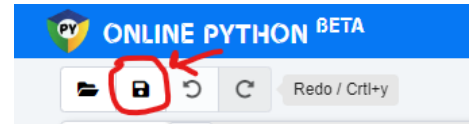


PYTHON ASSIGNMENT

DIRECTIONS:

- Use the website <https://www.online-python.com/> instead of Replit to write and check your code and once you get the desired result, click on the save icon to save the file in a folder in your system.
- The folder name should be in this format **student-python-assignment-1**, (replace student with your name, **wasiq-python-assignment-1**)
- Compress the folder into a zip file and submit that zip file in the discord folder with hashtag #assignment-submission.
- Deadline is: Sunday, November 12, 2023.
- Note: Do not use Ai Code Assistants, or ChatGPT to find exact solutions, however you are free to use any other internet resource or even ChatGPT to understand how certain phenomenon works. (like how to convert a binary number into a decimal number).
- NOTE: If you even completed 1 assignment successfully, consider yourself as a good learning. Right now we want to learn as much as possible, specially the concepts of looping, because they are trickiest part, so revise your lecture, code snippets, check references, but do it by yourself. These exercises will give you good practice of implementing the knowledge you get in our previous lectures.
- Everyone has to submit it.



QUESTIONS:

1. Write a Python program that iterates the integers from 1 to 50. For multiples of three print "3x" instead of the number and for multiples of five print "5x". For numbers that are multiples of three and five, print "15x".
2. Write a Python program which takes a binary number as input and convert it to decimal number. (The program should also check if the number is actually a binary number)
3. Write a Python program to check the validity of passwords input by users.
4. Validation:
 - a. At least 1 letter between [a-z] and 1 letter between [A-Z].
 - b. At least 1 number between [0-9].
 - c. At least 1 character from [\$#@].
 - d. Minimum length 6 characters.
 - e. Maximum length 16 characters
5. Write a Python program to calculate a dog's age in dog years.
 - a. Note: For the first two years, a dog year is equal to 10.5 human years.
 - b. After that, each dog year equals 4 human years.
6. Write a Python program to check whether an alphabet is a vowel or consonant.
7. Write a python program to calculate the number of significant figures based on the following criteria:

- a. All non – zero numbers are significant
 - b. Zeros between non – zeros are also significant
 - c. Zeros at the end of the number are non – significant
 - d. Zeros at the start of the number are also non – significant
 - e. Zeros at the end of the number but followed by decimal are also significant.
8. Write a Python program to check if a triangle is equilateral, isosceles or scalene.
- a. Note:
 - i. An equilateral triangle is a triangle in which all three sides are equal.
 - ii. A scalene triangle is a triangle that has three unequal sides.
 - iii. An isosceles triangle is a triangle with (at least) two equal sides.
9. Write a Python program to construct the following pattern, using a nested loop number.
- a. Expected Output:
- ```
1
22
333
4444
55555
666666
7777777
88888888
999999999
```
10. Make a python program which can be used as email validator. Based on the given flow – chart.



# Code Camp | Alpha

{“Dream” , “Code” , “Build”}

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## Email Address Validator

Python Program Flow Chart

