PROJECT PROPOSAL ON

REAL-TIME CHAT SYSTEM

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INTRODUCTION

- Instant communication is essential for personal and professional interactions.

- This project focuses on developing a real-time chat system.

- Ensures seamless, instant messaging across multiple platforms.

- Aims to provide a smooth user experience for all users.

PROBLEM STATEMENT

- Users expect fast, secure, and seamless messaging, which many platforms fail to deliver.

- There's a need for a lightweight, real-time chat application that ensures smooth communication, user privacy, and minimal server load.

OBJECTIVES

TO CREATE SIMPLE , EFFECTIVE , AND USER-FRIENDLY

CHATTING SYSTEM

KEY FEATURES

- **TEXT MESSAGING**

  The project includes a robust text messaging feature for instant communicatio

- **FILE SHARING**

  Users will have the capability to easily share files among each other.

- **AUDIO CALL**

  An integrated audio calling feature will enhance user interaction.

WORK BREAKDOWN

S. N	Week Task Description	1st-2nd Week	3rd-4th Week	5th-6th Week	7th-8th Week	9th-10th Week	11th-12th Week
1	Problem Identification	▓					
2	Analysis	▓	▓				
3	Design		▓	▓			
4	Coding			▓	▓	▓	
5	Implementing and Testing				▓	▓	▓
6	Documentation	▓	▓	▓	▓	▓	▓

FEASIBILITY STUDY

- ECONOMIC FEASIBILITY

  The system requires minimal financial investment, using open-source tech and free-tier hosting.

- OPERATIONAL FEASIBILITY

  Designed for efficiency on low-spec devices, ensuring wide accessibility for users.

  TECHNICAL FEASIBILITY
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  Developed with popular frameworks like Node.js and React, ensuring user-friendly operation.
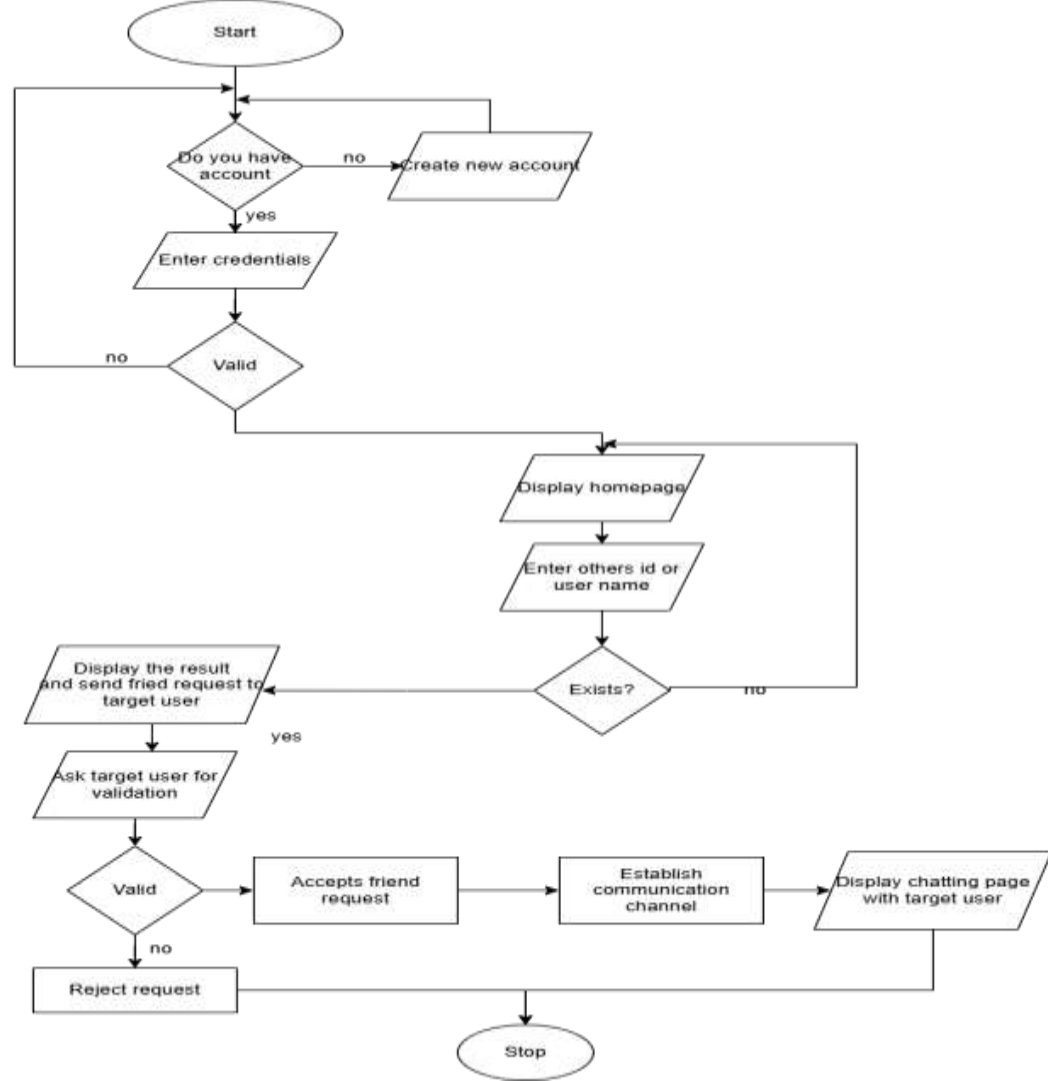
  SCHEDULE FEASIBILITY
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  Completion estimated in 3 to 4 months, covering all project phases efficiently.

METHODOLOGY

The methodology involves a structured approach to developing the real-time chat system. The algorithm outlines the steps for user authentication, account creation, establishing communication channels, and displaying the chatting page. The flowchart visually represents the process flow, while the use case diagram illustrates the interactions between users and the system. The E-R diagram defines the entities and relationships within the database.

Tools and Platforms: Visual Studio Code

Flowchart

ALGORITM

1. Start

2. Ask the user: "Do you have an account?"

   - If No, go to step 3.

   - If Yes, go to step 4.

3. Create a new account.

   - Proceed to step 4.

4. Enter credentials.

5. Check if credentials are valid:

   - If No, prompt the user to re-enter credentials (loop back to step 4).

   - If Yes, proceed to step 6.

6. Display homepage.

7. Ask the user to enter another user's ID or username.

8. Check if the entered user exists:

   - If No, return to step 7.

   - If Yes, proceed to step 9.

9. Display the search result and send a friend request to the target user.

10. Ask the target user for validation.

11. Check if the target user accepts the request:

    - If No, reject the request and stop.
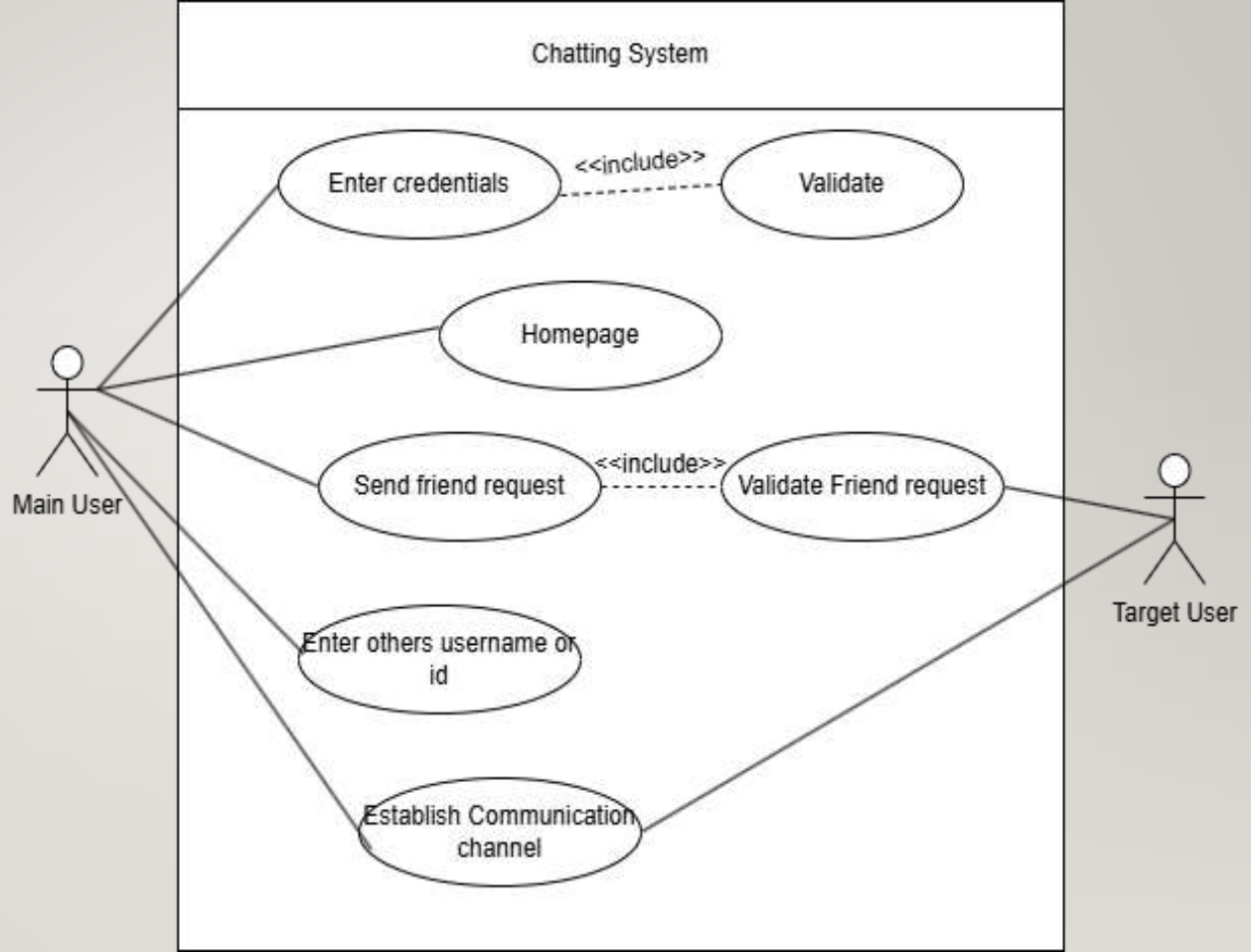
    - If Yes, proceed to step 12.

12. Establish a communication channel.
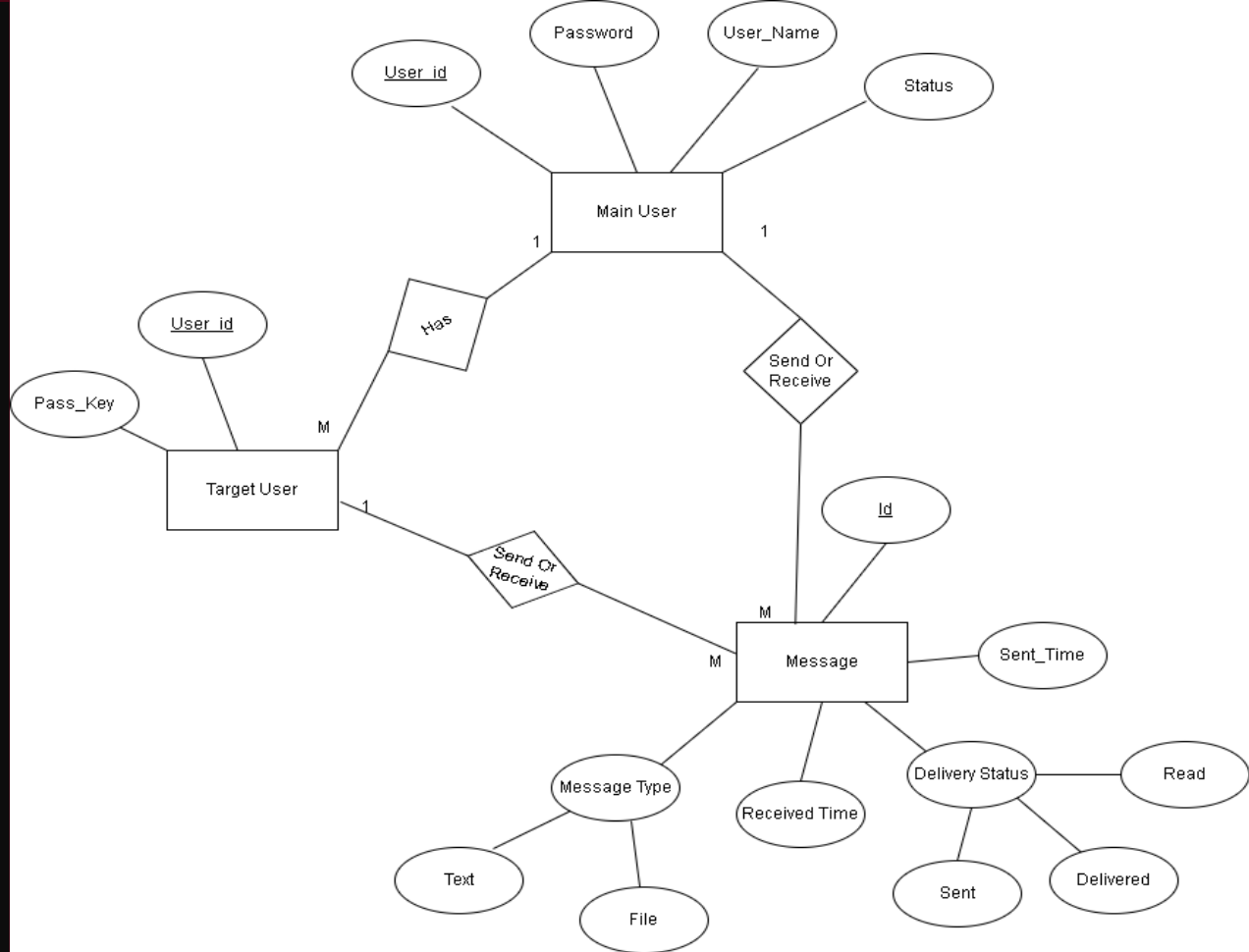
13. Display the chatting page with the target user.

14. Stop.

USE CASE DIAGRAM

ER DIAGRAM

Thank you!