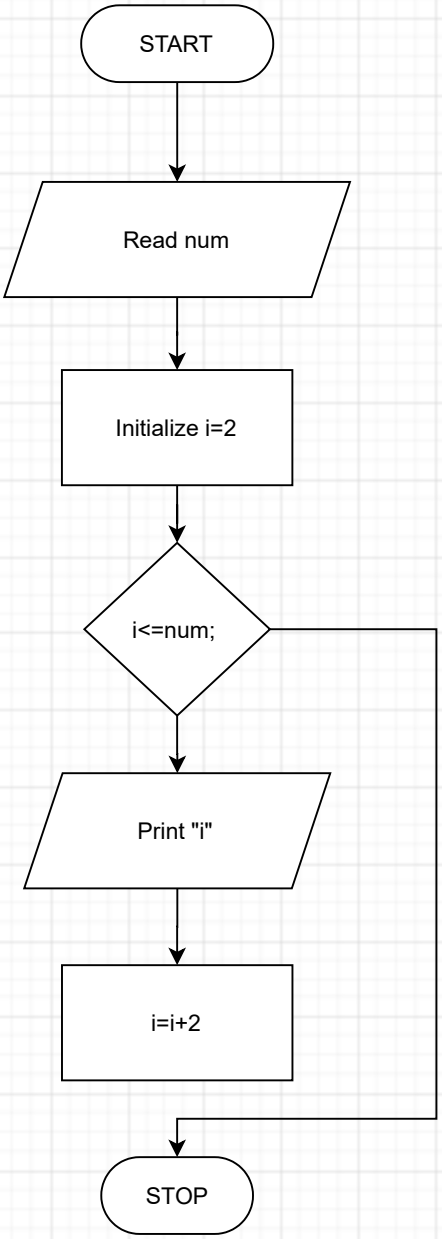


Q.19. Write an algorithm and Flowchart to print the Even Series

Algorithm:-

1. START
2. Initialize i=2
3. Get a input from user num
4. i<=num
5. print i
6. i=i+2 until i<=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<=num
5. print i
6. i=i+2 until i<=num
7. STOP

Flow Chart:-