

18<sup>th</sup> South African Regional  
ACM Collegiate Programming Contest

Sponsored by IBM

15 October 2016

**Problem 0 — Translucent Balloon  
Hello World**

**Problem Description**

Need a nice excuse for saying Hello so often.

**Input**

You are given a list of names, one per line. The termination of the input file contains a single . on its own line. No name will contain whitespace.

**Output**

You need to output the world Hello followed by the name and a full stop for every name input.

**Sample input**

```
Peter  
Bob  
.
```

**Sample output**

```
Hello Peter.  
Hello Bob.
```

**Time limit**

5 seconds

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**Problem 1 — Clear Balloon  
Toy Test**

**Problem Description**

You have been approached by a leading toy manufacturer to automate the process of toy acceptance and rejection after production. The toys are measured by laser and you are given these measurements and the criteria to which they must comply.

**Input**

For each toy, 3 measurements are given in millimeters (mm) followed by a tolerance, also in millimeters. Each measurement must be within the specified tolerance of every other measurement. A tolerance of 0 requires all measurements to be exactly the same. A first measurement of  $-1$  signals the end of input.

**Output**

All you need to do is output 0 if the toy is rejected and 1 if it has been accepted. A toy is rejected if at least one of the measurement pairs falls outside the specified tolerance zone.

**Sample input**

```
5 9 20 2
5 6 7 2
50 55 50 5
5 5 5 0
-1
```

**Sample output**

```
0
1
1
1
```

**Time limit**

5 seconds