**Python Lab 1**

Start Date: 09-08-2017

Due Date: 15-08-2017

* Assignment is to be done in groups and only one group member should submit.
* To complete the work, you may take help from the reference manual where necessary. But the work should be done by the group members only.
* If the solution is found plagiarized, 0 marks would be awarded.

1. If you run a 10 kilometre race in 43 minutes 30 seconds, calculate your average time per mile and your average speed in miles per hour using Python Calculator.
2. Write a function to calculate the sum of squares of first n natural numbers.
3. Write a function that takes a string argument and returns true if it is a palindrome and False otherwise.
4. Write a function that takes a string as a parameter. Calculate the length of a string without using len function. Print the length concatenated with the string.
5. Write a function called middle that takes a list and returns a new list that contains all but the first and last elements. So middle ([1, 2, 3, 4]) should return [2, 3].
6. Write a program that reads words.txt and prints only the words with more than 20 characters (not counting white space).
7. Write a program for Binary search, given is a sorted array and a key.