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import java.util.Scanner;
import java.util.concurrent.CountDownLatch;
class Coin
{
    private static int sum;
    private static int result;
    private static int[] coins;
    private static CountDownLatch c1 = new CountDownLatch(1);
    private static int coin(int[] coins, int sum) {
        return count(coins, coins.length, sum);
    }
    private static int count(int[] coins, int length , int sum) {
        if (sum == 0) {
            return 1;
        }
        if (sum < 0 || length <= 0) {
            return 0;
        }
        return count(coins, length, sum - coins[length - 1]) + count(coins,
length - 1, sum);
    }

    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        int a=0;
        do{
            Thread t1 = new Thread(()->
            {
                System.out.println("Enter the Sum");
                sum = sc.nextInt();
                System.out.println("Enter the number of coins");
                int n = sc.nextInt();
                coins=new int[n];
                for(int i=0;i<n;i++)
                {
                    System.out.println("Enter the value for coint "+(i+1)+":");
                    coins[i] = sc.nextInt();
                }
                c1.countDown();
            });
            Thread t2 = new Thread(()->
            {
                try {
                    c1.await(); // Wait for initialization to complete
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
            }
            result = coin(coins,sum);

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    });
    t1.start();
    t2.start();
    try {
        t1.join();
        t2.join();
    } catch (InterruptedException e) {
        e.printStackTrace();
    }

    System.out.println("There are " + result + " ways");
    System.out.println("Do you want to:1.Continue 2.Exit");
    a=sc.nextInt();
}while(a!=2);
System.out.println("Thank you");
}
}

```

PS C:\Users\anush\Desktop\Christ\Java\Labs\Lab 6> java Coin

Enter the Sum

4

Enter the number of coins

3

Enter the value for coint 1:

1

Enter the value for coint 2:

2

Enter the value for coint 3:

3

There are 4 ways

Do you want to:1.Continue 2.Exit