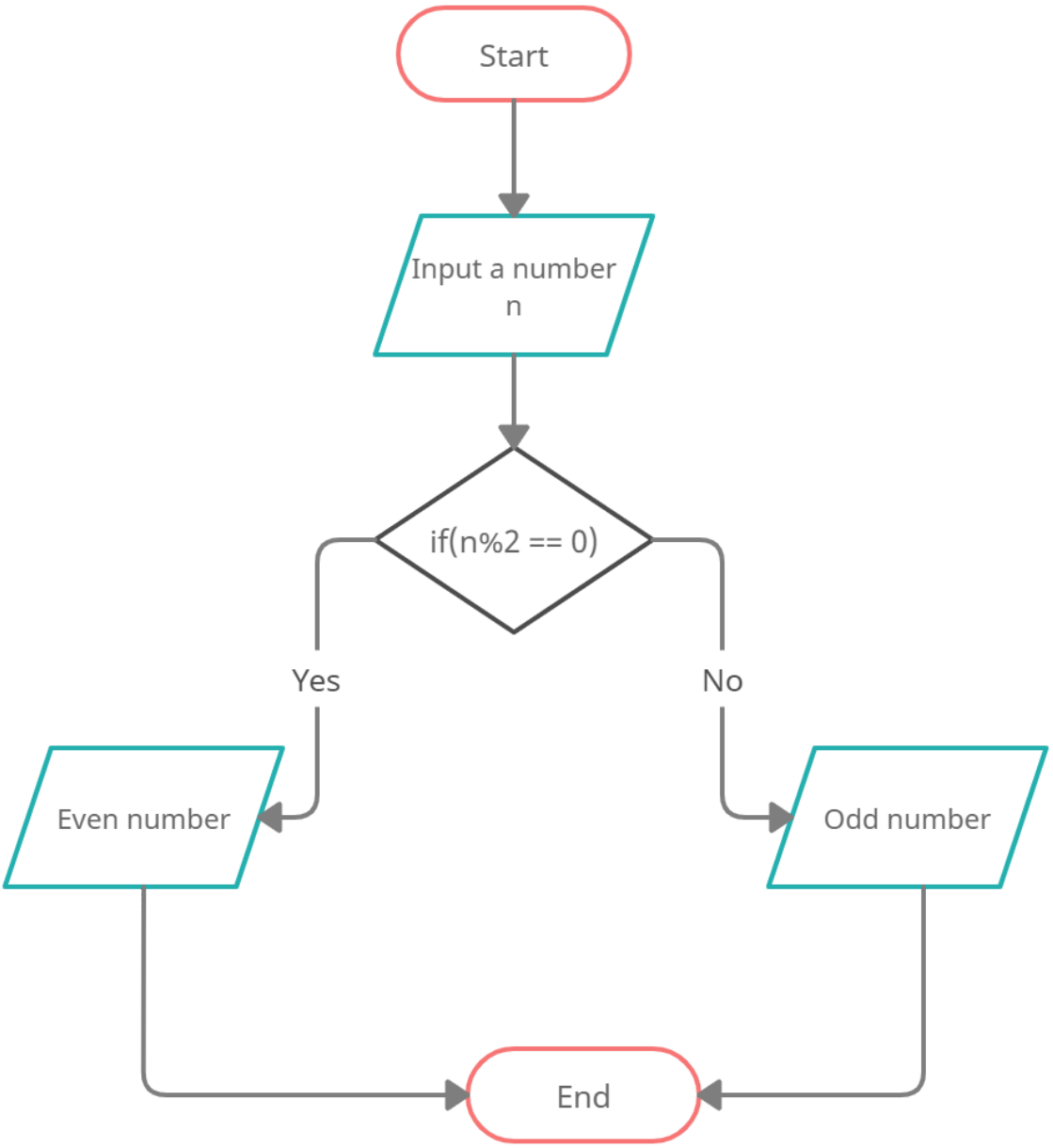
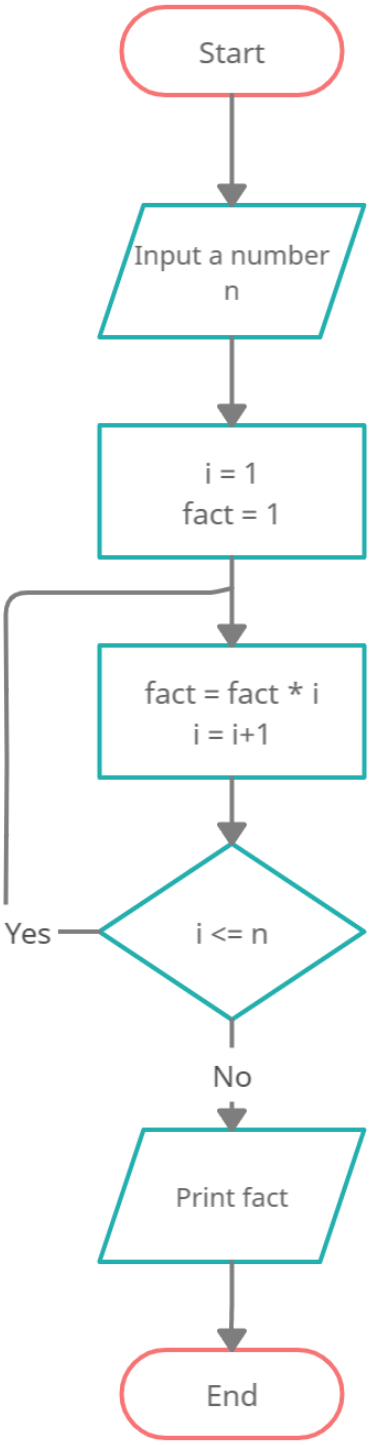
1. Check if the given number is EVEN or ODD.



2. Write a Java Program to find the Factorial of a given number.



3. Find the Factorial of a number using Recursion.

Steps:

1. Enter a number n as input.
2. Create a recursive function int fact(int n).
3. Set (n <= 1) as base case for recursion. If (n <= 1), return 1 else go to step 4.
4. Return n*fact(n-1);
5. Final value returned by the function fact() will be the factorial of the given number.

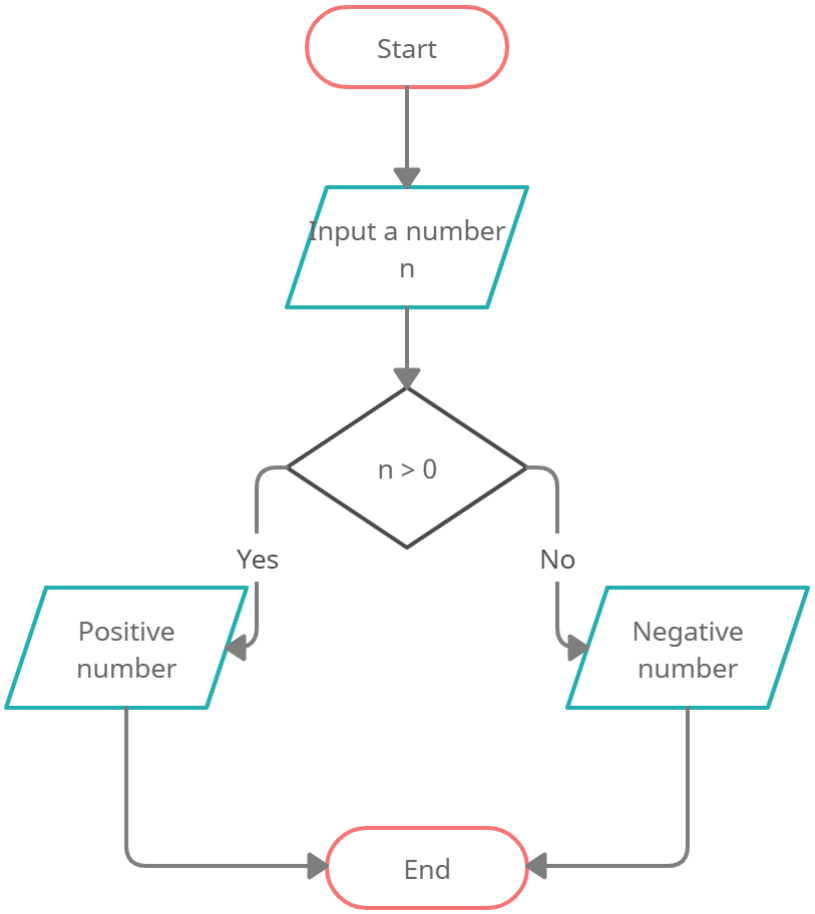
---

4. Swap two numbers without using the third variable approach.

Steps:

1. Take two numbers a and b as input from the user.
2. Print a and b.
3. a = a + b
4. b = a - b
5. a = a - b
6. Print swapped values of a and b.

5. How to check if the given number is Positive or Negative in Java?



6. Write a Java Program to find whether a given number is Leap year or NOT?

Steps:

1. Input a year y from the user.
2. Check if y is divisible by both 400 and 4.
3. Check if y is not divisible by 100.
4. If both the conditions given in step 2 and 3 are true then y is a leap year. If not, then y is not a leap year.

---

7. Write a Java Program to Print 1 To 10 Without Using Loop.

```
static int disp(int n){
        if(n > 9){
                System.out.println(10);
                return 1;
        }
        else{
                System.out.println(n);
                return disp(++n);
        }
}
```

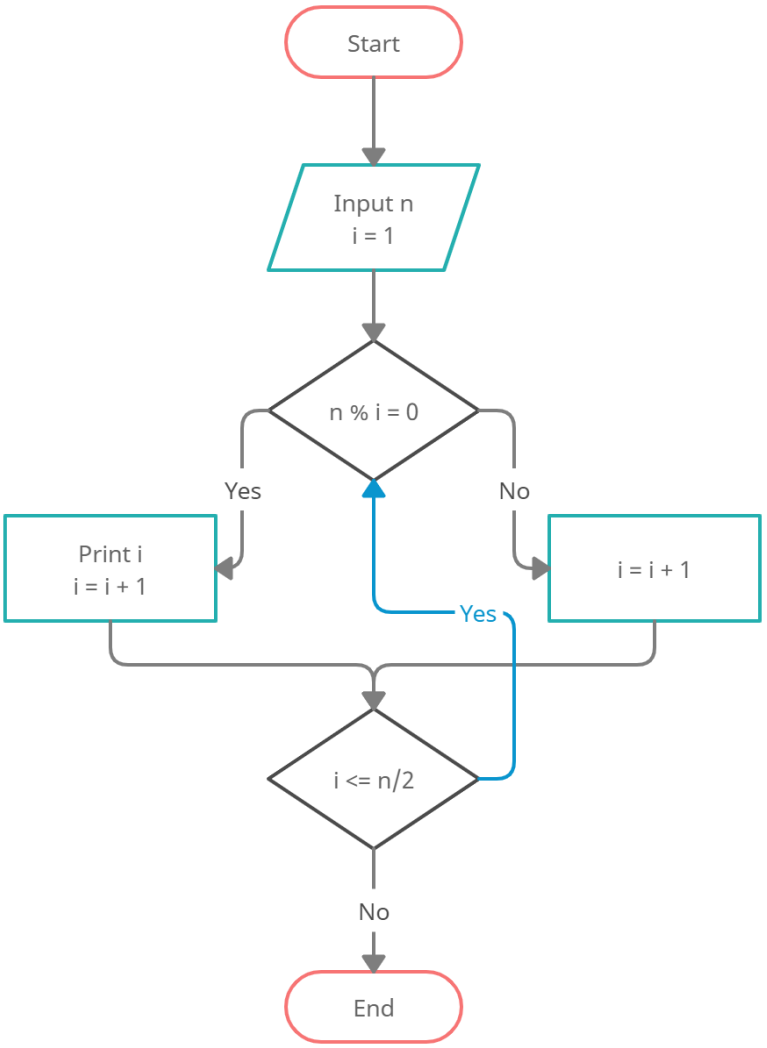
---

8. Write a Java program to print the digits of a given number.

Steps:

1. Input a number x from the user.
2. Perform di = x % 10. The expression (x % 10) gives the last digit of the number x.
3. Print value of di
4. Perform x = x / 10. This removes the last digit of the number x.
5. Repeat steps 2 to 3 until n does not equal to zero.

9. Write a Java program to print all the factors of the given number.



10. Write a Java Program to find the sum of the digits of a given number.

Steps:

1. Input a number x from the user.
2. Perform sum = sum + x % 10. The expression (x % 10) gives the last digit of the number x. The sum of digits is stored in the variable “sum”.
3. Perform x = x / 10. This removes the last digit of the number x.
4. Repeat steps 2 to 3 until n does not equal to zero.
5. Print the final value of the variable sum.

---

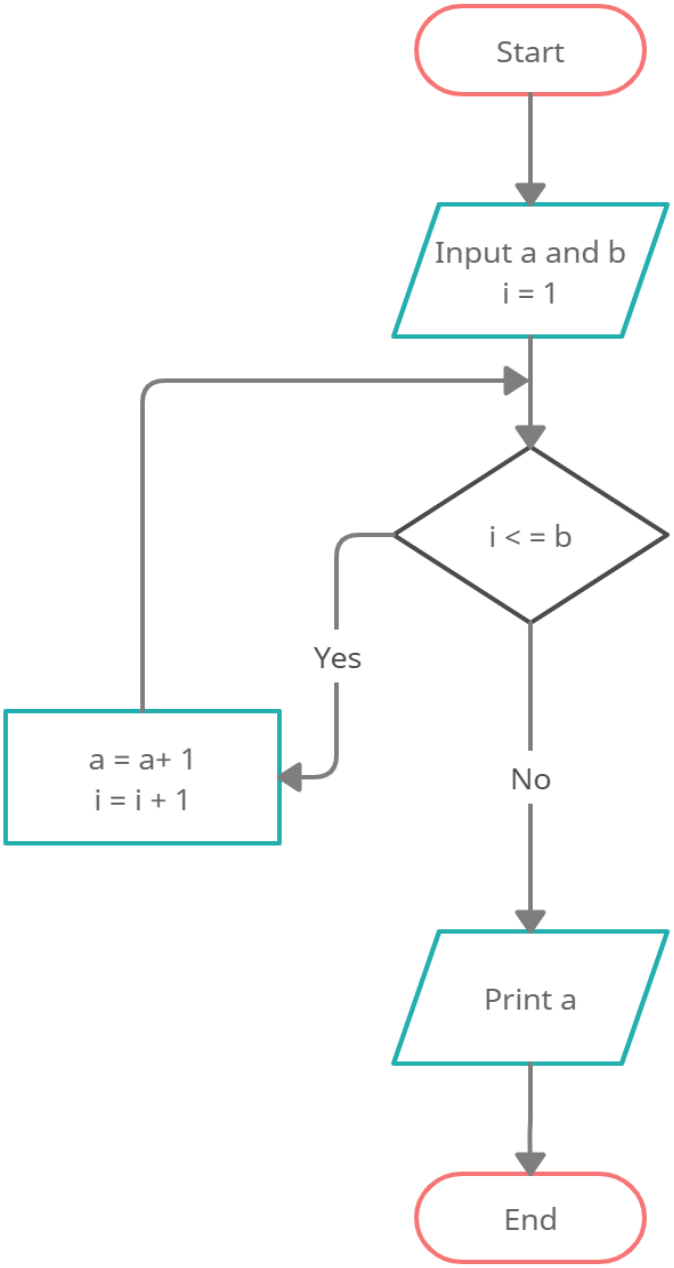
11. Write a Java Program to find the smallest of 3 numbers (a,b,c).

Steps:

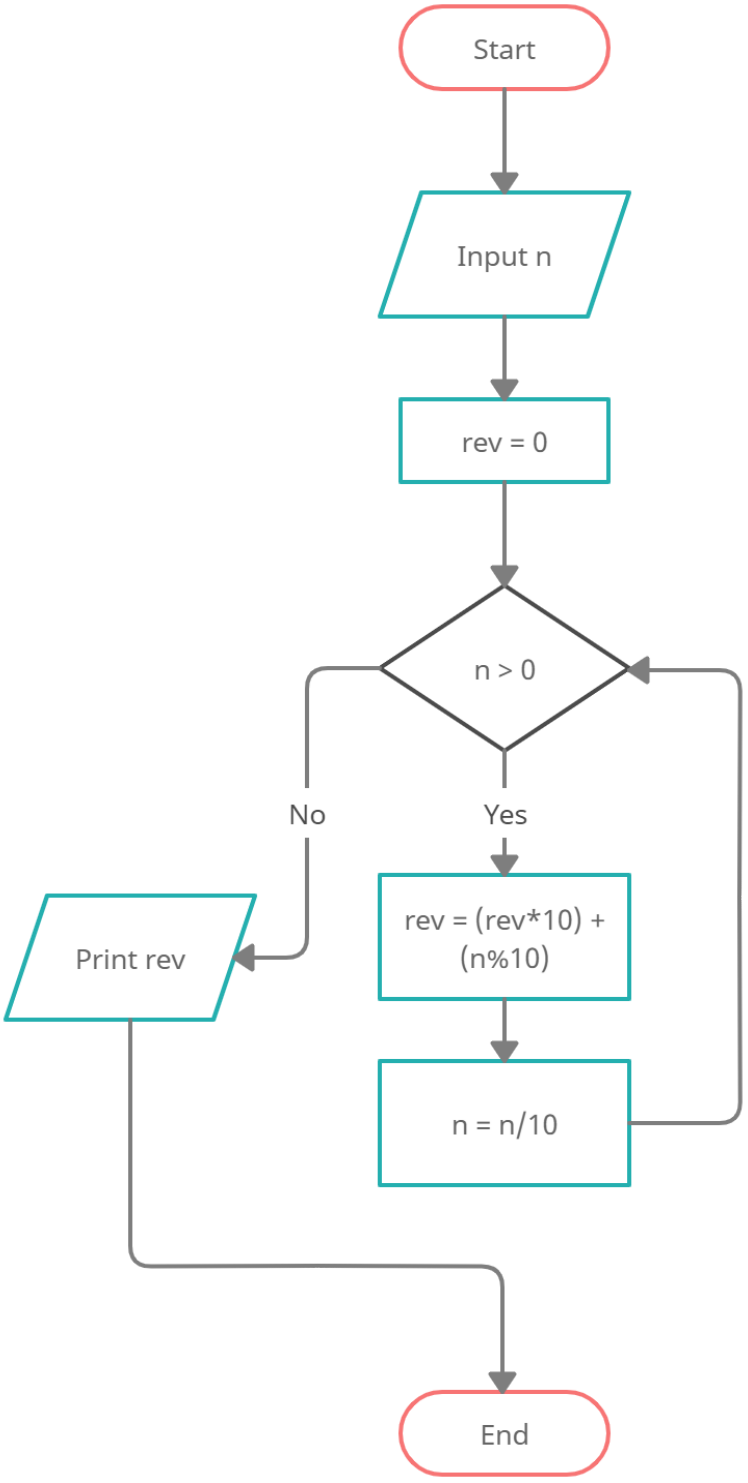
1. Store values of a, b and c.
2. Check if (a < b && a < c). If yes then print it.
3. Else if check if (b <a && b < c), if yes then print it.
4. Else c is the smallest number. Print it.

---

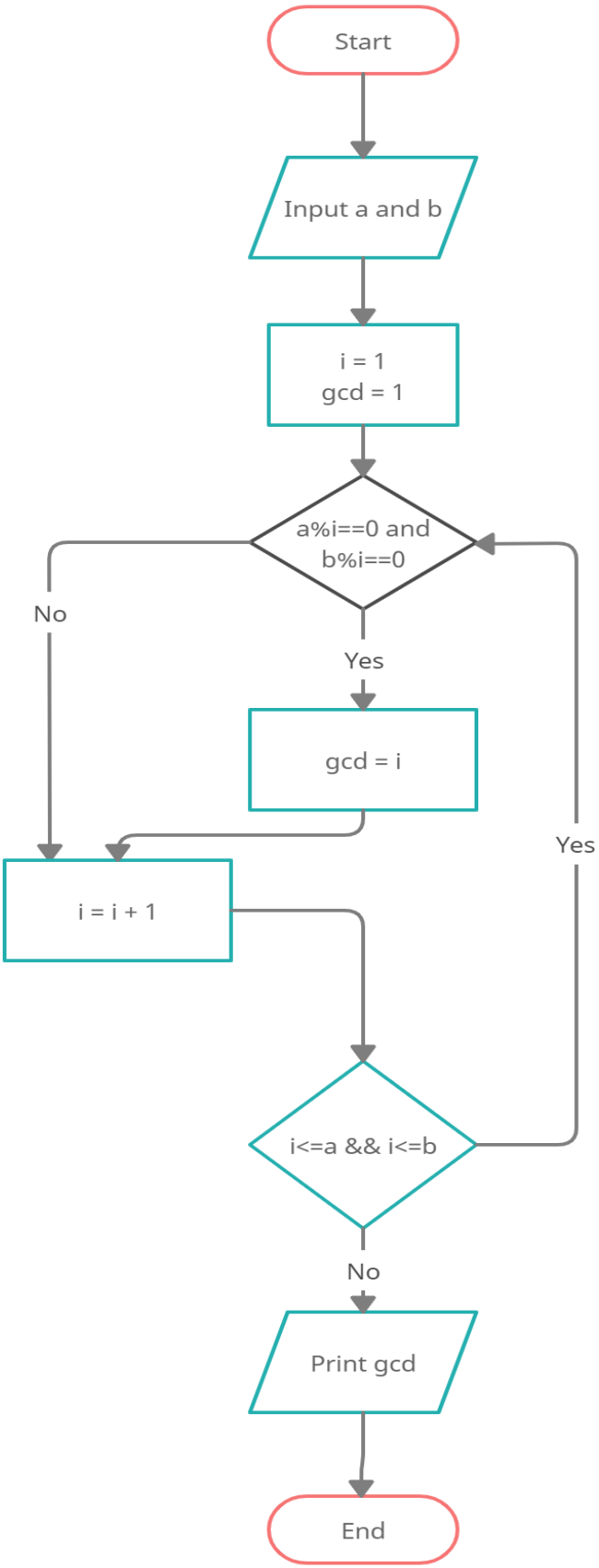
12. How to add two numbers without using the arithmetic operators in Java?



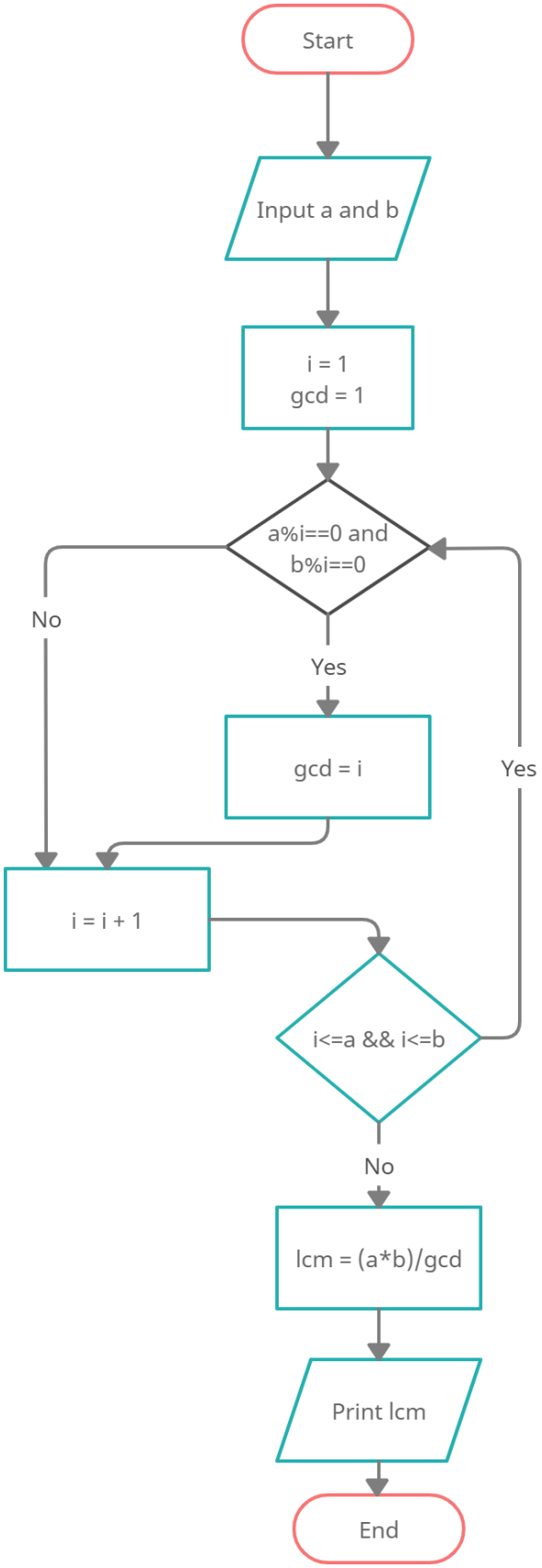
13. Write a java program to Reverse a given number.



14. Write a Java Program to find GCD of two given numbers.



15. Write a java program to LCM of TWO given numbers.



16. Write a java program to LCM of TWO given numbers using the Prime Factors method.

Steps:

1. Input two numbers a and b. Initialize k=1 and i=2.
2. Run loop (i=2; i<=a || i <=b; i++)
3. Check (a%i == 0), if yes then do k = k*i and a = a/i.
4. Check (b%i == 0), if yes then do k = k*i and b = b/i.
5. End loop. The value stored in k after the loop finishes will be the LCM of the given numbers.

---

17. Check whether the Given Number is a Palindrome or NOT.

Steps:

1. Input a number n. Initialize rev=0.
2. Run step 3 and 4 in a loop till n>0.
3. rev = (rev * 10) + (n%10)
4. n=n/10
5. End loop.
6. Check if rev == n, if yes then the given number is palindrome.

---

18. Write a Java Program to print all the Prime Factors of the Given Number.

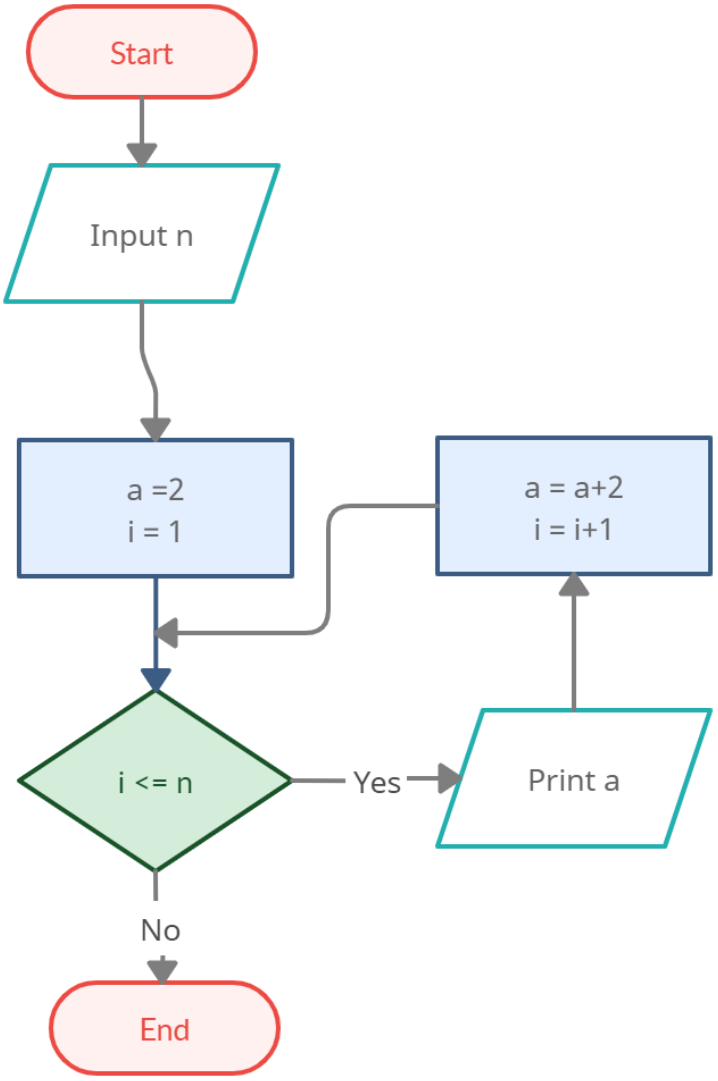
Steps:

1. Input a number n.
2. Start the loop while(n%2 == 0) and keep printing 2 as long as the condition is met.
3. Divide n by 2 in each iteration of loop (n = n/2). End loop.
4. Start loop for(int i = 3; i <= Math.sqrt(n); i += 2)
5. Print i while(n % i == 0)
6. Divide n by i in each iteration of loop(n = n/i). End loop.
7. Check if n>2, if yes then print n.

---

19. To print the following series EVEN number Series 2 4 6 8 10 12 14 16 .....

Input n : the number of terms required.



20. To print the following series ODD number Series 1 3 5 7 9 11 13 ....

Input n : the number of terms required.