

Warmup Assignment

Objectives:

The main objectives of this assignment are:

- Work with Array and Singly Linked List
- Get familiar with Eclipse (import, export, Junit testing, debug)
- Write test cases and use Junit to test

The Assignment:

- Sort an array
- Find the kth largest element in an array, not sorted
- Reverse a singly linked list
- Remove duplicated in a sorted linked list

Getting Started:

1. Download and import the following zip file: **Warmup.zip**. For Eclipse:
 1. Open Eclipse
 2. Choose "File → Import".
 3. Select the "General" category.
 4. Pick "Existing Projects into Workspace"
 5. Click on "Next"
 6. Select the button for "Select Archive File" and browse to/select the zip file.
 7. Click on "Finish"
2. Read the comments in ArrayProblems.java and LinkedListProblems.java and understand the function for each method.
3. Complete the 4 unfinished test cases in ArrayProblemsTest.java and LinkedListProblemsTest.java by following the finished test cases.
4. Complete the ArrayPoblems.java and LinkedListProblems.java
5. Run the test cases in ArrayProblemsTest.java and LinkedListProblemsTest.java and fix all the bugs.

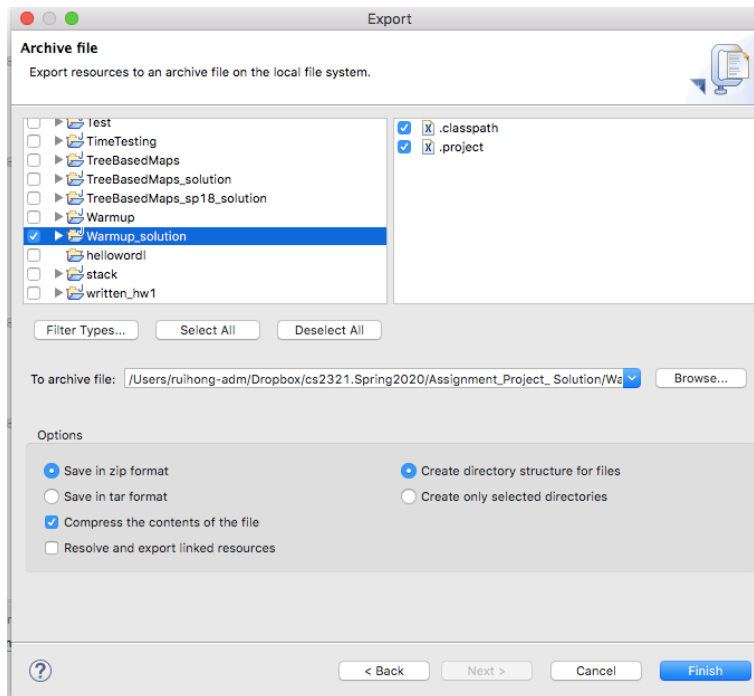
Submission:

First, look at the following checklist:

1. Have you tested every method?
2. Is the indentation easily readable? You can have Eclipse correct indentation by highlighting all code and select "Source → Correct Indentation".
3. Are comments well organized and concise?

Then, export your project to a zip file in Eclipse:

1. Select File → Export
2. In the "Select an export wizard" pane, Select General → Archive File
3. Hit the "Next" button
4. Enter the archive file name **prog0.zip** or click the “Browse” to choose different directory and type the archive file name **prog0.zip**.
Again, **please use the name prog0.zip**
5. Click “Finish”



After the export is finished, **expand the prog0.zip** file and make sure it has the correct folder structure and ALL the java source code files are under the correct folders. Missing any source file or directory could cause compilation failure. When the project does not compile, you will get 0 point. If you had multiple copies in different locations, make sure you are expanding the right zip file by checking the timestamp.

Then submit the zip file prog0.zip. You may submit many times. Canvas might rename your file as prog0-1.zip, prog0-2.zip, etc. Don't worry about it. We will handle it.

After you submit to Canvas, please double check if you submit the correct file. Please pay attention to the timestamp of the file and/or download the file that you submitted and make sure the zip file has everything you need to submit. A common mistake that students made in the past was to submit the wrong file as there were multiple files with the same name but under different folders.

Grading Criteria:

1. Sort an array (15p)

2. Find the kth largest element in an array, not sorted (5p)
3. Reverse a singly linked list (10p)
4. Remove duplicated in a sorted linked list (10p)
5. Complete the 4 unimplemented test cases (3 in ArrayProblemsTest.java and 1 in LinkedListProblemsTest.java) (10p)