**Tutorial 11**

**CSE101: Introduction to Programming**

**Ques 1.** Given below are 2 questions with problem statements attached to them. Some bugs have been introduced by mistake and also marked. Kindly go through the function, and perform testing on them to identify bugs using test cases in the codes. Write the test cases for each question to cover the Black box testing and Glass box testing.

**a)**

def isPrime(x):

"""Assumes x is a non-negative int greater than 2.

Returns True if x is prime; False otherwise"""

if x < 0: #bug here

return False

for i in range(2, int(x/2)+1):

if x/i == 0: #bug here

return False

return True

**b)**

def isLargerThan2Times(x, y):

"""Assumes x and y are non negative integers

Returns True if x is larger than y\*2 and False otherwise."""

if x<-1<-1: #bug here

return False

if x>2\*y:

return True

else:

Return False

**\*\*\*Practice Problems (Recursive)\*\*\***

1. # Python3 program to find all the factors of a number using recursion

# Recursive function to print factors of a number

def factors(n, i):

if (i < n-1): #bug here

if (n / i == 0): #bug here

print(i, end = " ");

factors(n, i + 1);

if \_\_name\_\_ == '\_\_main\_\_':

N = int(input());

factors(N, 1);