Easy

1. Java Int to String
   https://www.hackerrank.com/challenges/java-int-to-string/problem

You are given an integer n, you have to convert it into a string.

Please complete the partially completed code in the editor. If your code successfully converts n into a string s the code will print "Good job". Otherwise it will print "Wrong answer".

n can range between -100 to 100 inclusive.

```java
1.  import java.util.*;
2.  import java.security.*;
3.  public class Solution {
4.    public static void main(String[] args) {
5.
6.      DoNotTerminate.forbidExit();
7.
8.      try {
9.        Scanner in = new Scanner(System.in);
10.       int n = in .nextInt();
11.       in.close();
12.       //String s=???; Complete this line below
13.        //Write your code here
14.        String s = String.valueOf(n);
15.
16.
17.       if (n == Integer.parseInt(s)) {
18.         System.out.println("Good job");
19.       } else {
20.         System.out.println("Wrong answer.");
21.       }
22.     } catch (DoNotTerminate.ExitTrappedException e) {
23.       System.out.println("Unsuccessful Termination!!");
24.     }
25.   }
26. }
27.
28. //The following class will prevent you from terminating the code using exit(0)!
29. class DoNotTerminate {
30.
31.   public static class ExitTrappedException extends SecurityException {
32.
33.     private static final long serialVersionUID = 1;
34.   }
35.
36.   public static void forbidExit() {
37.     final SecurityManager securityManager = new SecurityManager() {
38.       @Override
39.       public void checkPermission(Permission permission) {
40.         if (permission.getName().contains("exitVM")) {
41.           throw new ExitTrappedException();
42.         }
43.       }
44.     };
45.     System.setSecurityManager(securityManager);
46.   }
47. }
48.
```

2. Java Substring
   https://www.hackerrank.com/challenges/java-substring/problem

Constraints

- $1 \le |s| \le 100$
- $0 \le start < end \le n$
- String s consists of English alphabetic letters (i.e., $[a - zA - Z]$) only.

Output Format

Print the substring in the inclusive range from $start$ to $end - 1$.

Sample Input

```
Helloworld
3 7
```

Sample Output

```
lowo
```

```java
1.  import java.io.*;
2.  import java.util.*;
3.  import java.text.*;
4.  import java.math.*;
5.  import java.util.regex.*;
6.
7.  public class Solution {
8.
9.      public static void main(String[] args) {
10.         Scanner in = new Scanner(System.in);
11.         String S = in.next();
12.         int start = in.nextInt();
13.         int end = in.nextInt();
14.
15.         System.out.println(S.substring(start, end));
16.     }
17. }
```

3. Java Static Initializer Block
   https://www.hackerrank.com/challenges/java-static-initializer-block/problem

Sample input 1

```
1
3
```

Sample output 1

```
3
```

Sample input 2

```
-1
2
```

Sample output 2

```
java.lang.Exception: Breadth and height must be positive
```

```java
1.  import java.io.*;
2.  import java.util.*;
3.  import java.text.*;
4.  import java.math.*;
5.  import java.util.regex.*;
6.
7.  public class Solution {
8.
9.  // Write your code here
10.     private static int B;
11.     private static int H;
12.     private static boolean flag;
13.
14.     static {
15.         Scanner scan = new Scanner(System.in);
16.         B = scan.nextInt();
17.         H = scan.nextInt();
18.         scan.close();
19.         if(B <= 0 || H <= 0){
20.             System.out.println("java.lang.Exception: Breadth and height must be positive");
21.             flag = false;
22.         }else{
23.             flag = true;
24.         }
25.     }
26.
27. public static void main(String[] args){
28.         if(flag){
29.             int area=B*H;
30.             System.out.print(area);
31.         }
32.
33.     }//end of main
34.
35. }//end of class
```

4. Java BigInteger
   https://www.hackerrank.com/challenges/java-biginteger/problem

Sample Input

```
1234
20
```

Sample Output

```
1254
24680
```

Explanation

$1234 + 20 = 1254$

$1234 \times 20 = 24680$

```java
1.  import java.io.*;
2.  import java.util.*;
3.  import java.text.*;
4.  import java.math.*;
5.  import java.util.regex.*;
6.
7.  public class Solution {
8.
9.      public static void main(String[] args) {
10.         /* Enter your code here. Read input from STDIN. Print output to STDOUT. You
    r class should be named Solution. */
11.         Scanner scan = new Scanner(System.in);
12.
13.         BigInteger num1;
14.         BigInteger num2;
15.         BigInteger sum = BigInteger.valueOf(0);
16.         BigInteger multiply = BigInteger.valueOf(0);
17.
18.         num1 = new BigInteger(scan.nextLine());
19.         num2 = new BigInteger(scan.nextLine());
20.
21.         sum = sum.add(num1);
22.         sum = sum.add(num2);
23.         multiply = num1.multiply(num2);
24.
25.         System.out.println(sum);
26.         System.out.println(multiply);
27.     }
28. }
```

5. Java Iterator
    https://www.hackerrank.com/challenges/java-iterator/problem

In this problem you need to complete a method func. The method takes an ArrayList as input. In that ArrayList there is one or more integer numbers, then there is a special string "###", after that there are one or more other strings. A sample ArrayList may look like this:

```
element[0]=>42
element[1]=>10
element[2]=>"###"
element[3]=>"Hello"
element[4]=>"Java"
```

You have to modify the func method by editing at most 2 lines so that the code only prints the elements after the special string "###". For the sample above the output will be:

```
Hello
Java
```

```java
1.  import java.util.*;
2.  public class Main{
3.
4.      static Iterator func(ArrayList mylist){
5.          Iterator it=mylist.iterator();
6.          while(it.hasNext()){
7.              Object element = it.next();
8.              if(element.equals("###"))//Hints: use instanceof operator
9.                  break;
10.             }
11.         return it;
12.
13.     }
14.     @SuppressWarnings({ "unchecked" })
15.     public static void main(String []args){
16.         ArrayList mylist = new ArrayList();
17.         Scanner sc = new Scanner(System.in);
18.         int n = sc.nextInt();
19.         int m = sc.nextInt();
20.         for(int i = 0;i<n;i++){
21.             mylist.add(sc.nextInt());
22.         }
23.
24.         mylist.add("###");
25.         for(int i=0;i<m;i++){
26.             mylist.add(sc.next());
27.         }
28.
29.         Iterator it=func(mylist);
30.         while(it.hasNext()){
31.             Object element = it.next();
32.             System.out.println((String)element);
33.         }
34.     }
35. }
36.
```

6. Java Instanceof keyword
   https://www.hackerrank.com/challenges/java-instanceof-keyword/problem

Sample Input

```
5
Student
Student
Rockstar
Student
Hacker
```

Sample Output

```
3 1 1
```

```java
1.  import java.util.*;
2.
3.  class Student{}
4.  class Rockstar{}
5.  class Hacker{}
6.
7.  public class InstanceOFTutorial{
8.
9.      static String count(ArrayList mylist){
10.         int a = 0,b = 0,c = 0;
11.         for(int i = 0; i < mylist.size(); i++){
12.             Object element=mylist.get(i);
13.             if(element instanceof Student)
14.                 a++;
15.             if(element instanceof Rockstar)
16.                 b++;
17.             if(element instanceof Hacker)
18.                 c++;
19.         }
20.         String ret = Integer.toString(a)+" "+ Integer.toString(b)+" "+ Integer.toStri
    ng(c);
21.         return ret;
22.     }
23.
24.     public static void main(String []args){
25.         ArrayList mylist = new ArrayList();
26.         Scanner sc = new Scanner(System.in);
27.         int t = sc.nextInt();
28.         for(int i=0; i<t; i++){
29.             String s=sc.next();
30.             if(s.equals("Student"))mylist.add(new Student());
31.             if(s.equals("Rockstar"))mylist.add(new Rockstar());
32.             if(s.equals("Hacker"))mylist.add(new Hacker());
33.         }
34.         System.out.println(count(mylist));
35.     }
36. }
37.
```

7. Java Generics
   https://www.hackerrank.com/challenges/java-generics/problem

You are given code in the editor. Complete the code so that it prints the following lines:

```
1
2
3
Hello
World
```

```java
1.  import java.io.IOException;
2.  import java.lang.reflect.Method;
3.
4.  class Printer
5.  {
6.      //Write your code here
7.      <T> void printArray(T[] array) {
8.          for (T element : array) {
9.              System.out.println(element);
10.         }
11.     }
12. }
13.
14. public class Solution {
15.
16.     public static void main( String args[] ) {
17.         Printer myPrinter = new Printer();
18.         Integer[] intArray = { 1, 2, 3 };
19.         String[] stringArray = {"Hello", "World"};
20.         myPrinter.printArray(intArray);
21.         myPrinter.printArray(stringArray);
22.         int count = 0;
23.
24.         for (Method method : Printer.class.getDeclaredMethods()) {
25.             String name = method.getName();
26.
27.             if(name.equals("printArray"))
28.                 count++;
29.         }
30.
31.         if(count > 1)System.out.println("Method overloading is not allowed!");
32.
33.     }
34. }
```

8. Java Output Formatting
   https://www.hackerrank.com/challenges/java-output-formatting/problem

Sample Input

```
java 100
cpp 65
python 50
```

Sample Output

```
================================
java           100
cpp            065
python         050
================================
```

```java
1.  import java.util.Scanner;
2.
3.  public class Solution {
4.
5.      public static void main(String[] args) {
6.              Scanner sc=new Scanner(System.in);
7.              System.out.println("================================");
8.              for(int i=0;i<3;i++)
9.              {
10.                 String s1=sc.next();
11.                 int x=sc.nextInt();
12.                 //Complete this line
13.                 System.out.printf("%-15s%03d\n", s1, x);
14.             }
15.             System.out.println("==============================");
16.
17.     }
18. }
```

Medium

1. Tag Content Extractor
   https://www.hackerrank.com/challenges/tag-content-extractor/problem

Sample Input

```
4
<h1>Nayeem loves counseling</h1>
<h1><h1>Sanjay has no watch</h1></h1><par>So wait for a while</par>
<Amee>safat codes like a ninja</amee>
<SA premium>Imtiaz has a secret crush</SA premium>
```

Sample Output

```
Nayeem loves counseling
Sanjay has no watch
So wait for a while
None
Imtiaz has a secret crush
```

```java
1.  import java.io.*;
2.  import java.util.*;
3.  import java.text.*;
4.  import java.math.*;
5.  import java.util.regex.*;
6.
7.  public class Solution{
8.      public static void main(String[] args){
9.
10.         Scanner in = new Scanner(System.in);
11.         int testCases = Integer.parseInt(in.nextLine());
12.         while(testCases>0){
13.             String line = in.nextLine();
14.
15.             //Write your code here
16.             boolean matchFound = false;
17.             Pattern r = Pattern.compile("<(.+)>([^<]+)</\\1>");
18.             Matcher m = r.matcher(line);
19.             while(m.find()){
20.                 System.out.println(m.group(2));
21.                 matchFound = true;
22.             }if(!matchFound){
23.                 System.out.println("None");
24.             }
25.             testCases--;
26.         }
27.     }
28. }
```