**ASSIGNMENT 2 README FILE**

By: Khadija Swailem 202301222

***Aim of program:***

The aim of this program is to implement queues using stack abstract data type.

***Thought process and methodology:***

I used the help of inheritance to allow the stack to access the functions from the linked list class such as append() for the push method and removeEnd() for the pop method. I used two attempts in which one of them is more optimized than the other, in the dequeue function. I made a quick sketch to help me visualize the implementation of attempt 1.At first I wanted to make the enqueue process to set two stacks one to enqueue and then if we want to enqueue again I would have to pop the existing elements and push them to stack 2 then push the new element to be enqueued to stack 1 then pop the elements from stack 2 and push them back into stack 1 so the element that was just enqueued to be the last one in the stack to achieve FIFO concept easily when dequeuing as I would only have to pop the top element.In the second attempt, my goal was to improve the complexity of the dequeue function and to achieve that without having to pop and push twice each time, I had to access the element to be dequeued directly through function called returntop() that I implemented in the stack class.

Diagram:

***To compile code:***