**CSC 341**

**Test 1**

**Work from examples!**

1. **No\_1.py (Like Lab 2).** Write code that prompts the user for a GPA. Then perform the following tests:
   1. If the GPA is higher than 4.0 or less than 0, print out "out of range"
   2. Otherwise, if the GPA is 3.8 or higher print out “summa cum laude”
   3. Otherwise, if the GPA is 3.6 or higher print out “magna cum laude”
   4. Otherwise, if the GPA is 3.4 or higher print out “cum laude”
   5. Otherwise, if the GPA is 2.0 or higher print out “graduating”
   6. Otherwise, print out "not graduating"
2. **No\_2.py (Like Lab 3).** Write a function that calculates the sum of the values in a list raised to the kth power.

A computer screen shot of a program

Description automatically generated

1. **No\_3.py (Like Lab 4 – Order.py).** Import the os module and use it to set the current working directory to be that of the python file. Read the file Country.csv which contains on each line the name of country, its birth\_rate and its death\_rate. (Both floats) Read the file and make three lists. Print out the data and include the quantity birth\_rate – death\_rate as well as a category:

Growing rapidly if birth\_rate – death\_rate >= 10

Growing if 0 <= birth\_rate – death\_rate <10

Shrinking if birth\_rate – death\_rate <0

as shown below

A screen shot of a computer

Description automatically generated

1. **No\_4.py (Like Lab 5).** Import the necessary modules. Then read the JSON data found at

http://www1.lasalle.edu/~blum/c343wks/PinkFloyd.json

Read it directly off the Internet. Prompt the user to enter a year between 1967 and 1987. Then write code that removes the songs that were written before the user’s year. Then write the new JSON data to a local file.

1. **No\_5.py (Like Lab 6 – the tkinter part).** Use the head start No\_5.py Edit the function that responds to the interface user clicking the button. Gather the individual hexcodes for red, green, and blue. Display the hexcode and the corresponding color chosen by the user
2. **No\_6.py (Like Lab 7).** Write a simple PACity class that has five properties. City, County, Population, MedianHouseIncome, and PerCapitaIncome.

Add a method that determines TotalIncome = Population \* PerCapitaIncome

Read the data in PA\_City.csv and create a list of objects. Print out the following data for each city: City, County, Population, TotalIncome

A screen shot of numbers

Description automatically generated