

**Invitation Link of “Au21 CSE-1121 and CSE-1122” Google Classroom**

<https://classroom.google.com/c/Mzc1MzcwODkyODYx?cjc=wg5lhgb>

## **Topic: 2D Array**

### **Topic Discussion**

**Video** Watch the following video upto **01:52:51**

<https://drive.google.com/file/d/1JrdaMSDUzFW1I1qPCUImnDSeB1t9y0NZ/view?usp=sharing>

### **Assignment**

**Video (Problem Statement Explanation Video)**

<https://drive.google.com/file/d/1DynofdgfriFzc-lez8vzK7kXlzCoZeKi/view>

**Custom Problemset PDF:**

[https://docs.google.com/document/d/1G9zIm4WvoqyF8-UyrKiH8p0BjbWa\\_IWbCDmBMmISjU/edit?usp=sharing](https://docs.google.com/document/d/1G9zIm4WvoqyF8-UyrKiH8p0BjbWa_IWbCDmBMmISjU/edit?usp=sharing)

### **Tasks:**

- 1) Solve all the problems of this contest

Contest Link: <https://www.hackerrank.com/2d-array-2>

### **Solve Class**

**Video (Solve Class Video)**

<https://drive.google.com/file/d/1ZiwT92tJ9Y6IDeDe9fzaAshv-07YnrvD/view>

## **Topic: 3D and multidimensional Array**

### **Topic Discussion**

**Video** Watch the following video from **01:52:51**

<https://drive.google.com/file/d/1JrdaMSDUzFW1I1qPCUImnDSeB1t9y0NZ/view?usp=sharing>

## **Topic: String**

### **Topic Discussion (Part 1)**

#### **Video:**

[https://drive.google.com/file/d/1-i\\_6fbSM8IZn85PIDA7\\_vwwXpYaRIFo/view](https://drive.google.com/file/d/1-i_6fbSM8IZn85PIDA7_vwwXpYaRIFo/view)

### **Assignment (Part 1)**

#### **Tasks:**

- 1) solve first 4 problems from newcomer sheet 4

[Newcomer sheet #4:

<https://codeforces.com/group/MWSDmqGsZm/contest/219856>]

### **Topic Discussion (Part 2)**

#### **Video:**

[https://drive.google.com/file/d/1Uky75GO6p6bP1OgNNUmnFLy\\_iGMZLD2p/view](https://drive.google.com/file/d/1Uky75GO6p6bP1OgNNUmnFLy_iGMZLD2p/view)

#### **Discussed contents:**

- 1) String related functions: strcat, strcpy, strcmp
- 2) Sheet#4 Problem-D

[\[https://codeforces.com/group/MWSDmqGsZm/contest/219856/problem/D\]](https://codeforces.com/group/MWSDmqGsZm/contest/219856/problem/D)

- 3) Copying one string to another manually - issue regarding null character

### **Assignment (Part 2)**

#### **Tasks:**

- 1) Sheet#4 - Problem E to Problem J

[Newcomer sheet #4:

<https://codeforces.com/group/MWSDmqGsZm/contest/219856>]

## **Topic: 2D String**

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## **continue practicing 1D string**

### **Topic Discussion**

#### **Video:**

<https://drive.google.com/file/d/120EbAroZ-jCD36scHnbLx1pm-v6HyMXw/view>

#### **Discussed contents:**

- 1) Thinking 2D string as an array of strings. Each row as a string
- 2) Problem: Searching string in a list of strings
- 3) gets related issues
- 4) Thinking 2D string as a matrix
- 5) Sheet #3: Problem - X: 8 Neighbours

[\[https://codeforces.com/group/MWSDmqGsZm/contest/219774/problem/X\]](https://codeforces.com/group/MWSDmqGsZm/contest/219774/problem/X)

### **Assignment**

#### **Tasks:**

1. Solve at least 15 problems from sheet #4 including P, Q, S and W  
[Newcomer Sheet #4:

[https://codeforces.com/group/MWSDmqGsZm/contest/219856\]](https://codeforces.com/group/MWSDmqGsZm/contest/219856)

### **Solve Class**

#### **Video (Solve Class Video of Problem P, Q, S, W from Sheet #4)**

<https://drive.google.com/file/d/1u6pIfHocDEJ-g1iJD69LrXlpx31svfM/view>

## **Topic: Function (Part 2)**

### **Topic Discussion**

#### **Video:**

<https://drive.google.com/file/d/1j5VVeyGA9KaFTJ8KLW3GGHEwqqQt--Zd/view>

## **Topic: Recursion**

### **Topic Discussion (Part 1)**

#### **Video:**

[https://drive.google.com/file/d/1yz7jkiWTd3\\_rlGEJvnpgG7nCJLQi-IsQ/view](https://drive.google.com/file/d/1yz7jkiWTd3_rlGEJvnpgG7nCJLQi-IsQ/view)

#### **Discussed contents:**

- Recursion Basics
- Recursion Tree
- Printing from 1 to N, Fibonacci

### **Topic Discussion (Topic 2)**

#### **[Advanced Topic]**

#### **Video:**

<https://drive.google.com/file/d/1zszDKy-nZKn2Yn8rn77Pg5-8qRcOk2nC/view>

#### **Discussed contents:**

- Drawing recursion tree- Solving Problems using recursion
- 5 steps to remember:
  1. Magical function
  2. Determining States
  3. Solving Sub problem
  4. Do necessary works for the current state

5. Base case

- Problem discussion: Printing Triangle from 1 to N, from N to 1, Digit Sum

Topic Discussion (Part 3)

[Advanced Topic]

**Video:**

<https://drive.google.com/file/d/1jKtmNCvcpudCA3jYsINK-Pi-xu3ltW9c/view>

**Discussed contents:**

- 1) Solving array/string related problems using recursion
- 2) Solving 2D array related problems using recursion
- 3) Problems: Array sum, string lowercase letter count, 2D array sum.

# **Topic: File Handling & Structure**

## **Topic Discussion (Part 1)**

### **Video:**

[https://drive.google.com/file/d/1CruWbmNeGhlfzkotfXkc7q\\_9ALrOPhkK/view](https://drive.google.com/file/d/1CruWbmNeGhlfzkotfXkc7q_9ALrOPhkK/view)

### **Discussed contents:**

- 1) Reading from a file and "r" mode related issues
- 2) Problem - Reading two characters from a file and checking whether lowercase or not
- 3) Writing to a file and "w" mode related issues
- 4) Problem - reading two integers from a file and writing to another file
- 5) Saving high score in a file

## **Topic Discussion (Part 2)**

### **Video:**

[https://drive.google.com/file/d/1ctQXf2IVzYLHxy9eD\\_ICwR\\_P--EFaAu/view](https://drive.google.com/file/d/1ctQXf2IVzYLHxy9eD_ICwR_P--EFaAu/view)

### **Discussed contents:**

- 1) Concept of updating, deleting from a file
- 2) Basic CRUD Application
- 3) Benefits of using function

### Topic Discussion (Part 3)

**Video:**

<https://drive.google.com/file/d/1d15cA6uckM3NAEbuBN4Oj1F0ySincnUI/view>

**Discussed contents:**

- 1) Structure and its benefits

**Related CODE:** <https://ideone.com/W2Cpe2>

### Topic Discussion (Part 4)

**Resource:**

[https://drive.google.com/file/d/1NJ-r6u-hQ\\_5mdfgOvVPNDmgaPo3EEoOY/view](https://drive.google.com/file/d/1NJ-r6u-hQ_5mdfgOvVPNDmgaPo3EEoOY/view)

**Discussed contents:**

- 1) File Handling with structure
- 2) A CRUD application and some standard practices

**Related CODE:** <https://ideone.com/YC9IE8>

## **Topic: Storage Class & Bitwise Operation**

### Topic Discussion

**Video:**

<https://drive.google.com/file/d/13U7fazWr5kMSj7ZfBKQN1xh7WJyIf-xi/view?usp=sharing>



## **Topic: Pointer**

### **Topic Discussion (Part 1)**

**Video:**

[https://drive.google.com/file/d/1Ms5Te9dKHdZEzinroQJSEs77azoE\\_wDW/view](https://drive.google.com/file/d/1Ms5Te9dKHdZEzinroQJSEs77azoE_wDW/view)

**Discussed contents:**

- 1) Pointer and its basics
- 2) Benefits of pointer - swap function and using & in scanf function
- 3) Pointer Arithmetic
- 4) Arrays are pointers!! (But less powerful)

### **Topic Discussion (Part 2)**

**Video:**

<https://drive.google.com/file/d/12Ocyo3g9YEW71rMr8AmvNb0Sp2oEUXd9/view>

**Discussed contents:**

- 1) Creating dynamic sized arrays

### **Topic Discussion (Part 3)**

**Video:**

<https://drive.google.com/file/d/1zcmWnLeWRndcglPPagiFqTVuvOFWjHE1/view>

**Discussed contents:**

- 1) Ways of returning multiple values from a function

# **Topic: Bitwise Operation & Macro**

## **Topic Discussion**

### **Video:**

<https://drive.google.com/file/d/1cJStsqGGetVgWa3kG1xLpy2xCmT-XIQ5/view>