

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 III: FILTERING (10/10 points)

At this point, you can run `ps7.py`, and it will fetch and display Google and Yahoo news items for you in little pop-up windows. How many news items? *All of them.*

Right now, the code we've given you in `ps7.py` gets all of the feeds every minute, and displays the result. This is nice, but, remember, the goal here was to filter out only the the stories we wanted.

PROBLEM 10

Write a function, `filterStories(stories, triggerlist)` that takes in a list of news stories and a list of triggers, and returns a list of only the stories for which *any* of the triggers fires on. The list of stories should be unique - that is, do not include any duplicates in the list. For example, if 2 triggers fire on StoryA, only include StoryA in the list one time.

After completing Problem 10, run the file `ps7_test.py`. All the tests should now 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.

Also after completing Problem 10, you can try running `ps7.py`, and various RSS news items should pop up, filtered by some hard-coded triggers defined for you in some code near the bottom. The code runs an infinite loop, checking the RSS feed for new stories every 60 seconds. Press "Exit" at the bottom of the popup window to exit out of the program.

Note: In addition to the function `filterStories`, please provide your definitions of `WordTrigger`, `TitleTrigger`, `SubjectTrigger`, `SummaryTrigger`, and `PhraseTrigger` in the following box.

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

Correct

Test results

Hide output

CORRECT

Test: filterStories 1

This is a test similar to test8FilterStories in ps6_test.py.
The NewsStories are the same but we only test on the PhraseTrigger.

Output:

```
True
True
True
False
False
False
Number of filtered stories: 3
```

Test: filterStories 2

This test is the same as test8FilterStories2 in ps6_test.py.

Output:

```
True
True
len(filteredStories) = 2
```

Test: filterStories 3

Output:

```
Trigger 1: TrueTrigger() - always returns True
Trigger 2: TrueTrigger() - always returns True
Story with title 'MIT and Russia Partner with Skolkovo Tech' and subject 'New school located near Moscow'
story in filteredStories: True
Story with title 'Russian dignitaries Visit USA' and subject 'Obama meets with Russian President Vladimir Putin'
story in filteredStories: True
Story with title 'Russia Overrun With Friendly Tigers' and subject 'Putin poses for photo op with cuddly felines'
story in filteredStories: True
Story with title 'Mitt Romney Defeated' and subject 'Obama edges win over Republican challenger Mitt Romney'
story in filteredStories: True
Number of filtered stories: 4
Story titles in the list of filtered stories your code generated:
['MIT and Russia Partner with Skolkovo Tech', 'Mitt Romney Defeated', 'Russia Overrun With Friendly Tigers', 'Russian dignitaries Visit USA']
```

Test: filterStories 4

Output:

```
Trigger 1: TitleTrigger("Russia")
Trigger 2: SubjectTrigger("Putin")
Trigger 3: TitleTrigger("MIT")
Story with title 'MIT and Russia Partner with Skolkovo Tech' and subject 'New school located near Moscow'
story in filteredStories: True
Story with title 'Russian dignitaries Visit USA' and subject 'Obama meets with Russian President Vladimir Putin'
story in filteredStories: True
Story with title 'Russia Overrun With Friendly Tigers' and subject 'Putin poses for photo op with cuddly felines'
story in filteredStories: True
Story with title 'Mitt Romney Defeated' and subject 'Obama edges win over Republican challenger Mitt Romney'
story in filteredStories: False
Number of filtered stories: 3
Story titles in the list of filtered stories your code generated:
['MIT and Russia Partner with Skolkovo Tech', 'Russia Overrun With Friendly Tigers', 'Russian dignitaries Visit USA']
```

Test: filterStories 5

Output:

```
Trigger 1: FalseTrigger() - always returns False
Story with title 'MIT and Russia Partner with Skolkovo Tech' and subject 'New school located near Moscow'
story in filteredStories: False
Story with title 'Russian dignitaries Visit USA' and subject 'Obama meets with Russian President Vladimir Putin'
story in filteredStories: False
Story with title 'Russia Overrun With Friendly Tigers' and subject 'Putin poses for photo op with cuddly felines'
story in filteredStories: False
Story with title 'Mitt Romney Defeated' and subject 'Obama edges win over Republican challenger Mitt Romney'
story in filteredStories: False
Number of filtered stories: 0
Story titles in the list of filtered stories your code generated:
[]
```

Test: filterStories 6

Output:

```
Trigger 1: AndTrigger(TitleTrigger("Russia"), SubjectTrigger("Putin"))
Trigger 2: TitleTrigger("MIT")
Story with title 'MIT and Russia Partner with Skolkovo Tech' and subject 'New school located near Moscow'
story in filteredStories: True
Story with title 'Russian dignitaries Visit USA' and subject 'Obama meets with Russian President Vladimir Putin'
story in filteredStories: False
Story with title 'Russia Overrun With Friendly Tigers' and subject 'Putin poses for photo op with cuddly felines'
story in filteredStories: True
Story with title 'Mitt Romney Defeated' and subject 'Obama edges win over Republican challenger Mitt Romney'
story in filteredStories: False
Number of filtered stories: 2
Story titles in the list of filtered stories your code generated:
['MIT and Russia Partner with Skolkovo Tech', 'Russia Overrun With Friendly Tigers']
```

Test: filterStories 7

Output:

```
Trigger 1: PhraseTrigger("Neil deGrasse Tyson")
Trigger 2: OrTrigger(SummaryTrigger("Mars"), SummaryTrigger("Venus"))
Story with title 'Planetarium Popular' and subject 'Strangely, children enjoy learning' and summary 'Astrophysicist Neil deGrasse Tyson brings in new visitors to NYC museum'
story in filteredStories: True
Story with title 'NASA funding slashed' and subject 'No future visits to Mars' and summary 'Children sad at the loss of future jobs for astronauts'
story in filteredStories: False
Story with title 'Rover Visits the Red Planet' and subject 'Curiosity picks up where Spirit left off' and summary 'Findings reveal potential for life on Mars'
story in filteredStories: True
Story with title 'Uninhabitable Planets' and subject 'Uranus, Neptune deemed too cold' and summary 'Venus, Jupiter deemed much too toxic'
story in filteredStories: True
Number of filtered stories: 3
Story titles in the list of filtered stories your code generated:
['Planetarium Popular', 'Rover Visits the Red Planet', 'Uninhabitable Planets']
```

Test: filterStories 8

Output:

```
Trigger 1: PhraseTrigger("Neil deGrasse Tyson")
Trigger 2: SummaryTrigger("Mars")
Trigger 3: SummaryTrigger("Venus")
Story with title 'Planetarium Popular' and subject 'Strangely, children enjoy learning' and summary 'Astrophysicist Neil deGrasse Tyson brings in new visitors to NYC museum'
story in filteredStories: True
Story with title 'New Movie at Planetarium' and subject 'Planetarium shows new movie about space' and summary 'Astrophysicist Neil deGrasse Tyson presents a new movie about the planet Mars'
story in filteredStories: True
Story with title 'Another Movie at Planetarium!' and subject 'Planetarium shows new movie about space' and summary 'Astrophysicist Neil deGrasse Tyson presents a new movie about the planet Venus'
story in filteredStories: True
Story with title 'Uninhabitable Planets' and subject 'Uranus, Neptune deemed too cold' and summary 'Venus, Jupiter deemed much too toxic; Mars still an unknown variable.'
story in filteredStories: True
Number of filtered stories: 4
Story titles in the list of filtered stories your code generated:
['Another Movie at Planetarium!', 'New Movie at Planetarium', 'Planetarium Popular', 'Uninhabitable Planets']
```

Hide output

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