Midterm 010 Summer 2020. Answer all questions. 10 points/question

1) What happens if you multiply a number by a string? Try “++”* 5. Store the result in variable s. Now what happens if you multiply s by 10 and then print it?

2) Given a text string, write a program to count the number of consonants.
   Eg: text: Georgetown University output: 12

3) You have a string that contains punctuations spaces and alphabets and digits. Remove all punctuations and digits, but not spaces. (Punctuation’s are all characters except alphabets.
   EX: input: Hello! How are you? Your, Phone number: 202-687-600.
       Output: Hello How are you Your Phone number

4) Write a function that will replace the red value with (revalue + bluevalue). Make sure you do not exceed 255 for the red value.
   Ex: redvalue: 100, bluevalue = 50 the new redvalue = 150
       redvalue: 200, bluevalue = 100 the new redvalue = 255

5) Write a function to mirror an image horizontally. That is the mirror is placed at (width, 0), (width, height).

6) Write a function to duplicate an image. Make the same image appear one bellow the other.

7) Write a function that pinkifies yellow in a picture. Input a picture, then check each pixel to see if the red and green, are over 200 and blue value is less than 50. If so, set that pixel to pink.

8) Write a program that takes a list of integers and prints average of the maximum and minimum.
   Eg: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] output: (1+10)/2 = 5.5

9) Write a function that will scale up just part of the picture. Try making Katie’s (katie.jpg) nose longer. (NOT katieFancy.jpg)

10) Using nested loops, write a function that takes “beach.jpg” and reduces red by 50% in the left third of a picture and clears blue in the right second third.