

Programming Assignment 2

Getting started

Complete the reading and practice assignments posted on the course schedule. Review class handouts and examples. This assignment requires knowledge of String methods and conditional statements.

Programming Project: Citations

worth: 20 points

Parse a list of citation strings.

Google Scholar is an online search engine for scholarly literature. It works by locating books, articles, patents and other published works available online. By parsing the reference lists in these sources, it discovers new papers and calculates citation counts. In this assignment, you will work on implementing a part of this functionality, namely, parsing the text of references in APA ¹ format (a widely used publication style) to separate the values of specific fields.

APA formatting style defines the ways in which different content sources (books, articles, websites, movies, etc.) are referenced when they are cited. In this assignment, you will work with APA style for **books**, **magazine articles** and **journal articles**. Consider the format specifications and examples presented in the figure on the next page. These specifications detail the order and format in which the source data is presented in APA style.

The program that you write must read a citation of a book, magazine article or a journal article in the APA style and output

- the category (book, magazine article or a journal article) of the referenced item,
- a list of source components, separated by field,

as shown in the interactions below.

The following three interactions demonstrate three different runs of the program. First, a book reference:

```
Please enter a reference
Finney, J. (1970). Time and again. New York, NY: Simon and Schuster

BOOK-----
      AUTHORS: Finney, J.
      TITLE: Time and again.
      YEAR: 1970
      MONTH:
PUBLICATION TITLE:
      VOLUME:
      ISSUE:
      PAGES:
      PUBLISHER: Simon and Schuster
      ADDRESS: New York, NY
-----
```

¹APA - American Psychological Association

Citing a book in print

Format:

AUTHORS (YEAR OF PUBLICATION). TITLE. PUBLISHER CITY, STATE: PUBLISHER.

Examples:

Finney, J. (1970). Time and again. New York, NY: Simon and Schuster.

Case, L. P., Daristotle, L., Hayek, M. G., & Raash, M. F. (2011). Canine and feline nutrition: A resource for companion animal professionals. Maryland Heights, MO: Mosby.

Calfee, R. C., & Valencia, R. R. (1991). APA guide to preparing manuscripts for journal publication. Washington, DC: American Psychological Association.

Citing a magazine article in print

Format:

AUTHORS (YEAR, MONTH OF PUBLICATION). ARTICLE TITLE. MAGAZINE TITLE, VOLUME(ISSUE), PP.-PP.

Examples:

Tumulty, K. (2006, April). Should they stay or should they go? Time, 167(15), 3-40.

Gross, A., & Murphy, E. (2010, January/February). Seal of disapproval. The Environmental Magazine, 21(1), 34-37.

Barone, M. (2014, December). The experience factor. US News & World Report, 141(24), 26.

Citing a journal article in print

Format:

AUTHORS (PUBLICATION YEAR). ARTICLE TITLE. PERIODICAL TITLE, VOLUME(ISSUE), PP.-PP.

Examples:

Bailey, N.W. (2012). Evolutionary models of extended phenotypes. *Trends in Ecology & Evolution*, 27(3), 561-569.

Pempek, T.A., Yermolayeva, Y.A., & Calvert, S.L. (2009). College students' social networking experiences on Facebook. *Journal of Applied Developmental Psychology*, 3(2), 227-238.

The next interaction shows a magazine article.

Please enter a reference

Tumulty, K. (2006, April). Should they stay or should they go? Time, 167(15), 3-40

MAGAZINE ARTICLE-----

AUTHORS: Tumulty, K.
 TITLE: Should they stay or should they go?
 YEAR: 2006
 MONTH: April
 PUBLICATION TITLE: Time
 VOLUME: 167
 ISSUE: 15
 PAGES: 3-40
 PUBLISHER:
 ADDRESS:

And finally, a journal article.

Please enter a reference

Pempek, T.A., Yermolayeva, Y.A., & Calvert, S.L. (2009). College students' social networking experiences on Facebook. Journal of Applied Developmental Psychology, 3(2), 227-238

JOURNAL ARTICLE-----

AUTHORS: Pempek, T.A., Yermolayeva, Y.A., & Calvert, S.L.
 TITLE: College students' social networking experiences on Facebook.
 YEAR: 2009
 MONTH:
 PUBLICATION TITLE: Journal of Applied Developmental Psychology
 VOLUME: 3
 ISSUE: 2
 PAGES: 227-238
 PUBLISHER:
 ADDRESS:

Important Notes: regarding the input:

- Only valid data will be entered as input.
- Each references will use a single space as separator and may or may not end with a period.
- The title will always consist of a single sentence and will end with a period, an exclamation symbol or a question mark.
- Publisher name will not contain any commas.

Regarding the output:

- The output must list the category in the first line, and all fields, including those not specified in the reference, in the order shown.
- Field names should line up on the right side, as shown.

Hints: I suggest to start processing by determining the category of the item.

- The easiest way to tell a magazine article reference from other categories is by noting that its publication date contains a month specification spelled with letters, whereas the other categories only specify the year.
- Books are distinguished from journal articles by the presence of the publisher information following the : symbol (note, however, the : could be also present in a title).

Note that the authors, date and title fields are common for all three categories and they appear in the same order in all three categories of references. Likewise, magazine and journal articles have the same structure starting from the title. For simplicity, structure your code to capture these commonalities and avoid repeating the code that performs the same function.

I will provide a file with sample references for you to test your program. You can find or create other APA style references to test your code further.

Grading

The grading schema for this project is roughly as follows:

Your program should compile without syntax errors to receive any credit. If a part of your program is working, you will receive partial credit, but only if the program compiles without syntax errors.

- 1 point will be awarded for correctly handling the input
- 2 points for correct format and order of the fields in the output
- 6 points will be awarded for the correct determination of the category
- 2 points will be awarded for good programming style, as defined in handout 1.
- Correct parsing will take the rest of the points.