

## Python Programming (Assignment -2)

### CSE, 3<sup>rd</sup> Semester

Deadline August 29, 2020

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#### Note -

- Create your GitHub profile as taught in lectures and then push all your programs to folders named according to the assignment. For Example - when you push codes of this assignment, they should be inside the Assignment2 folder.
  - Please keep in mind that you don't commit all the codes together. Keep on committing codes module wise or question wise whatever seems available.
1. Write a function that computes the volume of a sphere given its radius.
  2. Write a function that checks whether a number is in a given range (inclusive of high and low).
  3. Write a Python function that accepts a string and calculates the number of upper case letters and lower case letters. You can use functions `.isupper()` and `.islower()`.
  4. Write a Python function that takes a list and returns a new list with unique elements of the first list.
  5. Write a Python function to multiply all the numbers in a list and return the result.
  6. Write a Python function that checks whether a passed in string is palindrome or not.
  7. Write a program that creates a list of tuples for all the numbers in a given limit and indicate whether number is Prime or Non Prime. Let's suppose limit is 7 so list should be created in the following way - [(2,Prime),(3,Prime),(4,Non Prime),(5,Prime),(6,Non Prime),(7,Prime)]
  8. Write a program that creates a dictionary for all the numbers in a given limit and indicate whether number is Prime or Non Prime. Let's suppose limit is 7 so list should be created in the following way - {2:"Prime",3:"Prime",4:"NonPrime",5:"Prime",6:"NonPrime",7:"Prime"} Once dictionary is created, delete all the Non-Prime **key-value** pairs and print their counts on output screen.
  9. Write a program to print N fibonacci numbers where N is being passed from command line and you can run python program using command - **python fibo.py 20**, where N=20.
  10. Write a program to print **Pascal** triangle.