# Project Meeting Documentation

## 1st Meeting - Group Meeting

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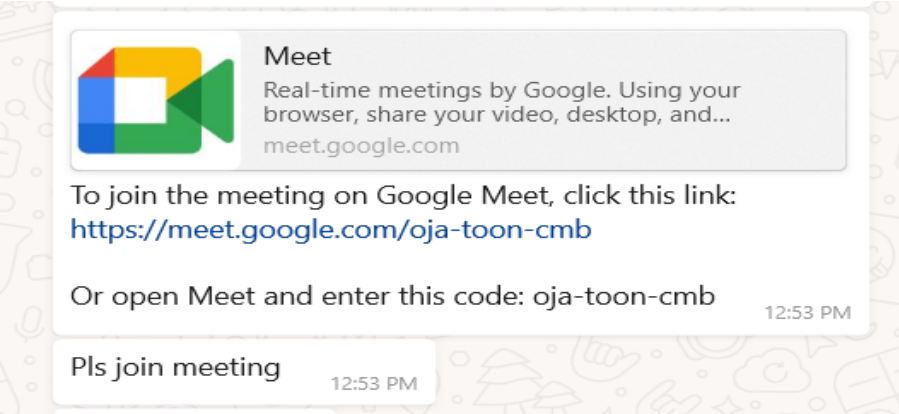
### Meeting Details

- **Meeting Name**: Group Meeting
- **Date**: October 28, 2024
- **Time**: 1:00 PM
- **Duration**: 30 Minutes





- **Attendees**:
  - Vivek Kumar 1

- Nirmal Kumar
- Anuradha Tiwari
- Vivek Kumar 2
- Harisingh Rajput

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**Objective**

The main objectives of this meeting were to:

1. Discuss the group assignment and clarify the project scope.
2. Assign specific tasks and responsibilities to each group member.
3. Ensure each member understands their role and contribution to the project.
4. Foster better collaboration and communication among all group members.

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## Task Assignment

Each group member was assigned the following tasks:

| Name | Assigned Task |
|---|---|
| Vivek Kumar 1 | Upper triangular matrix html file |
| Vivek Kumar 2 | Diagonal Matrix CSS and Html |
| Nirmal Kumar | Git and GitHub |
| Harisingh | The CSS and HTML are used in the lower triangular matrix. |
| Anuradha Tiwari | Zoom Meetings & Documentation |

**2nd Meeting - Group Meeting**

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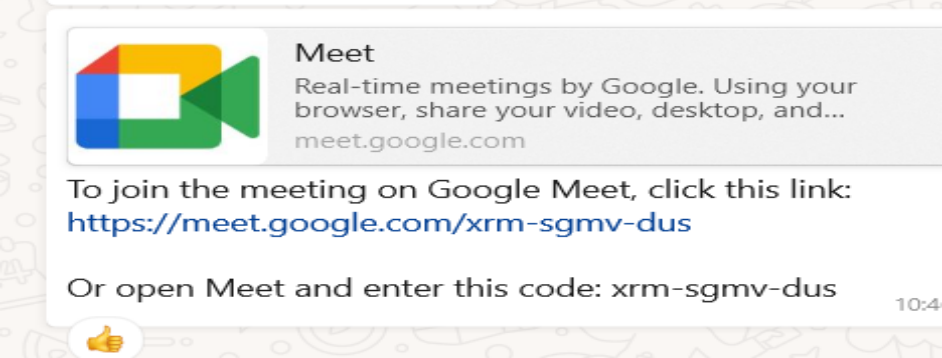
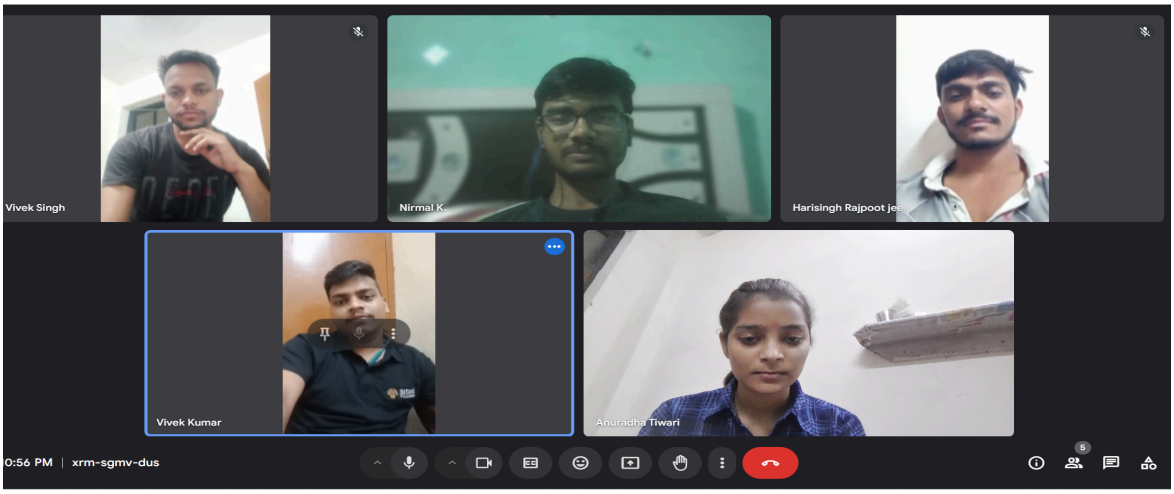
# Meeting Details

- **Meeting Name**: Group Meeting
- **Date**: November 05, 2024
- **Time**: 10:00 PM
- **Duration**: 50  Minutes




- **Attendees**:
  - Vivek kumar 1
  - Nirmal Kumar
  - Anuradha Tiwari
  - Vivek Kumar 2
  - Harisingh Rajput

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# Objective

1. To review progress and make adjustments as needed.

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### 3rd Meeting - Group Meeting

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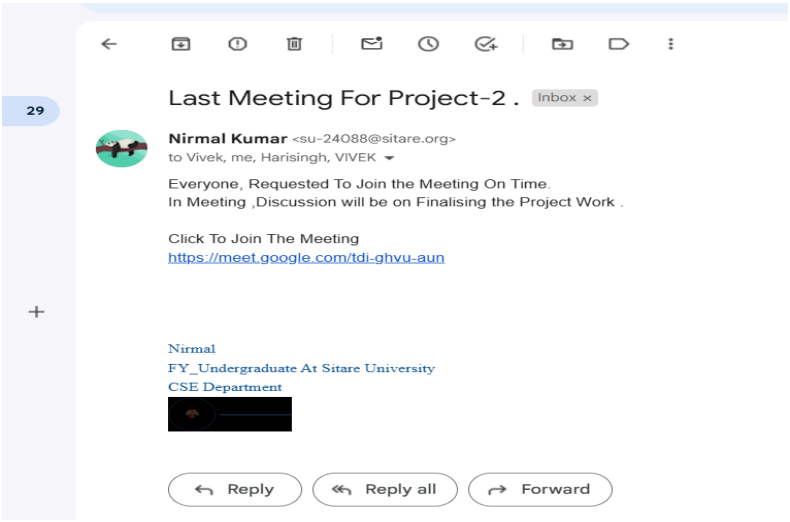
# Meeting Details

- **Meeting Name**: Group Meeting
- **Date**: November 07, 2024
- **Time**: 5:00 PM
- **Duration**: 35  Minutes




- **Attendees**:
    - Vivek kumar 1
    - Nirmal Kumar
    - Anuradha Tiwari
    - Vivek Kumar 2
    - Harisingh Rajput

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**Objective**

2. To finalize the project.

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# LUD web page overview

### LDU Factorization Calculator

## 1. Overview

The **LDU Factorization Calculator** is a web-based tool designed to perform LDU factorization on a matrix provided by the user. Users can input the size of the matrix, enter matrix values, and compute the lower-diagonal upper (LDU) factorization. This calculator is created using HTML, CSS, and JavaScript, and relies on two JavaScript files: `Main_.js` (main functions) and `MatrixFind_.js` (matrix input generation).

### 2. HTML Structure

### HTML5 Document Declaration

html

Copy code

```
<!DOCTYPE html>
<html lang="en">
```

- Specifies the document type as HTML5 and sets the language to English.
- **`<head>` Section** Contains metadata and links to external resources:
  - `<meta charset="UTF-8">`: Sets character encoding to UTF-8.
  - `<meta name="viewport" content="width=device-width,`

`initial-scale=1.0">`: Ensures responsive design for different screen sizes.
    - `<title>LDU Factorization Calculator</title>`: Specifies the title displayed in the browser tab.
    - `<script src="Main_.js"></script>`: Links to the main JavaScript file handling the LDU factorization calculations.
    - `<link rel="stylesheet" href="Main_.css">`: Links to the CSS file for styling.
    - `<script src="MatrixFind_.js"></script>`: Links to the JavaScript file that handles dynamic matrix input field generation based on the matrix size.

**`<body>` Section** Main section of the document, containing the UI components and placeholders for matrix input and output:

html

Copy code

```
<div class="calculator">
```

- This `div` acts as the main container for all elements related to the calculator.

## 3. Elements and Their Functions

### Title and Instructions

html

Copy code

```
<h1>LDU Factorization Calculator</h1>
<p class="instructions">We need to convert the input matrix into a Lower-Diagonal-Upper (LDU) format.</p>
```

1.
    - `<h1>` displays the main title.
    - `<p class="instructions">` provides brief instructions or information about the calculator's purpose.

**Matrix Size Input Section**

html

Copy code

```
<div class="input-section">
<label for="matrixSize">Enter the size of the matrix:</label>
<input type="number" id="matrixSize" min="1" placeholder="Matrix Size">
<button onclick="getMatrix()">Generate Matrix</button>
</div>
```

2.

- `<label for="matrixSize">`: Label for matrix size input, providing context for accessibility.
- `<input type="number" id="matrixSize" min="1" placeholder="Matrix Size">`: Accepts the matrix size from the user. The `min="1"` attribute ensures only positive integer input.
- `<button onclick="getMatrix()">Generate Matrix</button>`: When clicked, this button calls the `getMatrix()` function (defined in `MatrixFind_.js`) to generate the input fields for the matrix.

# Matrix Input Fields Placeholder

html

Copy code

```
<div id="matrixInput"></div>
```

# Calculate LDU Button

html

Copy code

```
<button onclick="calculateLDU()" id="calculateButton"
    style="display: none;">Calculate LDU</button>
```

3.
   - This button triggers the `calculateLDU()` function in `Main_.js` to perform LDU factorization. The button is hidden (`display: none`) initially and is displayed once the matrix input fields are generated.

## Result Display Section

html
Copy code

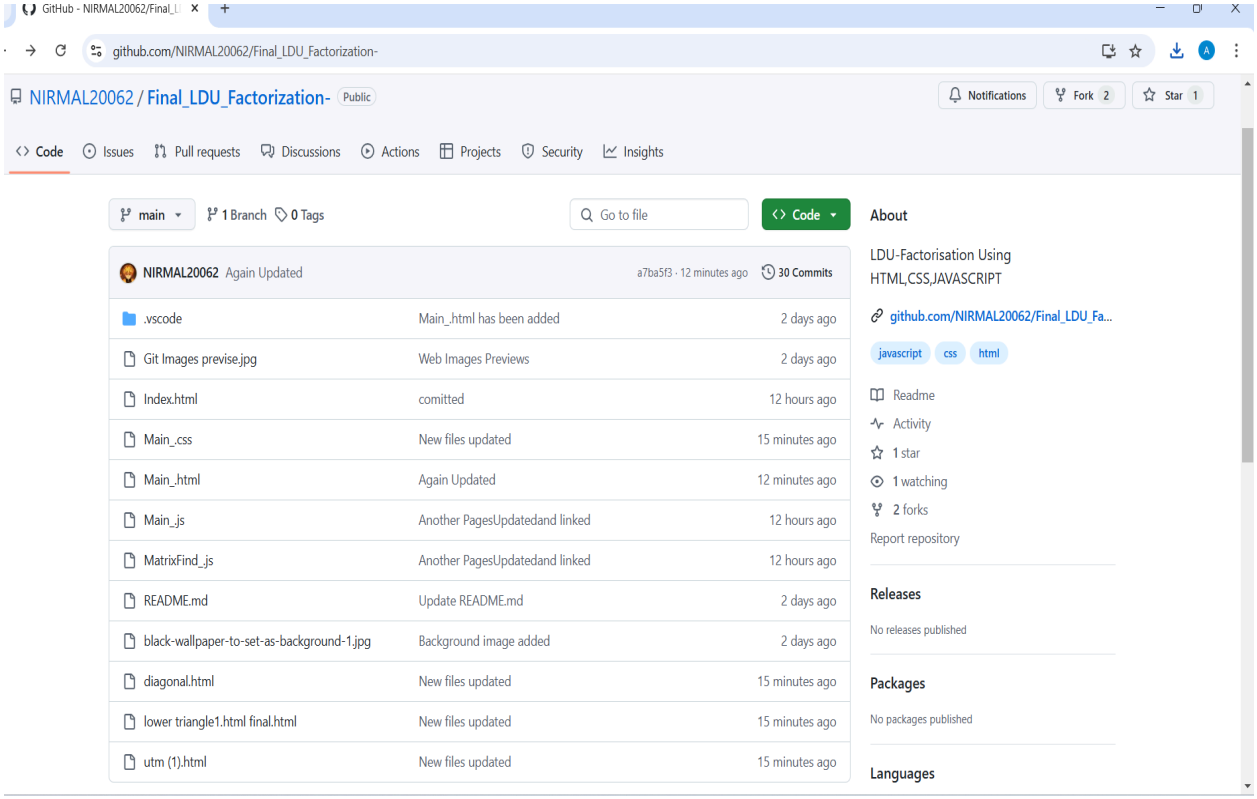
```
<h2>Step-by-Step LDU Factorization</h2>
        <div id="result"></div>
```

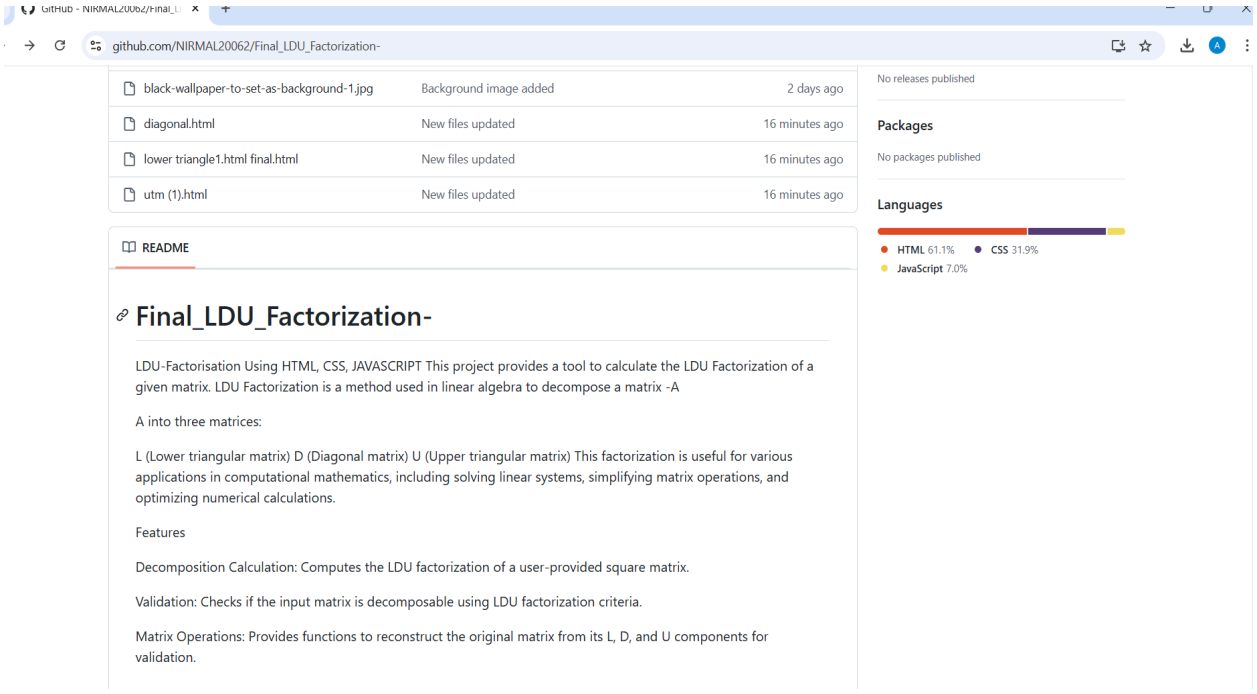
4.
   - `<h2>` serves as a title for the results section.
   - `<div id="result"></div>` will display the step-by-step LDU factorization results, as populated by the `calculateLDU()` function.

# 5. CSS File (`Main_.css`)

The CSS file provides the styling for the calculator interface, ensuring a clean and readable layout. Basic styling rules apply to the overall container, text alignment, button appearance, and form elements.

# Github Work


GitHub - NIRMAL20062/Final_L
github.com/NIRMAL20062/Final_LDU_Factorization-
NIRMAL20062 / Final_LDU_Factorization- Public
Notifications
Fork 2
Star 1
Code
Issues
Pull requests
Discussions
Actions
Projects
Security
Insights
main
1 Branch
0 Tags
Go to file
Code
NIRMAL20062 Again Updated
a7ba5f3 · 12 minutes ago
30 Commits
.vscode Main_.html has been added 2 days ago
Git Images previse.jpg Web Images Previews 2 days ago
Index.html comitted 12 hours ago
Main_.css New files updated 15 minutes ago
Main_.html Again Updated 12 minutes ago
Main_.js Another PagesUpdatedand linked 12 hours ago
MatrixFind_.js Another PagesUpdatedand linked 12 hours ago
README.md Update README.md 2 days ago
black-wallpaper-to-set-as-background-1.jpg Background image added 2 days ago
diagonal.html New files updated 15 minutes ago
lower triangle1.html final.html New files updated 15 minutes ago
utm (1).html New files updated 15 minutes ago
About
LDU-Factorisation Using HTML,CSS,JAVASCRIPT
github.com/NIRMAL20062/Final_LDU_Fa...
javascript
css
html
Readme
Activity
1 star
1 watching
2 forks
Report repository
Releases
No releases published
Packages
No packages published
Languages


github.com/NIRMAL20062/Final_LDU_Factorization-
black-wallpaper-to-set-as-background-1.jpg Background image added 2 days ago
diagonal.html New files updated 16 minutes ago
lower triangle1.html final.html New files updated 16 minutes ago
utm (1).html New files updated 16 minutes ago
README
Final_LDU_Factorization-
LDU-Factorisation Using HTML, CSS, JAVASCRIPT This project provides a tool to calculate the LDU Factorization of a given matrix. LDU Factorization is a method used in linear algebra to decompose a matrix -A
A into three matrices:
L (Lower triangular matrix) D (Diagonal matrix) U (Upper triangular matrix) This factorization is useful for various applications in computational mathematics, including solving linear systems, simplifying matrix operations, and optimizing numerical calculations.
Features
Decomposition Calculation: Computes the LDU factorization of a user-provided square matrix.
Validation: Checks if the input matrix is decomposable using LDU factorization criteria.
Matrix Operations: Provides functions to reconstruct the original matrix from its L, D, and U components for validation.
No releases published
Packages
No packages published
Languages
HTML 61.1%
CSS 31.9%
JavaScript 7.0%

# Thank you