**WRAV202: Practical 2**

Write a separate program for each of the following questions. Each program must read an input file and write to an output file.

You have to write your own Stack class. The most efficient way of implementing a stack is using a linked list. Do not reuse code from WRAV201. Your class must provide at least the following four methods: Pop, Push, Peek and Count (which keeps track of the number of elements in the stack). Use your stack implementation to answer the following questions.

# Question 1 – Rerverse LIST

The input file consists of a list of popular baby names from the United States. The program must load the input file and use a stack to reverse its order. No other reverse operation may be used. Finally, the program must save the reversed list into an output file called “Outputs.txt”.

Test Inputs and the Expected Test Outputs are provided in the question folder.

You will be required to demonstrate you program during the practical session using the “SubmissionInputs.txt” data.

# Question 2 – Process stack

Create a new empty stack in your program. The input file will be used to populate the stack. Each line of the input file is an instruction which your program must interpret. There are only two possible instructions.

* Instruction 1: If the line begins with a “+”, add the number that follows to the stack. So “+30” would mean to push the number 30 on top of the stack.
* Instruction 2: If the line begins with a “-” **and the stack is not empty**, pop a number from the top of the stack.

Once your program has processed the input file, it must write the stack to an output file called “Outputs.txt”. Each item must be on its own line, and the item on top of the stack will be the first line in your output file.

Test Inputs and the Expected Test Outputs are provided in the question folder.

You will be required to demonstrate you program during the practical session using the “SubmissionInputs.txt” data.

# SUBMISSION

Upload you code in two files with the extension .cs on the learn.mandela.ac.za site.