Exam 2 covering Chapter 5 through Chapter 7 in the *zyBooks* course will consist of writing code. Students will take their exam during their respective regular laboratory class session either on Tuesday, March 16th, or Friday, March 19th. This exam is closed book and closed notes. You will have 1 hour 30 minutes to complete this exam that consists of two complete Python 3 programs, which means approximately 45 minutes per program. No calculators may be used on the exam.

This code-writing exam will be given using our traditional Linux CSE machines where you will be able to edit and run your Python 3 code, checking for errors. While you will have access to code in your own Linux directory or my public directory, you will not have access to any notes or the Internet outside of this Linux environment. *Note that you may not add my lecture notes or similar files as an aid for your exam.* You can, however, access the built-in Python help system on our Linux CSE machines provided you know how to use it!

* Face-To-Face assessment exams will be closed-book/closed-notes and will be completed in the lab classroom during the assigned lab section time using the lab computers and applicable software. The TA for the lab section will monitor student progress during the exam. *If you are registered in the face-to-face lab section (CSCE 1035-306) and cannot attend in person due to COVID-19 issues, you are to notify your instructor as soon as possible BEFORE the exam so that alternate arrangements can be made. Failure to do so may result in a zero for the exam.*
* Remote assessment exams will be closed-book/closed-notes and will be completed during the assigned lab section time using Zoom with your webcam, microphone, and speaker turned on. You must not turn these devices off during the exam or you may be subject to academic integrity violations. This applies to students registered in the remote lab section (CSCE 1035-397). If you have connectivity issues during the exam, please contact your instructor or TA **immediately** via Zoom or e-mail so that it can be resolved during the exam window. Your instructor will be continuously monitoring Zoom and e-mail during this time.

You should review your textbook, the lecture notes, class code examples and past lab assignments to prepare for this exam.

You should be familiar with the structure of a basic Python 3 syntax and how the interpreter works, which also includes knowing the difference between functions and methods. You will be asked to write two complete Python 3 programs, so you should be familiar with the basic structure to start writing a Python 3 program as well as the following:

**Chapter 5**

* Use while and for loops, including nested loops, for counting or to iterate through containers, including the controlling factors of a loop (i.e., initialization action, Boolean condition, and update action components) and the loop else.
  + Use break and continue to change behavior of the loop.
* Import the random module to generate and use random numbers, including seeding a random number with the seed() function.
* Use range() to create an iterable list of values.
* Use enumerate() to retrieve the position index and values in a sequence.

**Chapter 6**

* Define and call user-defined functions with or without arguments (by reference or value) as well as use return with or without values.
  + Use keyword and default arguments, including arbitrary keyword and non-keyword argument lists.
* Be aware of variable local and global scope.

**Chapter 7**

* Use and manipulate strings, including accessing values, slicing, concatenation, and the len() function.
* Use the format() method to perform string formatting with the various format specifications identified in the lecture notes.
* Use the various string manipulation, testing and searching methods, such as replace(), find(), split(), join(), count(), isalpha(), isupper(), lower(), strip(), etc.
* Compare and test membership in strings.

While the focus of this exam will be on loops (Chapter 5), functions (Chapter 6), and strings (Chapter 7), you are still expected to be able to execute the functionality found in earlier chapters, such as using print(), input(), format(), if-elif-else statements, functionality from the math module, and general workings of containers such as lists, tuples, dictionaries, etc.