

The Midterm will be graded on a total of 100 points.

There are four programming exercises each worth a total of 25 points. You are required to do ANY TWO of the four for full credit. Additionally, there will be a quiz available worth 50 points. The quiz is open book, open notes, and open Internet but you will not be allowed to discuss your answers with others.

The exam questions are to be completed on your own – any plagiarism will be considered a violation of the Academic Integrity Policy that is outlined in the course syllabus. This includes copying or uploading any portion of this assignment to any websites including but not limited to Chegg.com, StackOverflow, or any other sites where work is completed by other individuals.

As with all of the programming projects, you must follow the guidelines found in “Python Programming Requirements”.

Program 1: Figure It Out

Create a program that asks the user to specify a number between 1 and 10 and uses the graphics.py module provided by the books author (available on Brightspace under the Resources folder) to draw a closed figure corresponding to that number of sides, each with equal length. Note: All interaction at this point with the user is through the command line interface (CLI). We will be adding buttons and other functionality to our GUIs in Chapter 11.



A 1 sided figure is a point.

A 2 sided figure is a line.

A 3 sided figure is a triangle.

A 4 sided figure is a square.

A 5 sided figure is a pentagon.

A 6 sided figure is a hexagon.

A 7 sided figure is a heptagon.

A 8 sided figure is a octagon.

A 9 sided figure is a nonagon.

A 10 sided figure is a decagon.

Program 2: Password Protected

Create a program that asks the user to enter a password. The program should then utilize a function to verify the password meets the criteria below. The program should then display a message indicating if the password was valid or invalid.

The password should:

Be at least 12 characters in length

Contain at least one uppercase character

Contain at least one lowercase character

Contain at least one number

Contain at least one special character (!, @, #, \$, %, ^, &, *)

Program 3: Class Distribution

Create a program that takes in final grades for each individual in a class of twenty-five people as a numeric value. The program should then output the average of the class as both a numeric average as well as a letter. It should then display the count for each grade, eg., 3 A's, 4 A-'s, ... etc. All letter grades should follow the convention as defined in the course syllabus.

Program 4: Course Grade

Write a program to calculate your course grade. The final output should display the final number as a percentage. Consult the course syllabus to ensure that you are collecting the grades for each of the assignments individually and using the CPT Departments grading scale. Be sure that your program indicates how a user should enter their grades (ie, 15 points or 100 percent on a quiz).