CS 323\_33 Programming Language: C++

Mock Final 2 Selection Sort LinkList

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**Source Code**

#include <iostream>

#include <string>

#include <fstream>

using namespace std;

class Node{

public:

int data = -9999;

Node\* prev;

Node\* next;

Node(int d){

data = d;

next = NULL;

}

};

class selectionSort{

public:

Node\* head = new Node(-9999);

int N = 0;

void createList(ifstream& inFile){

int data;

while(!inFile.eof()){

inFile >> data;

Node\* newNode = new Node(data);

N++;

Node\* temp = head->next;

head->next = newNode;

newNode->prev = head;

newNode->next = temp;

}

}

void selectionSorting(){

Node\* position = head->next;

while(position->next->next != NULL){

Node\* lowestFound = position;

Node\* findingNode = position->next;

while(findingNode->next != NULL){

if(findingNode->data < lowestFound->data){

lowestFound = findingNode;

}

findingNode = findingNode->next;

}

if(lowestFound->data < position->data){

Node\* temp;

temp->next = lowestFound->next;

temp->prev = lowestFound->prev;

lowestFound->next = position->next;

lowestFound->prev = position->prev;

position->next = temp->next;

position->prev = temp->prev;

delete temp;

}

position = position->next;

}

}

void printList(ofstream& outFile){

Node\* spot = head->next->next;

while(spot->next != NULL){

outFile << spot->data << endl;

spot = spot->next;

}

}

};

int main(int argc, char\* argv[]){

ifstream inFile(argv[1]);

ofstream outFile(argv[2]);

selectionSort S;

S.createList(inFile);

// S.selectionSorting();

S.printList(outFile);

inFile.close();

outFile.close();

}

Output ( selections sort not work)

A screenshot of a cell phone

Description automatically generated