



5 - Virology

Little is understood about the virus and the way it infects its human hosts, but what has been discovered is a peculiar pattern in human DNA that can tell virologists if a particular person is vulnerable or immune to the virus. DNA was sampled from every individual working with the CDC, and a pattern was recognized to be present in only those who were infected by the virus.

We have isolated 9 genes within human DNA that can tell us if a person is vulnerable to infection. Most people have at least 14 occurrences of these genes. An individual that is considered **vulnerable** is known to have met the following conditions:

- The individual must have exactly 14 occurrences of the numbered DNA genes (1-9). You will only test samples from people that meet this condition. There will be a max of 3 of the same gene in a test case. The order of the genes is not significant.
- Within their DNA there must be 4 total instances of triples and/or straights and 1 pair
 - triples (3 of the same gene, example: [7 7 7])
 - straights of 3 (examples: [1 2 3] [7 8 9] [4 5 6])
 - pair (2 of the same gene, example: [9 9])

Note: An instance of a gene cannot be reused in multiple sets

So if an individual with 14 numbered genes in their DNA has

- 4 triples/straights AND
- 1 pair

then they are vulnerable. If this pattern cannot be found in an individual's DNA then that individual is **immune**.

Your job is to take a list of DNA samples from individuals with 14 of the numbered genes and determine if they are vulnerable.

Input

The first number will be the number of test cases N ($1 \leq N \leq 200000$). Following that will be N lines of 14 numbers separated by spaces indicating the genes present in the DNA.

Output

If an individual is vulnerable to the virus, output `vulnerable`. Otherwise, output `Immune`. Output each answer on a separate line.

Sample Input

```
2
1 1 2 3 4 4 4 5 6 7 7 8 9 1
1 1 1 2 3 4 4 4 5 6 6 7 8 9
```

Sample Output

```
Vulnerable
```

```
Immune
```

The statements and opinions included in these pages are those of the Hosts of the ACM ICPC South Central USA Regional Programming Contest only. Any statements and opinions included in these pages are not those of Louisiana State University or the LSU Board of Supervisors.

© 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 ACM ICPC South Central USA Regional Programming Contest