Patuakhali Science and Technology University

Faculty of Computer Science and Engineering

CCE - 310 :: Software Development Project-I

Sessional Project Proposal

Project Title: Pomodoro Timer

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Submitted from,	Submitted to,
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Pomodoro Timer App

- ## Introduction

Pomodoro Timer Pro is a cross-platform productivity application designed to help users manage their time effectively using the Pomodoro Technique. The app allows users to break their work into focused intervals (typically 25 minutes) followed by short breaks. It is built to be simple, intuitive, and customizable, supporting both students and professionals in enhancing their productivity.

- ## Objective

The primary objectives of the Pomodoro Focus app are:

- To develop a user-friendly Pomodoro timer app for Web, Android, and iOS platforms.
- To allow customization of work and break durations.
- To track and display session history and productivity statistics.
- To provide notifications and sound alerts for session transitions.
- To support user authentication and cloud sync for multi-device usage.
- To ensure a clean and minimal UI for distraction-free use.

- ## Problem Statement

Many professionals, students, and freelancers struggle to maintain focus and manage time effectively due to distractions and inconsistent productivity tools across devices. Existing Pomodoro apps often lack cross-platform support, have limited customization, or fail to integrate task management and distraction-blocking features. This leads to fragmented user experiences, data silos, and reduced productivity. Pomodoro Focus aims to address these issues by providing a unified, feature-rich solution accessible on mobile, desktop, and PC platforms.

- **Related Work**

Several Pomodoro timer apps exist, but they vary in functionality and platform support:

- o **Focus To-Do**: Popular Pomodoro app with task integration, but limited free features and no web version.
- o **Be Focused**: Available on iOS and macOS, but lacks Android and web support.
- o **Pomodoro Timer Lite**: Simple and lightweight, but no cloud sync or user accounts.

- **Scope**

The app will include:
- o **Customizable timer settings**
- o **Session history and statistics**
- o **User authentication and cloud sync**
- o **Notifications and sound alerts**
- o **Cross-platform support (Web, Android, iOS)**

- **Methodology / Technology Stack**

The development of Pomodoro Timer Pro will follow an agile methodology, allowing for iterative improvements and user feedback. Our technology stack will includes,

- **Frontend**: Flutter (Dart)
- **Backend**: Firebase
- **UI/UX Design**: Figma
- **Database**: Firebase for real-time data synchronization across devices
- **Authentication**: Firebase Authentication
- **Hosting (web app)**: Vercel
- **CI/CD**: GitHub Actions, Docker (optional)
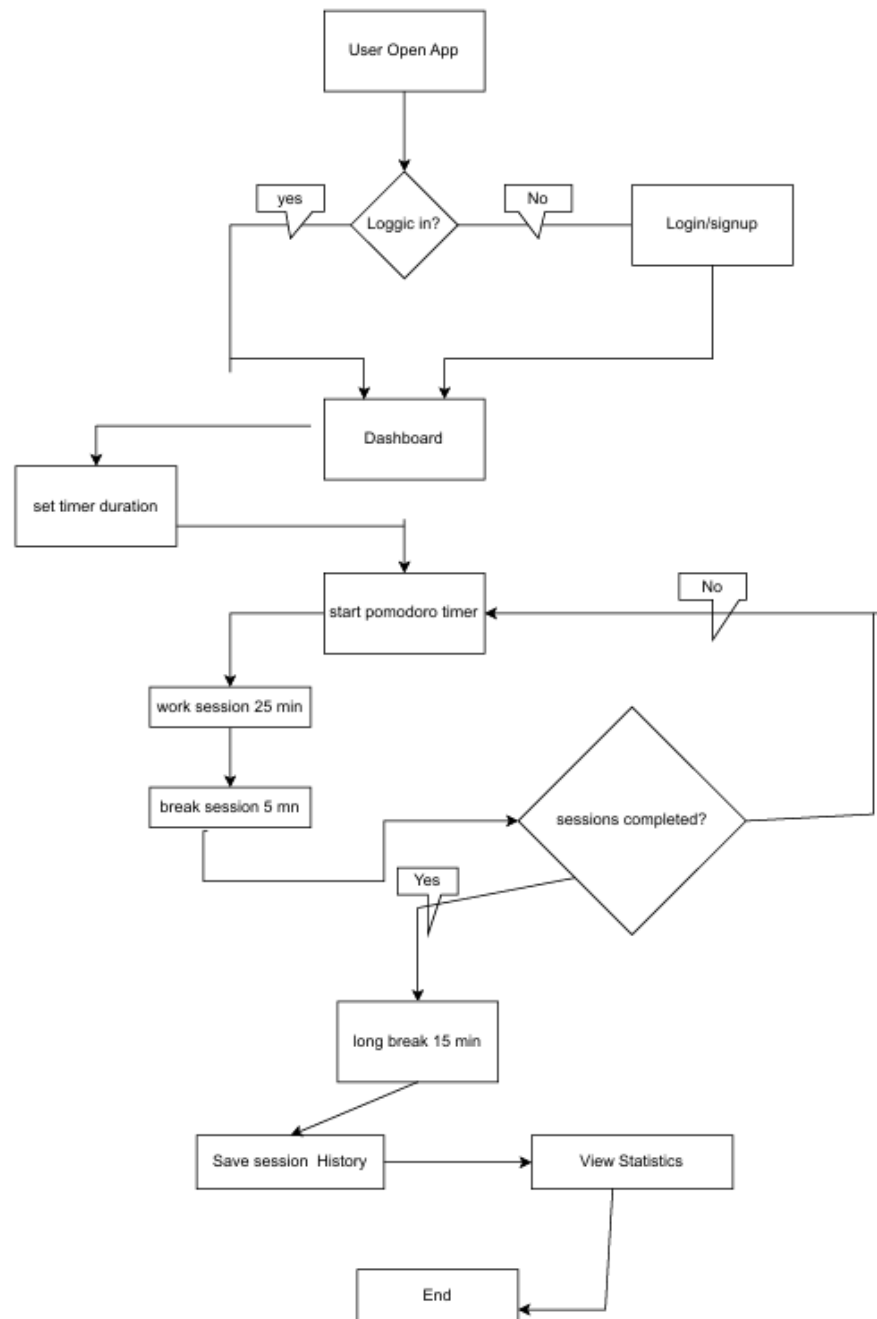
- **Flow Chart**

Figure 1: Flow Chart of pomodoro timer app

- **Gantt Chart**

  Below is a Gantt chart outlining the project timeline (to be included as a figure in the final report:

• Task	Week 1-2	Week 3-4	Week 5-6	Week 7-8	Week 9-10	Week 11-12
• Requirement Analysis	■					
• UI/UX Design		■				
• Development (Mobile)			■	■		
• Development (Desktop)				■	■	
• Testing & Debugging					■	■
• Deployment & Documentation						■

  Description: The Gantt chart schedules tasks over 12 weeks, with overlapping phases for efficient development.
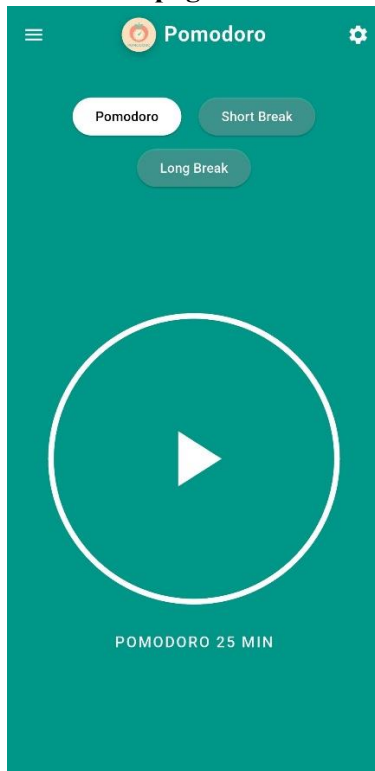
- **Result and Limitations**

  To be completed in mid-term or final report.Expected Results:
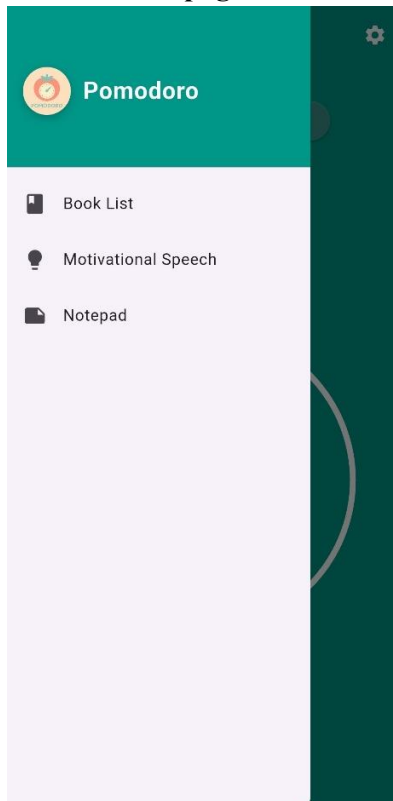 - A fully functional cross-platform Pomodoro timer app with task management and distraction-blocking features.
  - Seamless operation on iOS, Android, Windows, macOS, and Linux with data syncing via Firebase.
  - Positive user feedback on usability and productivity enhancement.
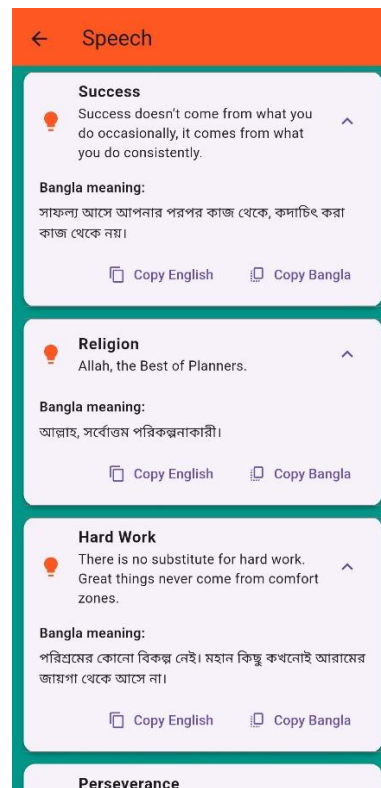
- **UI Mockups**

Home page

setting page

Drawer page

motivational speech page

- **Conclusion**

  Pomodoro Focus aims to deliver a versatile, cross-platform productivity tool that enhances focus and time management for users across mobile, desktop, and PC environments. By leveraging Flutter for development and Firebase for data synchronization, the app will provide a seamless experience with robust features. The Agile methodology ensures iterative improvements, addressing user needs effectively. This project aligns with the growing demand for accessible, multi-device productivity solutions.

- **References**
  - Flutter Documentation: https://flutter.dev
  - Supabase Documentation: https://supabase.com
  - Pomodoro Technique: https://www.francescocirillo.com/books-and-resources/

- Weekly Report

No	Date	Objective	Remarks
1		**Project Proposal & Research** • Initial research on existing Pomodoro apps • Defining objectives and requirements • Creating initial UI mockups and wireframes	
2		**Development Environment Setup** • Flutter SDK and IDE configuration • Project structure and navigation design • Creating basic UI components and themes	
3		**Core Timer Implementation** • Pomodoro timer logic and state management • Circular progress indicator implementation • Start/Pause/Reset functionality	
4		**Settings Module Development** • Duration customization interface • Theme color selection system • Sound and notification preferences	
5		**Additional Modules Integration** • Book list with PDF integration • Motivational speeches with translations • Notepad functionality implementation • History functionality implementation	
6		**Health Integration** • Break exercise suggestions • Water reminder during long sessions	
7		**UI Polish & Cross-Platform Testing** • Refining UI elements and animations • Testing on multiple platforms • Performance optimization	
8		**Final Testing & Deployment** • Comprehensive cross-platform testing • Bug fixing and performance tuning • App store deployment preparation	