

## CSC 3320: Systems Programming

Spring 2021

Homework

# 4: Total points 100

### Submission instructions:

1. Create a Google doc for each homework assignment submission.
2. Start your responses from page 2 of the document and copy these instructions on page 1.
3. Fill in your name, campus ID and panther # in the fields provided. If this information is missing in your document TWO POINTS WILL BE DEDUCTED per submission.
4. Keep this page 1 intact on all your submissions. If this *submissions instructions* page is missing in your submission TWO POINTS WILL BE DEDUCTED per submission.
5. Each homework will typically have 2-3 PARTS, where each PART focuses on specific topic(s).
6. Start your responses to each PART on a new page.
7. If you are being asked to write code copy the code into a separate txt file and submit that as well.
8. If you are being asked to test code or run specific commands or scripts, provide the evidence of your outputs through a screenshot and copy the same into the document.
9. Upon completion, download a .PDF version of the document and submit the same.

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**ALL PROGRAMS MUST BE COMMENTED. YOUR SOLUTION WILL NOT BE ACCEPTED IF THERE ARE NO COMMENTS IN YOUR SCRIPT.**  
Also note that the comments **MUST** be useful and not be random.

## **PART 1: 40pts**

**Must incorporate use of Functions and Pointers**

### 1. checkPasswd.c

```
[jrogers75@gsuad.gsu.edu@snowball hw4]$ gcc -o password checkPasswd.c
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./password
Enter password: jam
Total points deducted is 35.
The password is unsafe! Please reset.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./password
Enter password: jamie
The password is safe.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./password
Enter password: hello
The password is safe.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./password
Enter password: bye
Total points deducted is 35.
The password is unsafe! Please reset.
[jrogers75@gsuad.gsu.edu@snowball hw4]$
```

### 2. checkPasswd.c

```
[jrogers75@gsuad.gsu.edu@snowball hw4]$ gcc -o passwd checkPasswd.c
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./passwd
Enter password: mom45L
The password is safe.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./passwd
Enter password: Jamie145
The password is safe.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./passwd
Enter password: georgiastate
Total points deducted is 60.
The password is unsafe! Please reset.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./passwd
Enter password: GeorgiaState
Total points deducted is 40.
The password is unsafe! Please reset.
[jrogers75@gsuad.gsu.edu@snowball hw4]$
```

## Part II : 40pts

### Must incorporate the use of Functions and Pointer arrays

#### 3. checkPalindrome.c

```
[jrogers75@gsuad.gsu.edu@snowball hw4]$ vi checkPalindrome.c
[jrogers75@gsuad.gsu.edu@snowball hw4]$ gcc -o palin checkPalindrome.c
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./palin
Enter message: abba
This is a palindrome.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./palin
Enter message: tacocat
This is a palindrome.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./palin
Enter message: jamie
This is not a palindrome.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./palin
Enter message: j3mm3j
This is a palindrome.
[jrogers75@gsuad.gsu.edu@snowball hw4]$
```

#### 4. swapTwo.c

```
[jrogers75@gsuad.gsu.edu@snowball hw4]$ gcc -o swap2 swapTwo.c
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./swap2
Enter message 1: 90lop67
Enter message 2: hugyh44565
The messages must be the same length. Please try again.
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./swap2
Enter message 1: happy890
Enter message 2: 84482pda
AFTER SWAP:
Sentence 1: 84482pda
Sentence 2: happy890
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./swap2
Enter message 1: a1b3
Enter message 2: 8g23
AFTER SWAP:
Sentence 1: 8g2
Sentence 2: a1b
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./swap2
Enter message 1: h3t7l90
Enter message 2: 7f268nx
AFTER SWAP:
Sentence 1: 7f2 8nx
Sentence 2: h3t l90
[jrogers75@gsuad.gsu.edu@snowball hw4]$
```

### Part III : 20pts

**Must incorporate Functions, Pointers or PointerArrays, and Structures or Unions**

5.

```
[jrogers75@gsuad.gsu.edu@snowball hw4]$ gcc -o country countryLookup.c
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./country
Enter country code: 1
Country Code 1 = United States
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./country
Enter country code: 81
Country Code 81 = Japan
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./country
Enter country code: 44
Country Code 44 = United Kingdom
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./country
Enter country code: 880
Country Code 880 = Bangladesh
[jrogers75@gsuad.gsu.edu@snowball hw4]$ ./country
Enter country code: 999
Country code not recognized.
[jrogers75@gsuad.gsu.edu@snowball hw4]$
```