COSC-211: DATA STRUCTURES
HW0: GRADESCOPE
Due Friday, February 19, 11:59pm ET

The purpose of this assignment is to familiarize you with the Gradescope submission system that we'll be using this semester. We'll be doing both programming work and written work this semester, so there are two parts to this assignment: one to practice submitting programming assignments to Gradescope, and the other to practice submitting written assignments.

1 Your Tasks

Go to www.gradescope.com, click "log in," and choose to log in with school credentials. Enter your Amherst username and password. We've automatically enrolled you in COSC-211 on Gradescope, so you should see the course when you log in.

1.1 A short written assignment

This is a very short written assignment to remind you of some of the data structures you've seen in the past. There are three short problem, and then we'll walk you through submitting your work to Gradescope. You should write up this assignment however you plan to write up your written work throughout the semester: if you think you'll hand-write your work, hand-write this assignment, and if you think you'll type up your work, type up this assignment. If you choose to hand-write you work, please make sure you writing is neat and legible. Our graders reserve the right not to grade your work if they can't read what you've written.

Problem 1: Draw a picture of a singly linked list that contains the letters in your first name. The list should be ordered so that we read your name when traversing the list from the head to the end of the list.

Problem 2: Suppose you have an initially empty stack. What does the stack contain after the following sequence of operations?

```
push(2)
push(1)
push(3)
push(6)
pop()
pop()
push(1)
push(5)
pop()
```

Problem 3: Here's a picture of a queue with some elements in it:

$$\rightarrow \boxed{\text{S} \mid \text{T} \mid \text{A} \mid \text{C} \mid \text{K}} \rightarrow$$

Draw a picture of what this queue will look like after you add the elements Q, U, E, U, E, in that order.

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Now you're ready to submit your work to Gradescope.

Before submitting your work, please scan it as a pdf (if you wrote any part of your solutions by hand) or save it as a pdf (if you typed your solutions). You may need to download a phone app to be able to scan to pdf; one option is the Dropbox app: https://www.dropbox.com/features/productivity/doc-scanner-app.

Go to the COSC-211 course on Gradescope, select the assignment you're submitting (in this case, that assignment is "HW0: Written"), then select "upload pdf" to upload the pdf scan of your submission. For each question, select the pages of your scan that correspond to that question. This step is very important! If you don't indicate which pages belong to which problems, we will assume that the problem was not submitted and your work won't be graded. Here's a video with instructions on how to do this: (click here)

When you're done selecting the pages for each problem, click save or submit.

1.2   A short programming assignment

This part of the assignment is meant to give you practice submitting code to Gradescope. Begin by writing a short "Hello, world!" Java program (this is a program that prints "Hello, world!" to the screen and does nothing else). Your code **must** be saved in a file called `HelloWorld.java` (exactly like that, caps included). It is very important to follow any naming conventions we give you for files, methods, etc. If you don't, your program won't run properly with our test code and we won't be able to grade your work.

Once you've written your "Hello, world!" program, you're ready to submit. Go to the COSC-211 course on Gradescope, and select the "HW0: Programming" assignment. Upload your `HelloWorld.java` (and **only** that file).

At this point, our autograder will run your program. We'll be using Gradescope's autograder throughout the semester to check that your code compiles and runs without errors in the environment in which we'll be grading it. You're welcome to use any platform and any IDE that you like, as long as your code passes the autograder's compile/run tests. For this assignment, all the autograder does is check that your code compiles and runs without errors. Later, we might also include some simple test cases that you can use as a starting point to verify that your code does what it's supposed to.

If your code successfully compiled and ran, you'll see a message on Gradescope that looks something like this:

```
Compile: success


Run: success
```

If you see the above message, you're all set! Your code has been submitted, runs on our system, and is ready for us to grade. If your code had errors when compiling or running, you'll instead see a message that looks something like this:

```
Compile: failure


Run: failure
```

This message means that you have more work to do! You should fix whatever compiler or runtime error occurred, and then resubmit your code. (We might choose not to have Gradescope tell you what the specific error was - that's your job to figure out! If your code compiles on your machine but not through the autograder, check if your IDE added, e.g., a line that begins "package" at the start of your code. Some IDEs, such as Eclipse, will do this, and you'll need to delete this line before submitting your code.) You can resubmit as many times as you want before the submission deadline.

2 Submit your work

The above sections walk you through submitting this assignment on Gradescope.

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