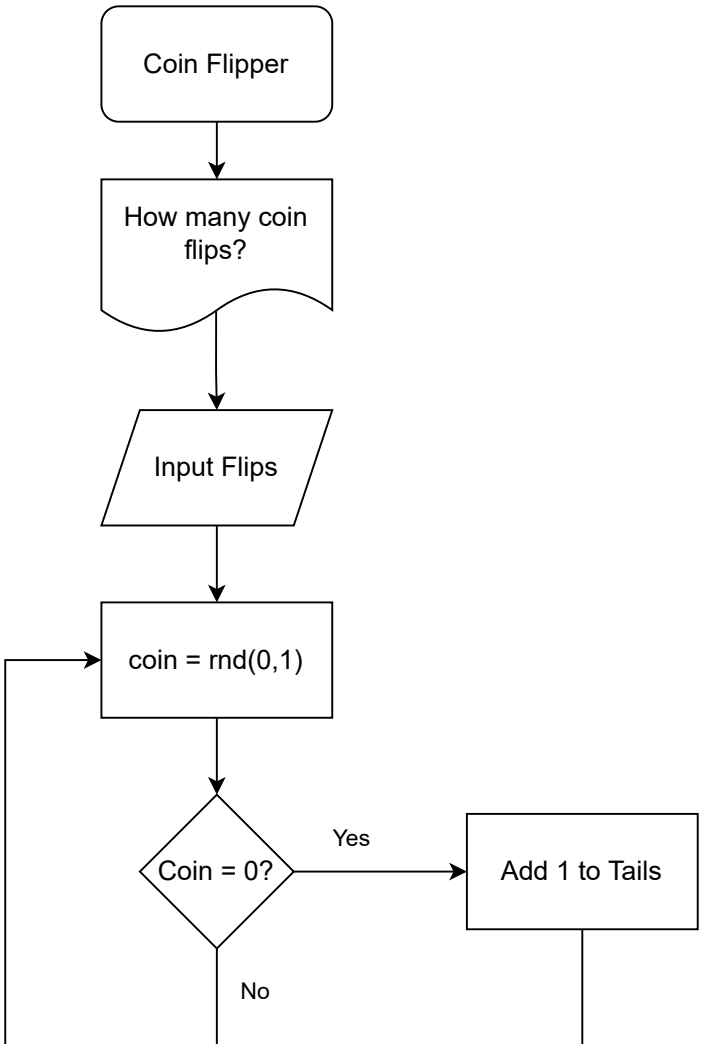
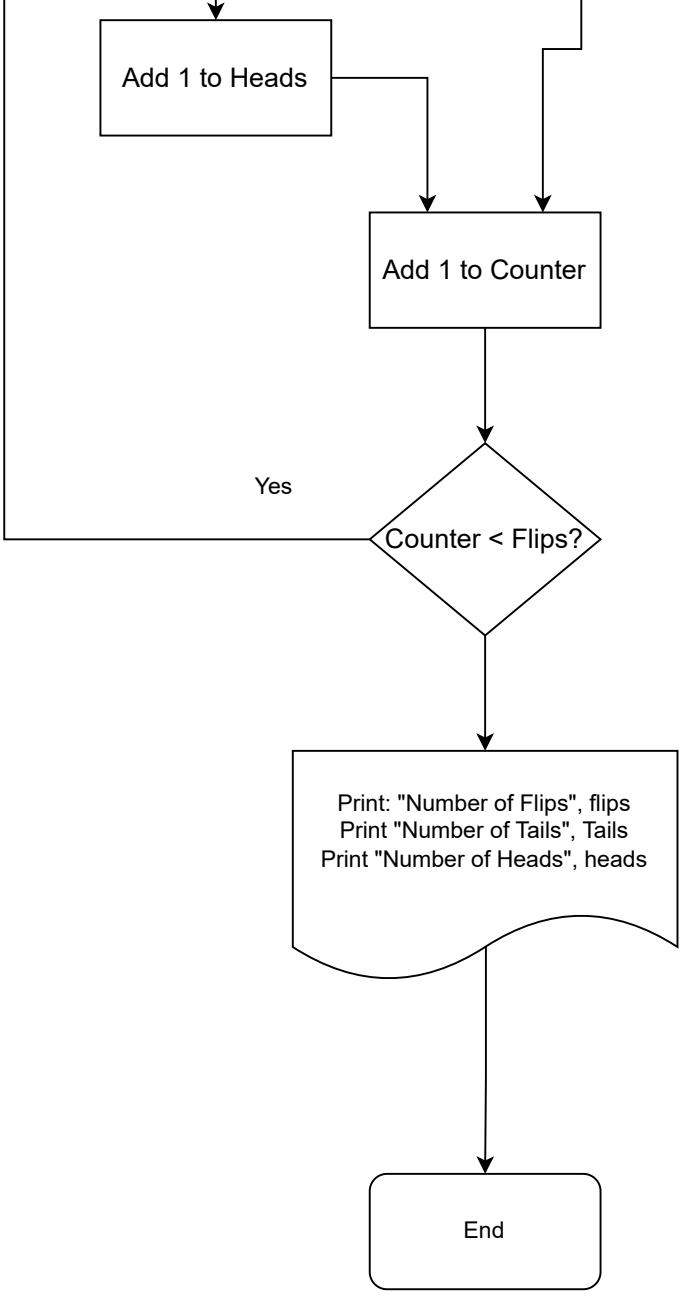
Task:

Word problem:
– Write the Pseudocode and construct a flow chart for the following program:
• Ask the user “How many coin flips?”
• Flip a coin the requested number of times. You can put
“coin = random(0,1)” in a process box to mean “Get a random number, either zero or one”. Then use one result
for heads and the other for tails.
• Display the results, something like:
Coin flips: 50
Heads: 27
Tails: 23

Pseudocode:

1. Set heads = 0, tails = 0, counter = 0
2. Print "How many coin flips?"
3. Input flips
4. Repeat until counter >= flips:
   4.1. Generate a random number, coin, either 0 (representing tails) or 1 (representing heads)
   4.2. If coin == 0, then:
      4.2.1. Add 1 to tails
   4.3. Else:
      4.3.1. Add 1 to heads
   4.4. Add 1 to counter
5. Print "Number of flips:", flips
6. Print "Number of heads:", heads
7. Print "Number of tails:", tails
8. End





Python:

```
import random


def coin_flipper():
    heads = 0
    tails = 0
    counter = 0

    print("How many coin flips? ")

    flips = int(input())

    while counter < flips:
        coin = random.randint(0, 1)

        if coin == 0:
            tails += 1
        else:
            heads += 1

        counter += 1


    print("Number of flips:", flips)
    print("Number of heads:",
heads)
    print("Number of tails:", tails)
    print("End")
```

```
if __name__ == "__main__":
    coin_flipper()
```

Java:

```
import java.util.Scanner;


public class CoinFlipper {
    public static void main(String[] args) {
        int heads = 0;
        int tails = 0;
        int counter = 0;

        System.out.println("How many coin flips? ");

        Scanner scanner = new Scanner(System.in);
        int flips = scanner.nextInt();


        while (counter < flips) {
            int coin = (int) (Math.random() * 2);

            if (coin == 0) {
                tails++;
            }
            else {
                heads++;
            }

            counter++;
        }

        System.out.println("Number of flips: " + flips);
        System.out.println("Number of heads: " +
heads);
        System.out.println("Number of tails: " + tails);
        System.out.println("End");

        scanner.close();
    }
}
```