### 

**36th Annual High School Programming Contest**

| **Sponsored by** |  |
| --- | --- |

##### April 12, 2024

###### Gold Problem #3: The Harvard Comma

Background Information: The Harvard Comma, otherwise known as the Oxford Comma or Serial Comma, is a grammatical punctuation sign that is used in a list of three or more items, after the penultimate (second to last item) and the coordinating conjunction. For example, the following list

Apples, Pears, and Fish

has a Harvard Comma between the words “Pears” and “and.”

However, not all style guides support the use of the Harvard Comma. For example, in Canada, the previous list would be properly stated as

Apples, Pears and Fish

Your program will read in a series of three or more strings. The last two strings will be a coordinating conjunction (AND or OR), followed by a style string (HARVARD or CANADA). Your program will properly add commas to the list of words (assuming there are more than 2 items in the list, otherwise no commas), based on whether you are using the Harvard Comma or the Canadian Style.

###### Programming Problem:

Input:  N Strings each on their own line. The second to last line will be either AND or OR. The last line will be HARVARD or CANADA (N < 10)

Output: The properly comma’ed string on one line with one space between words, but no spaces between a word and an immediately succeeding comma.

###### Example 1: Input: Example 3: Input:

###### FISH PIG

OR COW

CANADA FISH

OR

###### Output:  HARVARD

FISH

Output:

###### Example 2: Input: PIG, COW, OR FISH

###### BIRD

CAT Example 4: Input:

AND MOUSE

HARVARD DISK

FAN

###### Output:  CHIP

###### BIRD AND CAT AND

CANADA

Output:

MOUSE, DISK, FAN AND CHIP