2. Week 2- FLOW CONTROL STATEMENTS

You have recently seen a motivational sports movie and want to start exercising regularly. Your coach tells you that it is important to get up early in the morning to exercise. She sets up a schedule for you:

On weekdays (Monday - Friday), you have to get up at 5:00. On weekends (Saturday & Sunday), you can wake up at 6:00. However, if you are on vacation, then you can get up at 7:00 on weekdays and 9:00 on weekends.

Write a program to print the time you should get up.

Input Format

Input containing an integer and a boolean value.

The integer tells you the day it is (1-Sunday, 2-Monday, 3-Tuesday, 4-Wednesday, 5-Thursday, 6-Friday, 7-Saturday). The boolean is true if you are on vacation and false if you're not on vacation.

You have to print the time you should get up.

Example Input:

1 false

Output:

6:00

Example Input:

5 false

Output:

5:00

Example Input:

1 true

Output:

9:00

For example:

Input	Result
1 false	6:00
5 false	5:00
1 true	9:00

```java
import java.util.Scanner;
public class Alarm{
    public static void main(String[] args){
        Scanner sc=new Scanner(System.in);
        String s=sc.nextLine();
        String[] input=s.split(" ");
        int day=Integer.parseInt(input[0]);
        boolean isVacation=Boolean.parseBoolean(input[1]);
        if(day==2 || day==3 || day==4 || day==5 || day==6){
            if(isVacation){
                System.out.println("7:00");
            }else{
                System.out.println("5:00");
            }
        }else if(day==1 || day == 7){
            if(isVacation){
                System.out.println("9:00");
            }else{
                System.out.println("6:00");
            }
        }
    }
}
```

	Input	Expected	Got	
✓	1 false	6:00	6:00	✓
✓	5 false	5:00	5:00	✓
✓	1 true	9:00	9:00	✓

Passed all tests! ✓

Consider the following sequence:

1st term: 1

2nd term: 1 2 1

3rd term: 1 2 1 3 1 2 1

4th term: 1 2 1 3 1 2 1 4 1 2 1 3 1 2 1

And so on. Write a program that takes as parameter an integer n and prints the nth terms of this sequence.

Example Input:

1

Output:

1

Example Input:

4

Output:

1 2 1 3 1 2 1 4 1 2 1 3 1 2 1

For example:

Input	Result
1	1
2	1 2 1
3	1 2 1 3 1 2 1
4	1 2 1 3 1 2 1 4 1 2 1 3 1 2 1

```java
import java.util.Scanner;
public class Sequence{
    public static String generateSequence(int n){
        if(n==1) return "1";

        String prevTerm=generateSequence(n-1);
        return prevTerm+" "+n+" "+prevTerm;

    }
    public static void main(String[] args){
        Scanner sc= new Scanner(System.in);
        int n=sc.nextInt();
        String res=generateSequence(n);
        System.out.println(res);
    }
}
```

	Input	Expected	Got	
✓	1	1	1	✓
✓	2	1 2 1	1 2 1	✓
✓	3	1 2 1 3 1 2 1	1 2 1 3 1 2 1	✓
✓	4	1 2 1 3 1 2 1 4 1 2 1 3 1 2 1	1 2 1 3 1 2 1 4 1 2 1 3 1 2 1	✓

Passed all tests! ✓

Consider a sequence of the form 0, 1, 1, 2, 4, 7, 13, 24, 44, 81, 149...

Write a method program which takes as parameter an integer n and prints the nth term of the above sequence. The nth term will fit in an integer value.

Example Input:

5

Output:

4

Example Input:

8

Output:

24

Example Input:

11

Output:

149

For example:

Input	Result
5	4
8	24
11	149

```
import java.util.Scanner;
public class PrintSequence{
    public static void main(String[] args){
        Scanner sc= new Scanner(System.in);
        int n = sc.nextInt();
        int[] arr= new int[n];
        arr[0]=0;
        arr[1]=1;
        arr[2]=1;

            if (n==0) System.out.println(0);
            else if(n==1 || n==2) System.out.println(1);
            else{
                for(int j=3; j<n; j++){
                    arr[j]=arr[j-1]+arr[j-2]+arr[j-3];
                }
            }
            System.out.println(arr[n-1]);

    }
}
```

	Input	Expected	Got	
✓	5	4	4	✓
✓	8	24	24	✓
✓	11	149	149	✓

Passed all tests! ✓