**CSE - 1121**

[Jamil sir playlist](https://youtube.com/playlist?list=PLFxy2GUHK0ams5myVO5DDXW8gxuCn2T28)   
*Problem solving with c*

Follow this until 2D array.  
  
This link contains a roadmap for the sessions you need to watch and the problems you need to solve for the midterm exam.

[LINK](https://docs.google.com/spreadsheets/d/1iJ6DF5AL2_ChtJXXcKBdgLS_vx6sa-Pc8qAIR1WvwOk/edit?usp=sharing)

**Topic: 2D Array**

Topic Discussion

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

<https://drive.google.com/file/d/1JrdaMSDUzFW1I1qPCUlmnDSeB1t9y0NZ/view?usp=sharing>

Assignment

**Video (Problem Statement Explanation Video)** <https://drive.google.com/file/d/1DynofdgfriFzc-Iez8vzK7kXlzCoZeKi/view>

**Custom Problemset PDF:** <https://docs.google.com/document/d/1G9zIm4WvoqyF8-UyrKiH8p0BjbWa__lWbCDmBMmISjU/edit?usp=sharing>

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/1JrdaMSDUzFW1I1qPCUlmnDSeB1t9y0NZ/view?usp=sharing>

**Topic: String**

Topic Discussion (Part 1)

**Video:**

<https://drive.google.com/file/d/1-_i_6fbSM8lZn85PlDA7_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>

**Discussed contents:**

1. String related functions: strcat, strcpy, strcmp
2. Sheet#4 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**

**+**

**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 Neighbors

[<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>]

Solve Class

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

<https://drive.google.com/file/d/1u6pIfHocDEJ-g1iJD69LrXlixp31svfM/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>

**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-xu3ItW9c/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>

**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>

**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/1d15cA6uckM3NAEbuBN4Oj1F0ySincnUl/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>

**Discussed contents:**

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

**Related CODE**: <https://ideone.com/YC9lE8>

**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>

**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>