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Script started on 2024-04-17 13:40:49-05:00 [TERM="xterm-256color" TTY="/dev/pts/0" COLUMNS="290" LINES="65"]
[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$ pwd
[?2004l
/home/jovyan/CS2/Lab/Lab_20
[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$ ls -la
[?2004l
total 28
drwxr-sr-x  3 jovyan users 4096 Apr 17 13:40 [0m[01;34m.[0m
drwxr-sr-x 21 jovyan users 4096 Apr 16 11:19 [01;34m..[0m
drwxr-sr-x  2 jovyan users 4096 Apr 16 19:39 [01;34m.ipynb_checkpoints[0m
-rw-r--r--  1 jovyan users  839 Apr 17 13:40 MyStack.cpp
-rw-r--r--  1 jovyan users  466 Apr 17 13:33 MyStack.h
-rw-r--r--  1 jovyan users  731 Apr 16 18:15 reversedfile.dat
-rw-r--r--  1 jovyan users    0 Apr 17 13:40 Sabin_Lab_20.log
-rw-r--r--  1 jovyan users 1097 Apr 17 13:39 stack_main.cpp
[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$ cat -n
MyStack.h
[?2004l
     1  #ifndef MYSTACK_H
     2  #define MYSTACK_H
     3
     4  struct Node{
     5      //Structure for a doubly linked list
     6      Node *next;
     7      Node *prev;
     8      char data;
     9  };
    10
    11  class Stack{
    12  private:
    13      //Top and bottom
    14      Node *bottom;
    15      Node *m_top;
    16
    17  public:
    18      //Constructor
    19      Stack();
    20      //Push function
    21      void push(char value);
    22      //Pop function
    23      void pop();
    24
    25      //Return the top
    26      char top();
    27      //Check if stack is empty
    28      bool empty(){return m_top == nullptr;}
    29  };
    30  #endif[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-
tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$ cat -n MyStacvk[K[Kk.cpp
[?2004l
     1  #include "MyStack.h"
     2
     3  Stack::Stack(){
     4      //Set both to a nullptr
     5      bottom = nullptr;
     6      m_top = nullptr;
     7  }
     8  void Stack::push(char value){
     9      //Create a new node
    10      Node *newNode = new Node;
    11      newNode->data = value;
    12      newNode->next = nullptr;
    13      newNode->prev = nullptr;
    14      //Check if empty
    15      if(empty()){
    16          //If empty, set the top & bottom to the new node
    17          m_top = newNode;
    18          bottom = newNode;
    19          return;
    20      }
    21      //Push the new node to the front of the list
    22      m_top->next = newNode;
    23      newNode->prev = m_top;
    24      m_top = newNode;
    25  }
    26  char Stack::top(){
    27      return m_top->data;
    28  }
    29  void Stack::pop(){
    30      //Check if not empty
    31      if(!empty()){
    32          //Create a temp and set to the top
    33          Node *temp = m_top;
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    34              m_top = temp->prev;
    35              //Delete the temp node
    36              delete temp;
    37          }
    38      }[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$
cat -n stack_main.cpp
[?2004l
     1  /*
     2  Tyler Sabin
     3  Section 004
     4  Lab 20
     5  */
     6
     7  #include "MyStack.h"
     8  #include <iostream>
     9  #include <fstream>
    10  #include <string>
    11
    12  int main(){
    13
    14      std::string fileName;
    15
    16      std::cout << "Enter file to reverse: ";
    17      std::cin >> fileName;
    18      std::cout << '\n';
    19
    20      std::ifstream inFile{fileName};
    21      if(!inFile){
    22          std::cout << "ERROR file: " << fileName << " does not exist.";
    23      }
    24
    25      //Create a stack object
    26      Stack stackLL;
    27
    28      //Temp string
    29      std::string temp;
    30
    31      while(inFile){
    32          //Get the line
    33          std::getline(inFile,temp);
    34          //Itterate over the string for each char
    35          for(int character{0}; character < static_cast<int>(temp.length()); character++){
    36              //Push the char to the stack
    37              stackLL.push(temp[character]);
    38          }
    39          //While the stack is not empty
    40          while(!stackLL.empty()){
    41              //Print out the char
    42              std::cout << stackLL.top();
    43              //Pop the top
    44              stackLL.pop();
    45          }
    46          //Print out new line character
    47          std::cout << '\n';
    48      }
    49
    50      inFile.close();
    51
    52      return 0;
    53  }[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$
[7mg++ -Wall -Wextra -Werror stack_main.cpp MyStack.cpp -o reverse[27m
[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[Cg++ -Wall -Wextra -Werror
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[?2004l
[?2004h(base) ]0;jovyan@jupyter-tes4j: ~/CS2/Lab/Lab_20[01;32mjovyan@jupyter-tes4j[00m:[01;34m~/CS2/Lab/Lab_20[00m$ ./reverse
[?2004l
Enter file to reverse: reversedfile.dat

"Space Frontier"
In the year 7777, a daring explorer named Freon the Explorer embarked on a crucial mission. Armed with a mysterious family
heirloom passed down for 18.23 generations, Freon the Explorer journeyed through space.
An urgent plea for help arrived from the Xyzederons, whose homeworld faced destruction in just days.
In fact, it would be destroyed by Friday at 5:00pm (which is coincidentally when Labs are due)
With unyielding resolve, Freon the Explorer encountered a strange potato and unexpected cats, inching closer to the
Xyzederons's planet. As Freon the Explorer neared their destination, the fate of the galaxy rested on their shoulders, with
just a few hours to save the Xyzederons's world from annihilation.

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[?2004l
exit

Script done on 2024-04-17 13:41:42-05:00 [COMMAND_EXIT_CODE="0"]