**Lab 2 (Due: Feb 8th)**

**Objectives:**

* Learn how to perform analysis

**Analysis**

* Perform an analysis of the following functions:

**function 1:**

Analyze the following function with respect to number

**def function1(number):**

**total=0;**

**for i in range(0, number):**

**x = (i+1)**

**total+=(x\*x)**

**return total**

**function 2:**

Analyze the following function with respect to number

**def function2(number):**

**return ((number)\*(number+1)\*(2\*number + 1))/6**

**function 3:**

Analyze the following with respect to the length of the list. Note that the function call len() which returns the length of the list is constant (O(1)) with respect to the length of the list.

**def function3(list):**

**for i in range (0,len(list)-1):**

**for j in range(0,len(list)-1-i):**

**if(list[j]>list[j+1]):**

**tmp=list[j]**

**list[j]=list[j+1]**

**list[j+1]=tmp**

**function 4:**

Analyze the following function with respect to number

**def function4(number):**

**total=1**

**for i in range(1, number):**

**total\*=(i+1)**

**return total**