CSE220 Final Exam (Summer 2021)

The name, email, and photo associated with your Google account will be recorded when you upload files and submit this form

Any files that are uploaded will be shared outside of the organization they belong to.

* Required

CSE220 Final Exam

Department of Computer Science and Engineering
CSE220: Data Structures
Total Marks:30 | Time: 65 Minutes

- Answers must be hand written
- Don't refresh the page unnecessarily
- Answer the questions in your script
- Mention your Student ID at the top left corner of your answer script
- Show rough work where necessary
- Draw properly the diagrams where necessary

Question 1

You are given a string of characters. Complete the below recursive method in JAVA or in Python to print the odd numbers in a reverse manner and also print the count. S contains the string, i is the starting index and c is the count, which are both initialized to 0.

[Note for Python Implementation: You are not allowed to use any built-in functions except len(), print(), ord() and chr()].

```
def printReverse(s,i,c) :

        #To Do

OR

public void printReverse(String s, int i, int c){

        //To Do


}
```

Sample Input	Sample Output
s = Axy3*8g572961	count is 5, 19753

Question 2

Given array A = [514, 650, 174, 559, 649, 155, 200, 255, 520, 380]. Do the following tasks.

a. Create an **auxiliary array** AUX. Use the hash function hash(element) to help yourself. Element refers to the elements in array A.

```
def hash(element):
    index = summation of each digit of (element % 100)%10
return index
```

[Don't write code for part a. You have to draw and show calculations if there are any]

b. Complete the function find(A, AUX, key) that returns the frequency [number of times found] if key is found in A else return -1

Question 3

Given an array representation of a binary tree. [null value means the node is empty]
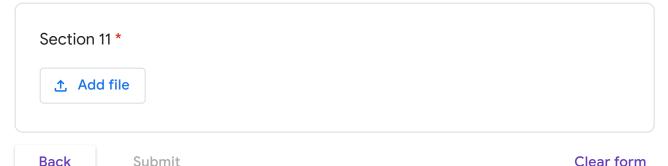
Ar = [null, Z, K ,B ,D ,F , null, G, H, null, null, Y, null, null, B, A]

i) Draw the tree. [2]

II) Write preorder traversal [1]

iii) Write postorder traversal [1]

iv) Write inorder traversal [1]

v) Draw adjacency matrix for the given tree   [2]

vi) Draw adjacency list for the given tree   [2]

vii) Draw a complete binary tree from given array, skip the null values [1]

File Naming Convention

Make sure to put all the tasks in a pdf file. (Only one file submission is accepted)
File name must be in the form of "Final_SectionNum_StudentID", eg: Final_11_18102541. Failure in naming the file properly will result in cancellation of the submission.

Section 11 *

⬆ Add file

Back   Submit   Clear form