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30-sept-15

Ch 1: 1.4, 1.5, 1.7, 1.8, 1.12

1.4
pgm1_4.cpp
/* This program will take a file a read through it to see if there is an #include statement, it will then output the #include into a new file called output. I wasn't quite sure what the question was asking or and I had to clarify with multiple colleagues. I was not able to get the output file to have the whole file and the related #include statements put in its place. */

```
#include <iostream>
#include <string>
#include <string.h>
#include <iostream>
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>

using namespace std;

bool chkInclude(string in) {
	const char *cs = in.c_str();
	if (strncmp(cs, "#include", 8) == 0) {
		cout << "It was true" << endl;
		return true;
	}
	else {
		cout << "it was false" << endl;
		return false;
	}

}

int main(int argc, char** argv) {
	string s;
	ssize_t ssz;
	size_t sz;
	char *buff = NULL;

	if (argc != 3) {
		printf("Usage: openRW infile outfile\n");
		exit(1);
	}
	FILE *r_fd = fopen(argv[1], "r");
```

```
	FILE *w_fd = fopen(argv[2], "w");

	if (r_fd == NULL || w_fd == NULL) {
		printf("Error on open file(s)\n");
		exit(1);
	}

	while ((ssz = getline(&buff, &sz, r_fd)) > 0) {
		cout << "checking if true" << endl;
		if(chkInclude(buff) == true){
		fwrite(buff, ssz, sizeof(char), w_fd);
		cout << "Look in the " << argv[2] << " file for the results" << endl;
		}
	}

}
```

1.5

numOnes.cpp

```
/* This program will take any number N for an input and then output it in its binary
representation, when read from bottom to top. In addition, it will also output the
number of 1s in N */
#include <iostream>
using namespace std;


/*int userNum() {

	return n;
}
*/
int oneCounter = 1;

void numOnes(int n) {


	if(n == 0) {
		cout << "0\n";
	}
	else if(n == 1) {
		cout << "1\n";
		//oneCounter = oneCounter + 1;
		cout << "Number of ones in the binary representation of N is: " <<
oneCounter << "\n";
	}
	else {
```

```
                cout << n % 2 << "\n";
                if(n % 2 == 1) {
                        oneCounter = oneCounter + 1;
                }
                //oneCounter = oneCounter + 1;
                numOnes(n/2);
                //cout << n % 2 << "\n";
                //numOnes(n%2);
                //cout << main(n%2);
        }
}

int main() {
        int n;
        cout << "Enter a number: ";
        cin >> n;
        //int n = 5;
        numOnes(n);
        return 0;
}
```

See hw2_part2_sobylak.txt for problems 1.7,1.8,1.12