# CS 115 - Introduction to Programming in Python

# Lab Guide 03B

**Lab Objectives:** Functions

1. Complete the following:
2. Write a function **largestDivisor(n)** which takes integer n as a parameter and returns the maximum integer that divides n (excluding n itself).
3. Write a scriptto input a positive integer n and decide if n is prime or not using the above function. The script will display whether the number is a prime or not. The program will continue inputting until a number < 1 is entered.

**Sample Run:**

Enter a positive integer >=1: 10

10 is not a prime number

Enter a positive integer >=1: 7

7 is a prime number

Enter a positive integer >=1: 0

1. Complete the following:
   1. Write a function, **generate\_password(n)** where n is the length of the password. The function should generate a password with n/2 letters and n/2 (+1 if odd) digits. The letters should be randomly selected from a – z, and you should randomly capitalize the letters before adding to the password.
   2. Write a script that generates passwords using the lengths input from the user. You should generate passwords until the user inputs -1 to quit. The input length of a password cannot be less than 5 and your program should validate the input and prompt again for invalid input.

**Sample Run:**

Enter password length (-1 to quit): 5

Your password is: aq373

Enter password length (-1 to quit): 4

Password minimum length is 5

Enter password length: 6

Your password is: qSm354

Enter password length (-1 to quit): 9

Your password is: jker40996

Enter password length (-1 to quit): -1