Institute of
Space Technology

DATABASE SYSTEMS

Pomodoro Timer

Project Proposal

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Project Submission: 10th June ,2025

Pomodoro Productivity Tracker

Objective

To design and implement a web-based Pomodoro timer application with integrated task management, session history tracking, and motivational feedback using a relational database system. The project will solve time management challenges by combining the Pomodoro Technique with data-driven productivity insights.

Problem Statement

Students and professionals increasingly struggle with time management and sustained focus due to:

- **Poor task prioritization** – Many users cannot effectively break down workloads into manageable units.
- **Lack of structured work intervals** – Without enforced time boundaries, distractions reduce productivity.
- **No progress tracking** – Manual logging of completed tasks/sessions is tedious and often abandoned.
- **Lack of Motivation** – Users lose momentum without feedback on their accomplishments.

Scope of the Project

Included Features:

- **Pomodoro Timer** (Customizable work/break sessions: 25/5/15 minutes)
- **Task Management** (Create, prioritize, and track task completion)
- **Session History** (Stores completed sessions with timestamps)
- **User Authentication** (Signup/login with secure password hashing)

Database & Tools

Frontend: HTML, CSS, JavaScript (for timer UI and interactivity)
Backend: PHP (to handle database operations)
Database: MySQL (Relational schema with tables for users, tasks, sessions etc)

Expected Outcome

- A fully functional web application where users can:
- Set and manage tasks with priorities
- Start Pomodoro sessions (work/short break/long break)
- View their session history

Expected Challenges

- Syncing timers with session data
  Solution: Use backend session tracking
- Managing user and task relationships
  Solution: Use foreign keys and normalization

Conclusion

This project combines time management with database systems. It will help us understand schema design, SQL operations, and backend integration in a real-world productivity tool.