

Assignment-2

1,

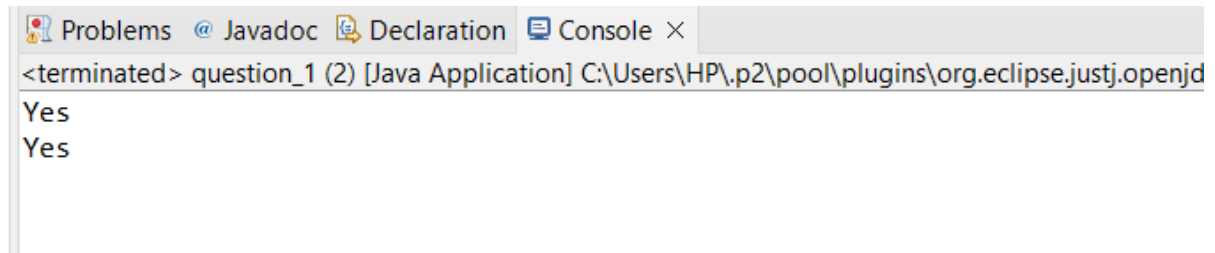
```
import java.util.*;
public class question_1
{
    private static Set<String> dictionary = new HashSet<>();
    public static void main(String []args)
    {
        String temp_dic[] = { "i", "like", "sam", "sung", "samsung",
"mobile", "ice",
                            "cream", "icecream", "man", "go", "mango"};

        for (String temp :temp_dic)
        {
            dictionary.add(temp);
        }

        if(wordBreak("ilike")) {
            System.out.println("Yes");
        }
        else {
            System.out.println("No");
        }
        if(wordBreak("ilikesamsung")) {
            System.out.println("Yes");
        }
        else {
            System.out.println("No");
        }
    }
    public static boolean wordBreak(String word)
    {
        int size = word.length();

        if (size == 0)
            return true;
        for (int i = 1; i <= size; i++)
        {
            if (dictionary.contains(word.substring(0,i)) &&
                wordBreak(word.substring(i,size)))
                return true;
        }
        return false;
    }
}
```

Output:



The screenshot shows the Eclipse IDE's console window. The title bar includes tabs for 'Problems', 'Javadoc', 'Declaration', and 'Console'. The console text shows the application has terminated, followed by two 'Yes' responses to prompts.

```
<terminated> question_1 (2) [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.justj.openjdk
```

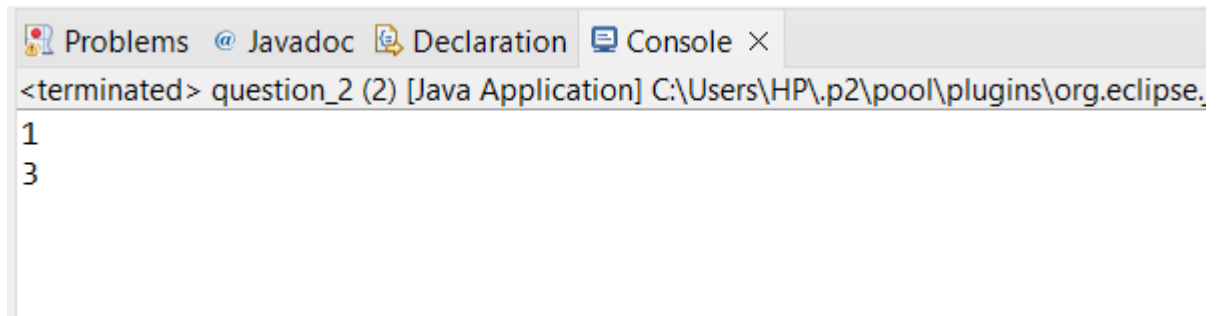
```
Yes
```

```
Yes
```

2,

```
class question_2 {  
    static int minCount(int n)  
    {  
        int[] squireq = new int[n + 1];  
  
        squireq[0] = 0;  
        squireq[1] = 1;  
  
        for (int i = 2; i <= n; ++i)  
        {  
            squireq[i] = Integer.MAX_VALUE;  
  
            for (int j = 1; i - (j * j) >= 0; ++j)  
            {  
                squireq[i] = Math.min(squireq[i], squireq[i - (j * j)]);  
            }  
  
            squireq[i] += 1;  
        }  
        int ans = squireq[n];  
        return ans;  
    }  
    public static void main(String[] args) {  
        System.out.println(minCount(100));  
        System.out.println(minCount(6));  
    }  
}
```

Output:



```
<terminated> question_2 (2) [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse.  
1  
3
```

3,

```
class question_3  
{  
    static boolean isDivisibleBy7(int num)  
    {  
        if( num < 0 )  
            return isDivisibleBy7( -num );  
        if( num == 0 || num == 7 )  
            return true;  
        if( num < 10 )  
            return false;  
        return isDivisibleBy7( num / 10 - 2 * ( num - num / 10 * 10 ) );  
    }  
    public static void main (String[] args)  
    {  
        int num = 371;  
        int num1=561;  
        if(isDivisibleBy7(num))  
            System.out.println(num+" is Divisible by 7");  
        else  
            System.out.println(num+ " is Not Divisible by 7");  
        if(isDivisibleBy7(num1))  
            System.out.println(num1+" is Divisible by 7");  
        else  
            System.out.println(num1+ " is Not Divisible by 7");  
    }  
}
```

Output:

```
Problems @ Javadoc Declaration Console ×
<terminated> question_3 (2) [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.justj.openjdk.f
371 is Divisible by 7
561 is Not Divisible by 7
```

4,

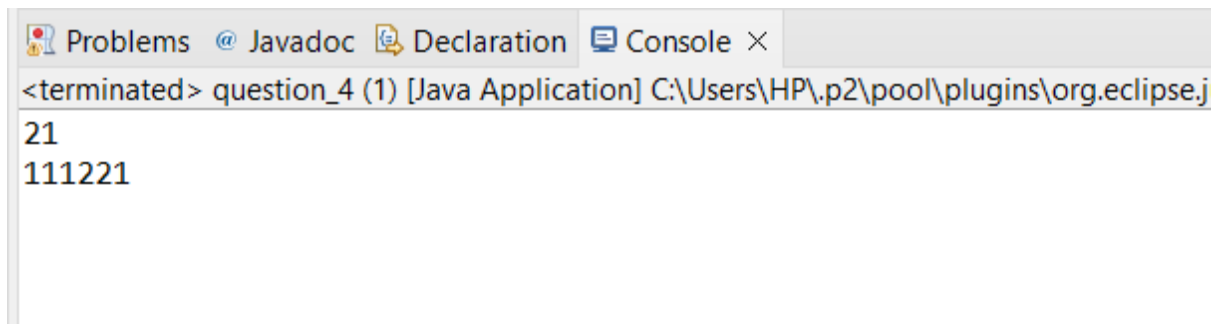
```
class question_4
{
    public static String lookandsay(int n)
    {
        if (n == 1)
            return "1";
        if (n == 2)
            return "11";
        String str = "11";
        for (int i = 3; i <= n; i++)
        {
            str += '3';
            int len = str.length();

            int count = 1;
            String ans = "";
            char []arr = str.toCharArray();
            for (int j = 1; j < len; j++)
            {
                if (arr[j] != arr[j - 1])
                {
                    ans += count + 0;
                    ans += arr[j - 1];
                    count = 1;
                }
                else count++;
            }
            str = ans;
        }

        return str;
    }
    public static void main(String[] args)
    {
        int N = 3;
        int n=5;
        System.out.println(lookandsay(N));
        System.out.println(lookandsay(n));
    }
}
```

}

Output:



The screenshot shows the Eclipse IDE's Console window. The title bar includes tabs for 'Problems', 'Javadoc', 'Declaration', and 'Console'. The console text shows the program has terminated, followed by the output '21' and '111221' on separate lines.

```
<terminated> question_4 (1) [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.j  
21  
111221
```

Submitted by:

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