

Conflict with Grader

To avoid getting an error from the grader about using the class variables `title`, `subject`, or `summary`, rename any variable you have used with these names to something else. Thank you!

PART II: COMPOSITE TRIGGERS (15/15 points)

COMPOSITE TRIGGERS

So the triggers from the previous page are mildly interesting, but we want to do better: we want to 'compose' the earlier triggers, to set up more powerful alert rules. For instance, we may want to raise an alert only when both "google" and "stock" were present in the news item (an idea we can't express right now).

Note that these triggers are *not* word triggers and should *not* be subclasses of `WordTrigger`.

PROBLEM 6

Implement a NOT trigger (`NotTrigger`).

This trigger should produce its output by inverting the output of another trigger. The NOT trigger should take this other trigger as an argument to its constructor. (Why its constructor? Because we can't change what parameters `evaluate` takes in... that'd break our polymorphism). So, given a trigger `T` and a news item `x`, the output of the NOT trigger's `evaluate` method should be equivalent to `not T.evaluate(x)`.

When this is done, the `NotTrigger` unit tests should pass.

Canopy specific instructions: Every time you modify code in `ps7.py` go to

Run -> Restart Kernel (or hit the CTRL with the dot on your keyboard)

before running `ps7_test.py`. **You have to do this every time you modify the file `ps7.py` and want to run the file `ps7_test.py`**, otherwise changes to the former will not be incorporated in the latter.

PROBLEM 7

Implement an AND trigger (`AndTrigger`).

This trigger should take two triggers as arguments to its constructor, and should fire on a news story only if *both* of the inputted triggers would fire on that item.

When this is done, the `AndTrigger` unit tests should pass.

PROBLEM 8

Implement an OR trigger (`OrTrigger`).

This trigger should take two triggers as arguments to its constructor, and should fire if either one (or both) of its inputted triggers would fire on that item.

When this is done, the `OrTrigger` unit tests should pass.

Note: In addition to the three classes in this problem (`NotTrigger` , `AndTrigger` , and `OrTrigger`), please provide your definitions of `WordTrigger` and `TitleTrigger` in the following box.

```
1 # Enter your code for WordTrigger, TitleTrigger,
2 # NotTrigger, AndTrigger, and OrTrigger in this box
3
4 # TODO: WordTrigger
5 class WordTrigger(Trigger):
6
7     def __init__(self, word):
8         self.word = word
9
10    def isWordIn(self, text):
11        text = text.lower()
12        for char in string.punctuation:
13            text = text.replace(char, ' ')
14        words = string.split(text)
15        return self.word.lower() in words
16
```

Correct

Test results

Hide output

CORRECT

Test: AndTrigger

Output:

```
Evaluating story with title 'Phoenix Suns!' and AndTrigger on title words 'Boston' and 'minneapolis':
False
Evaluating story with title 'boston, minneapolis, phoenix!' and AndTrigger on title words 'Boston' and 'minneapolis':
True
Evaluating story with title 'BOSTON RED SOX' and AndTrigger on title words 'Boston' and 'minneapolis':
False
Evaluating story with title 'Minneapolis is not the capital of Minnesota' and AndTrigger on title words 'Boston' and 'minneapolis':
False
Evaluating story with title 'Phoenix Suns!' and AndTrigger on title words 'red' and 'sox':
False
Evaluating story with title 'boston, minneapolis, phoenix!' and AndTrigger on title words 'red' and 'sox':
False
Evaluating story with title 'BOSTON RED SOX' and AndTrigger on title words 'red' and 'sox':
True
Evaluating story with title 'Minneapolis is not the capital of Minnesota' and AndTrigger on title words 'red' and 'sox':
False
Evaluating story with title 'Phoenix Suns!' and AndTrigger on title words 'PHOENIX' and 'minneapolis':
False
Evaluating story with title 'boston, minneapolis, phoenix!' and AndTrigger on title words 'PHOENIX' and 'minneapolis':
True
Evaluating story with title 'BOSTON RED SOX' and AndTrigger on title words 'PHOENIX' and 'minneapolis':
False
Evaluating story with title 'Minneapolis is not the capital of Minnesota' and AndTrigger on title words 'PHOENIX' and 'minneapolis':
False
```

Test: NotTrigger

Output:

```
Evaluating story with title 'Phoenix Suns!' and NotTrigger on title word 'Boston':
True
Evaluating story with title 'boston, minneapolis, phoenix!' and NotTrigger on title word 'Boston':
False
Evaluating story with title 'BOSTON RED SOX' and NotTrigger on title word 'Boston':
False
Evaluating story with title 'Phoenix Suns!' and NotTrigger on title word 'minneapolis':
True
Evaluating story with title 'boston, minneapolis, phoenix!' and NotTrigger on title word 'minneapolis':
False
Evaluating story with title 'BOSTON RED SOX' and NotTrigger on title word 'minneapolis':
True
Evaluating story with title 'Phoenix Suns!' and NotTrigger on title word 'PHOENIX':
False
Evaluating story with title 'boston, minneapolis, phoenix!' and NotTrigger on title word 'PHOENIX':
False
Evaluating story with title 'BOSTON RED SOX' and NotTrigger on title word 'PHOENIX':
True
```

Test: OrTrigger

Output:

```
Evaluating story with title 'Phoenix Suns!' and OrTrigger on title words 'Boston' and 'minneapolis':
False
Evaluating story with title 'boston, minneapolis, phoenix!' and OrTrigger on title words 'Boston' and 'minneapolis':
True
Evaluating story with title 'BOSTON RED SOX' and OrTrigger on title words 'Boston' and 'minneapolis':
True
Evaluating story with title 'Minneapolis is not the capital of Minnesota' and OrTrigger on title words 'Boston' and 'minneapolis':
True
Evaluating story with title 'Phoenix Suns!' and OrTrigger on title words 'red' and 'sox':
False
Evaluating story with title 'boston, minneapolis, phoenix!' and OrTrigger on title words 'red' and 'sox':
False
Evaluating story with title 'BOSTON RED SOX' and OrTrigger on title words 'red' and 'sox':
True
Evaluating story with title 'Minneapolis is not the capital of Minnesota' and OrTrigger on title words 'red' and 'sox':
False
Evaluating story with title 'Phoenix Suns!' and OrTrigger on title words 'PHOENIX' and 'MINNESOTA':
True
Evaluating story with title 'boston, minneapolis, phoenix!' and OrTrigger on title words 'PHOENIX' and 'MINNESOTA':
True
Evaluating story with title 'BOSTON RED SOX' and OrTrigger on title words 'PHOENIX' and 'MINNESOTA':
False
Evaluating story with title 'Minneapolis is not the capital of Minnesota' and OrTrigger on title words 'PHOENIX' and 'MINNESOTA':
True
```

Hide output

Check

Save

You have used 2 of 30 submissions

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