**Maximum Sum**

Given an array A of N integers. Now, you have to output the sum of unique values of the maximum subarray sum of all the possible subarrays of the given array A.  
**Note:**Subarray means contiguous elements with atleast one element in it.

**Input Format**

The first line of the input contains a single integer N, the total number of elements in array A.  
The next line of the input contains N space-separated integers representing the elements of the array.

**Output Format**

The only single line of the output should contain a single integral value representing the answer to the problem.

**Constraints**

1≤N≤2000  
0≤|Ai|≤109

**Sample Input**

4

5 -2 7 -3

**Sample Output**

17

**Explanation**

Following are the possible number of subarrays and their respective maximum subarray sums:

[5]=[5]=5  
[5,−2]=[5]=5  
[5,−2,7]=[5,−2,7]=10  
[5,−2,7,−3]=[5,−2,7]=10  
[−2]=[−2]=−2  
[−2,7]=[7]=7  
[−2,7,−3]=[7]=7  
[7]=[7]=7  
[7,−3]=[7]=7  
[−3]=[−3]=−3

5+10+(−2)+7+(−3)=17

**Note:**Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.

Time Limit: 1.0 sec(s) for each input file

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes

Allowed Languages: C#, Go, Groovy, Java, Java 8, Python, Python 3, Ruby, Scala

**The Upload Server**

A new website to host video and music is built up by the company **X.** The engineers at **X**are facing a major issue in identifying whether the data they receive in one of their API is of video or music.

Now, you will be given N lines of data. Each line of data consists a list of strings. Each string either represents an integer or a name. For each line of data, you need to check whether that data corresponds to a music or a video.

You need to follow the following rules to detect the data and store it:

1. A Music data consists of a name and an integer that denote the bitrate and nothing else.
2. A video data consists of a name and two integers that denote the resolution of the video and nothing else.
3. Rest of the data which does not match any of the formats above is to be ignored.
4. A music or a video name can consist of integers but it will contain at least one character of the English alphabets.
5. An integer in the data will consist only of integers, and it will never start with 0.

For each line of data, if it satisfies the constraints of a music then print **M,** if it satisfies constraints of a video print **V,**or else print **N**which means that the data has to be ignored.

**Input Format**

The first line contains an integer N as input denoting the total numbers of lines in the input.  
Next N lines contains either two strings or three strings separated by space.  
  
**Output Format**

For each data, you need to print either of the three characters **N, V**or**M.**

**Constraints**

1≤N≤105  
1≤word≤15 where word is the name of either music or a video.  
1≤bitrate≤1032 where bitrate is the bitrate of the song.  
1≤resx,resy≤1032  where resx and resy denote the width and height of video in pixels.

**Sample Input**

3

243 5399

a12 320 240

aviation 189

**Sample Output**

N

V

M

**Explanation**

In the given sample. the first one does not correspond to either a video or a music as it contains two integers which do not match the format of any of the two types of data.

The second data corresponds to a video as it contains one name and two integers.  
  
The third data corresponds to a music as it contains one name and one integer.

**Note:**Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.

Time Limit: 2.0 sec(s) for each input file

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded if any testcase passes

Allowed Languages: C#, Go, Groovy, Java, Java 8, Python, Python 3, Ruby, Scala

**Question**

**1**

Max. Marks 4.00

In OOP, a **friend** function of a class has exclusive access to which members of that class?

Top of Form

* Private & protected members
* Public & protected members
* Private & public members
* Private members
* Protected members

Bottom of Form

**Question**

**2**

Max. Marks 4.00

In OOP, which of the following functions is used to implement the **late binding** mechanism?

Top of Form

* Virtual
* Operator
* Const
* Static

Bottom of Form

**Question**

**3**

Max. Marks 4.00

In OOP, which of the following syntaxes is used to access a class data member using **this** pointer?

Top of Form

* this->x
* this.x
* \*this.x
* \*this-x

Bottom of Form

**Question**

**4**

Max. Marks 4.00

In OOP, which of the following signifies an **abstract** class?

Top of Form

* Declaring it as abstract by using a static keyword
* Declaring it as abstract by using a virtual keyword
* Making at least one member function a virtual function
* Making at least one member function a pure virtual function

Bottom of Form

**Question**

**5**

Max. Marks 4.00

In Hibernate, which element, within the **id** element, is used to automatically generate **primary key** values?

Top of Form

* <class>
* <meta>
* <property>
* <generator>

Bottom of Form

**Question**

**6**

Max. Marks 4.00

In Hibernate, which of these is a valid statement for creating a **SessionFactory** object?

Top of Form

* SessionFactory sf= new Configuration().configure().SessionFactory();
* SessionFactory sf = new Configuration().buildSessionFactory();
* SessionFactory sf= new configure().buildSessionFactory();
* SessionFactory sf = new Configuration().configure().buildSessionFactory();

Bottom of Form

**Question**

**7**

Max. Marks 4.00

Assume the following:

* In Spring, **file** is an abstract class that comprises the **toFile()** method.
* It also contains two concrete classes called **ImageFile** and **BinaryFile**.
* The **toFile()** method is implemented in both the concrete classes.

Which of the following file will you reference and call the**toFile()** method for?

Top of Form

* Binary file
* Image file
* Both of these
* None of these

Bottom of Form

**Question**

**8**

Max. Marks 4.00

In Spring, which of the following interfaces is used to map a database row to a **Java** object?

Top of Form

* ResultSet
* RowMapper
* RowSetMapper
* ResultSetMapper

Bottom of Form

**Question**

**9**

Max. Marks 4.00

In Java, which of the following are valid **constructors** of the **Thread** class:

1. Thread(Runnable r, String name)
2. Thread()
3. Thread(int priority)
4. Thread(Runnable r, ThreadGroup g)
5. Thread(Runnable r, int priority)

Top of Form

* 1 and 3
* 2 and 4
* 1 and 2
* 2 and 5

Bottom of Form

**Question**

**10**

Max. Marks 4.00

What is the output of the following Java code:

class Check

{

public static void main(String [] args)

{

Check p = new Check();

p.start();

}

void start()

{

boolean b1 = false;

boolean b2 = fix(b1);

System.out.println(b1 + " " + b2);

}

boolean fix(boolean b1)

{

b1 = true;

return b1;

}

}

Top of Form

* true true
* false true
* true false
* false false

Bottom of Form