

# CS23333-Object Oriented Programming Using Java-2023

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| Status    | Finished                            |
| Started   | Monday, 30 September 2024, 10:38 AM |
| Completed | Monday, 30 September 2024, 11:10 AM |
| Duration  | 32 mins 5 secs                      |

Question 1

Correct

Marked out of 5.00

Flag question

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    |

Answer: (penalty regime: 0 %)

```
1 import java.util.Scanner;
2 public class main{
3     public static int term(int n){
4         if(n==1)return 0;
5         if(n==2)return 1;
6         if(n==3)return 1;
7         int a=0,b=1,c=1;
8         for(int i=4;i<=n;i++){
9             int next=a+b+c;
10            a=b;
11            b=c;
12            c=next;
13        }
14        return c;
15    }
16    public static void main(String args[]){
17        Scanner s=new Scanner(System.in);
18        int n=s.nextInt();
19        int result=term(n);
20        System.out.println(result);
21    }
22 }
```

| Input | Expected | Got |
|-------|----------|-----|
| 5     | 4        | 4   |
| 8     | 24       | 24  |
| 11    | 149      | 149 |

Passed all tests!

Question **2**

Correct

Marked out of 5.00

Flag question

You and your friend are movie fans and want to predict if the movie is going to be a hit!

The movie's success formula depends on 2 parameters:

the acting power of the actor (range 0 to 10)

the critic's rating of the movie (range 0 to 10)

The movie is a hit if the acting power is excellent (more than 8) or the rating is excellent (more than 8). This holds true except if either the acting power is poor (less than 2) or rating is poor (less than 2), then the movie is a flop. Otherwise the movie is average.

Write a program that takes 2 integers:

the first integer is the acting power

second integer is the critic's rating.

You have to print Yes if the movie is a hit, Maybe if the movie is average and No if the movie is flop.

Example input:

9 5

Output:

Yes

Example input:

1 9

Output:

No

Example input:

6 4

Output:

Maybe

For example:

| Input | Result |
|-------|--------|
| 9 5   | Yes    |
| 1 9   | No     |
| 6 4   | Maybe  |

Answer: (penalty regime: 0 %)

```
1 import java.util.Scanner;
2 public class main{
3     public static void main(String args[]){
4         Scanner s=new Scanner(System.in);
5         int a=s.nextInt();
6         int b=s.nextInt();
7         if(a<2 || b<2){
8             System.out.println("No");
9         }else if(a>8 || b>8){
10            System.out.println("Yes");
11        }
12        else{
13            System.out.println("Maybe");
14        }
15    }
16 }
```

| Input | Expected | Got   |  |
|-------|----------|-------|--|
| 9 5   | Yes      | Yes   |  |
| 1 9   | No       | No    |  |
| 6 4   | Maybe    | Maybe |  |

Passed all tests!

Question **3**

Correct

Marked out of 5.00

Flag question

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 |

Answer: (penalty regime: 0 %)

```
1 import java.util.Scanner;
2 public class main{
3     public static void main(String args[]){
4         Scanner s=new Scanner(System.in);
5         int a=s.nextInt();
6         String currentTerm="1";
7         for(int i=2;i<=a;i++){
8             currentTerm=currentTerm+" "+i+" "+currentTerm;
9         }
10        System.out.println(currentTerm);
11    }
12 }
```

| 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!

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