MELISSA TRAN
COMPSCI 2208
250910612
Assignment 4

DUE DATE: April 3, 2018
11:55pm

Question 1
Recursive call calculations for exponent equation

How many stack frames are needed to calculate xn , when n = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12?

When n = 0, you would need one stack frame only
When n = 1, you would need two stack frames
When n = 2, you would need three stack frames
Wen n = 3, you would need four stack frames
When n =4, you would need five stack frames
When n = 5, you would need six stack frames
When n= 6, you would need seven stack frames
When n=7, you would need eight stack frames
When n=8, you would need nine stack frames
When n=9, you would need ten stack frames
When n= 10, you would need eleven stack frames
When n=11, you would need twelve stack frames.
When n=12, you would need thirteen stack frames
Each time for every value of n, the stack frames you would need would be n+1. The reason for this is because we are doing a recursive call, and so each time we call the function again we are adding on another stack. So essentially when n = 12, then 13 stack frames would be needed for the stack

Stack Frame

Sketch the structure of the stack frame that you utilized in your program.