

Homework #2

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DUE DATE: 03/31/2009, 14:20

As directed below, you need to upload your submission file to the designated place on the course website.

Any form of cheating, lying, or plagiarism will not be tolerated. Students can get zero scores and/or fail the class and/or be kicked out of school and/or receive other punishments for those kinds of misconducts. Discussions on course materials and homework solutions are encouraged. But you should write the final solutions alone and understand them fully. Books, notes, and Internet resources can be consulted, but not copied from.

Since everyone needs to write the final solutions alone, there is absolutely no need to lend your homework solutions and/or source codes to your classmates at any time. In order to maximize the level of fairness in this class, lending and borrowing homework solutions are both regarded as dishonest behaviors and will be punished according to the honesty policy.

Both English and Traditional Chinese are allowed for writing any part of your homework (if the compiler recognizes Traditional Chinese, of course). We do not accept any other languages.

1 Description

POOArticle is a key class that helps users post their articles on the POO BBS. It should contain the following member variables to store an article:

- (1) ID: a unique **3-digit** integer for differentiating between two or more articles
- (2) title: a string for storing the title of the article
- (3) author: a string for storing the author name of the article
- (4) content: a string for storing the content of the article
- (5) evaluation count: an integer for counting the number of pushes or boos
- (6) evaluation messages: a fixed-size array of strings, each of which stores one line of evaluation message from the user
 - the size of the array is defined as a constant (static final) member MAXEVAL of the class.

Moreover, as in the usual BBS system, users can do some actions on the articles including “boo”, “push”, “arrow”, “list”, “show”. Those actions are implemented as the methods of the class, and work as follows:

- (1) a “push” function that increases the evaluation count by 1, and adds a line to the evaluation messages
- (2) a “boo” function that decreases the evaluation count by 1, and adds a line to the evaluation messages
- (3) an “arrow” function that does not change the evaluation count, and adds a line to the evaluation messages
- (4) a “show” function that shows all the article information, the content, and the evaluation messages
- (5) a “list” function that shows only the evaluation count, the ID, the title, and the author

Note that your push/boo/arrow functions should take care of the case where the message array is full, and cannot insert messages anymore.

Last but not the least, there should be a constructor, which takes the title, author, and content strings as arguments, and assigns a unique 3-digit integer ID to each POOArticle instance.

2 Requirements

- Fill in your own code to the files provided by the TAs.
 - (1) Add the necessary member variables.
 - (2) Write the constructor that assigns a unique 3-digit ID to each article as well as allocating the fixed-size array.
 - (3) Complete the member methods.
- The main function should implement the following steps:
 - (1) Create a POOArticle instance
 - (2) The arguments of the article are as follows:
 - (a) Author : Your ID number
 - (b) Title : Your Name
 - (c) Contents : I'm [Your Name], who is a student in [Your Department].
 - (3) Use some push, arrow, boo methods to add evaluation messages into the article sequentially. You need to add more than 5 (MAXEVAL) messages to demonstrate that your program can handle the case where the message array is full.
 - (4) Use show/list methods to let the article show/list itself.
 - (5) Create at least three more POOArticle instance with any content you want, and show/list the article.
 - (6) Add any code that can be used to demonstrate how your program works.

3 Submission File

Please upload a single ZIP encrypted file to CEIBA. The zip file should be like `b86506054.zip`, where the file name should be changed to your own school ID. The ZIP file should contain the following items:

- `POOArticle.java`
- `POOArticleDemo.java`

The TAs would re-compile and test your code with `demo.sh` or `demo.bat` provided on the course website. We may also use our own `PooArticleTest.java` program to test whether your `POOArticle` class works as required.