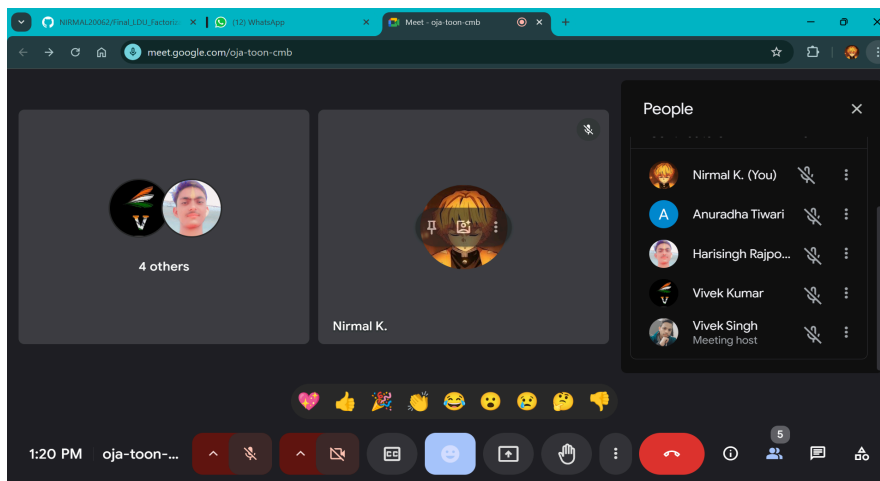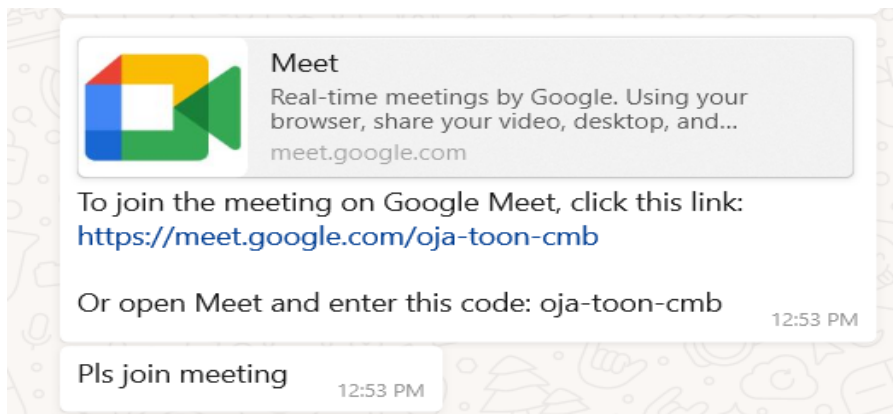# Project Meeting Documentation

1st Meeting - Group Meeting

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

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.


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(added Jvascript)

2nd Meeting - Group Meeting

Meeting Details

- **Meeting Name**: Group Meeting
- **Date**: November 05, 2024
- **Time**: 10:00 PM
- **Duration**: 50 Minutes
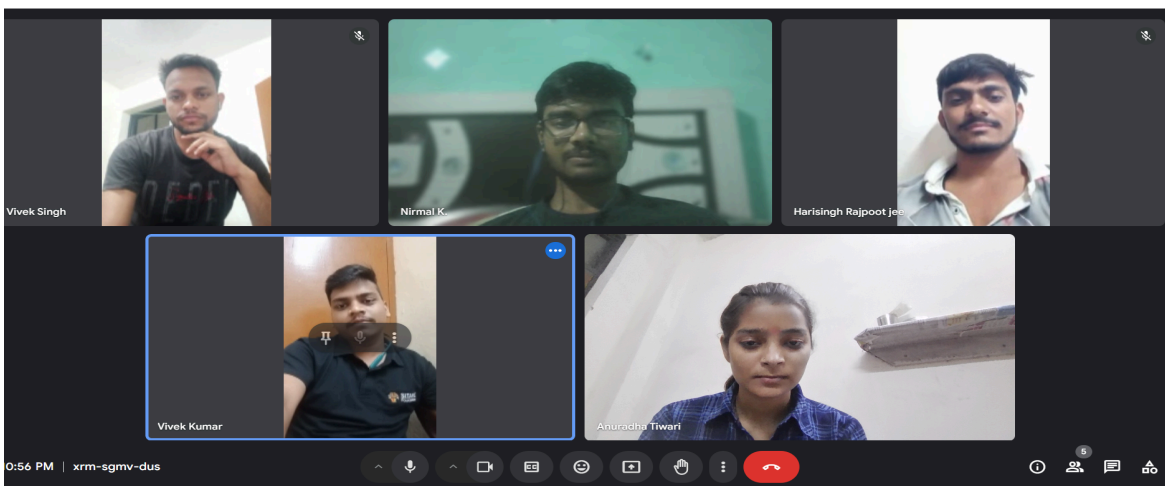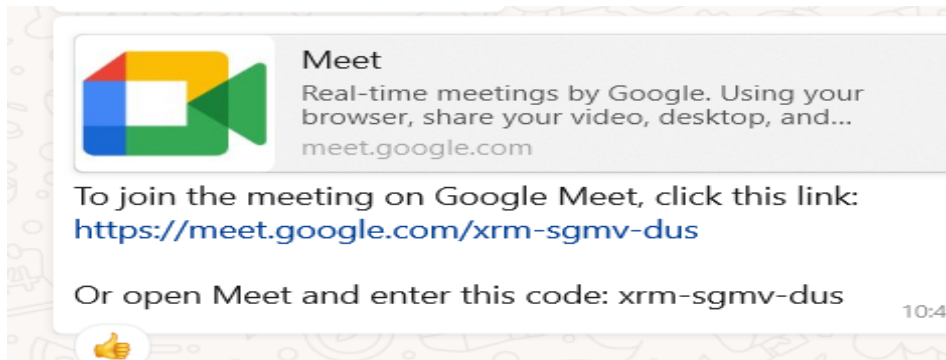
- ## Attendees:
  - Vivek kumar 1
  - Nirmal Kumar
  - Anuradha Tiwari
  - Vivek Kumar 2
  - Harisingh Rajput

Objective

1. To review progress and make adjustments as needed.

3rd Meeting - Group Meeting

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
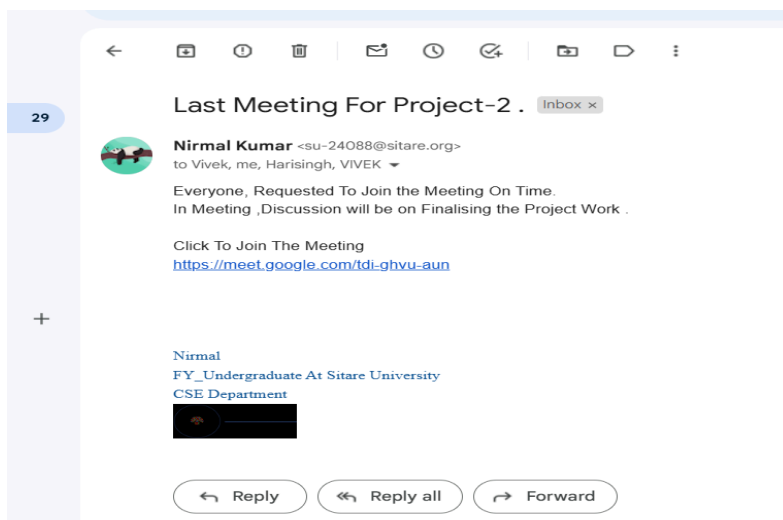   - Vivek Kumar 2
    - Harisingh Rajput

Objective

2. To finalize the project.

LUD web page overview

LDU Factorization Calculator

Overview

This web page provides an interactive interface for performing **LDU Factorization** of a given matrix. It includes links to specialized tools for calculating the **Lower Triangular Matrix**, **Diagonal Matrix**, and **Upper Triangular Matrix**. The design is visually appealing and user-friendly.

Features

1. **Interactive Design**
   - Input fields for matrix entry.
   - Responsive layout suitable for various screen sizes.
   - Hover animations on buttons and background for a dynamic experience.
2. **Quick Navigation**
   - Links to tools for specific matrix calculations:
     - **Lower Triangular Matrix** (`ltm.html`)
     - **Diagonal Matrix** (`dm_.html`)
     - **Upper Triangular Matrix** (`UTM (2).html`)
3. **Styling**
   - Gradient backgrounds for a polished look.
   - Smooth scaling effect on the background during interaction.
   - Clean typography for better readability.
4. **Modular Scripts and Styles**

○ JavaScript files handle the input and computation logic.
○ CSS file enhances visual presentation.

Code Structure

HTML

- Defines the structure of the web page, including:
    - Title and headers.
    - Section for matrix input and navigation links.
    - Integration of JavaScript (`Main_.js`, `MatrixFind_.js`) and CSS (`Main_.css`) files.

CSS (Internal and External)

- Provides:
    - Gradient backgrounds for the main container.
    - Flexbox-based layout for centering elements.
    - Button hover animations and scaling effects for interactivity.

JavaScript

- **Main_.js:** Implements core functionalities like user input handling and linking matrix operations.
- **MatrixFind_.js:** Allows users to input a matrix dynamically and ensures proper validation.

How to Use

1. **Main Functionality:**
    - Access the web page to input matrix dimensions and values.
    - Click on the provided links to navigate to specific matrix-related tools.

Key Files

1. **HTML**
   - Defines the content and structure of the web page.
2. **CSS**
   - Provides the styling for a polished and professional design.
3. **JavaScript**
   - Manages the interactive functionalities, such as matrix input and navigation.

Github Work: [Github](#)

| utm_styles.css | Updated | 17 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.

Thank you