# Shop With Grandpa

**Note:** This problem will be graded for 1%. Your coding style will contribute 30% toward your grade for the lab

## Uncle Grandpa is currently running the Shop With Grandpa company – South-East Asia largest E-commerce firm. Now he needs to analyze the market by looking at all the accesses to the website. There is a stream of logs that is received by his servers, each of form: IP country duration. Each IP is guaranteed to belong to no more than 1 country.

## He will need to extract 3 types of information:

## The maximum total duration of accessing time from any IP in a country.

* Number of countries with at least one IP which has accessed the website
* Number of distinct IP from a country

## Input

The first line contains a single integer – the number of queries he will have to handle

Each of the following lines contain a query of the following 4 types

* – the from accessed the website for minutes. ( will be in the form of where ) ( consists of only lower-case English letters, ( is an integer,
* – The maximum total duration of accessing time from any IP in a country
* - Number of countries with at least one IP which has accessed the website
* 4 - Number of distinct IP from

## Output

For each query of type 2, 3, 4, output on a line a single integer – the answer to the query

## Examples

|  |  |
| --- | --- |
| Input (website1.in) | Output (website1.out) |
| 10  1 192.168.0.1 usa 3  1 192.168.0.1 usa 5  1 192.168.0.2 singapore 1  2 usa  1 192.168.0.5 malaysia 2  3  1 192.168.0.3 singapore 5  1 192.168.0.4 usa 5  4 usa  4 vietnam | 8  3  2  0 |

## Explanation:

## For the 4th query, the IP that has the biggest total accessing time from the USA is with a total time of 8

## For the 6th query, there are 3 countries with at least 1 IP which has accessed the website. The 3 countries are

## For the 9th query, there are 2 different IP from the USA:

## For the 10th query, since there hasn’t been any IP from Vietnam accessing the website, the answer to this query is

## Note:

1. A skeleton file has been given to help you. You should not create a new file or rename the file provided. You should develop your program using this skeleton file.
2. You are free to define your own helper methods and classes (or remove existing ones) if it is suitable but you must put all the new classes, if any, in the same skeleton file provided

## Skeleton File

You are given the skeleton file Website.java. You should see the following contents when you open the file:

|  |
| --- |
| /\*\*  \* Name :  \* Matric. No :  \*/  import java.util.\*;  public class Website {  private void run() {  }  public static void main(String args[]) {  Website runner = new Website();  runner.run();  }  } |