FocusFlow

Java Data Structures

CSIS 294

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Project overview

- In today's digital age, maintaining focus and productivity has become increasingly challenging. Studies show that the average person is distracted every 40 seconds when working at their computer, leading to decreased productivity and increased stress, particularly among students and professionals. FocusFlow addresses this challenge by creating an integrated productivity ecosystem that combines proven focus-enhancement techniques with engaging features.
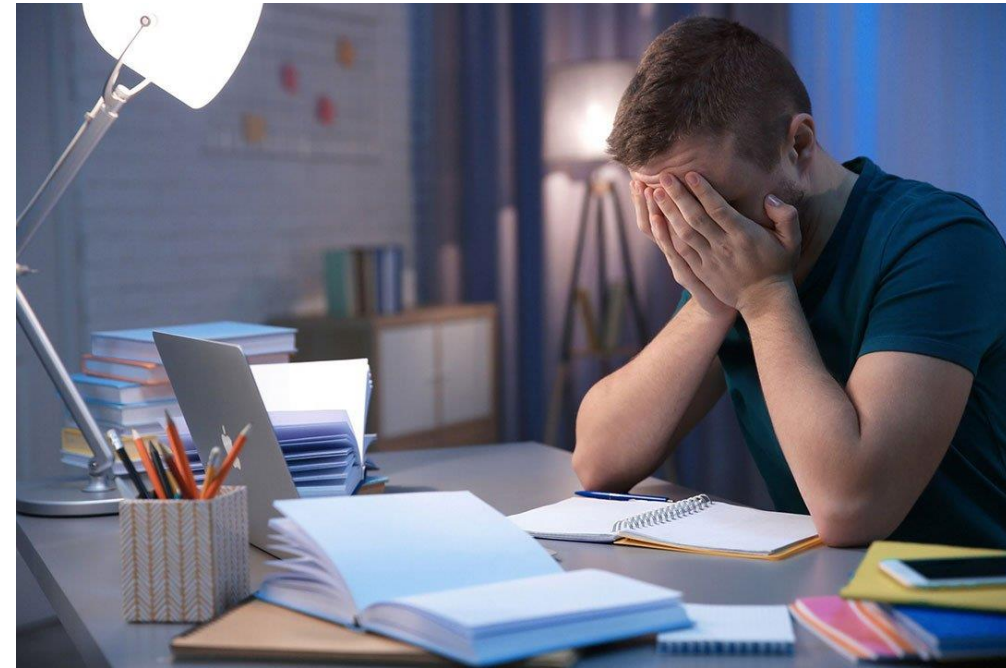
Technical approach

a. The main technical approach for FocusFlow is to create a comprehensive productivity application built on solid object-oriented programming principles. FocusFlow integrates several key components:

   i. A task management system built on dynamic data structures for efficient task organization and tracking.

   ii. A pomodoro timer system that helps users maintain focus.

   iii. An analytics engine that leverages Maps and Lists to track and analyze user productivity measures.

   iv. A reward system implementing interface-based design for extensible gamification.

   v. A flexible notification system using Queue-based architecture for managing user alerts.

   vi. A theme management system allowing for deep customization of the user experience.
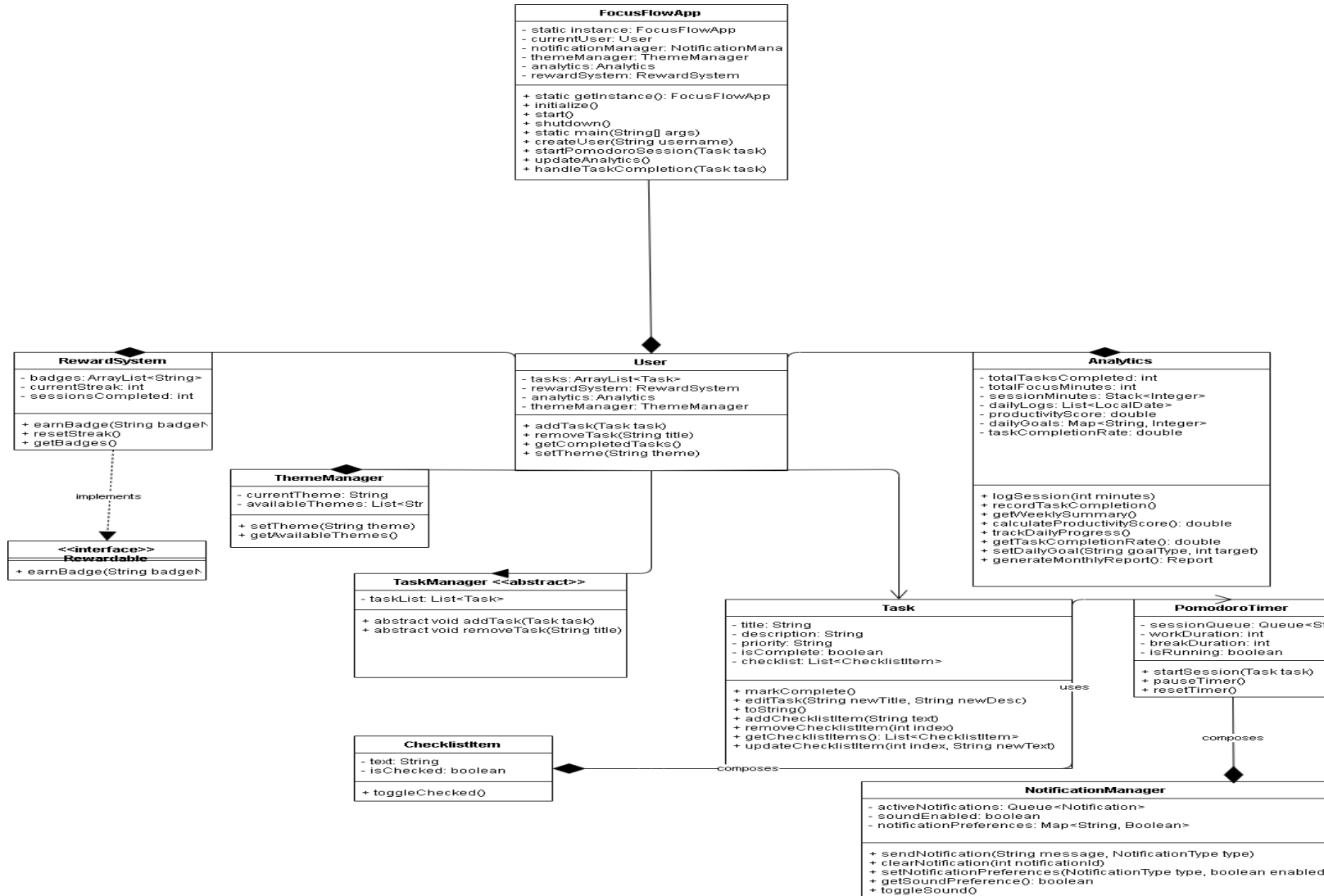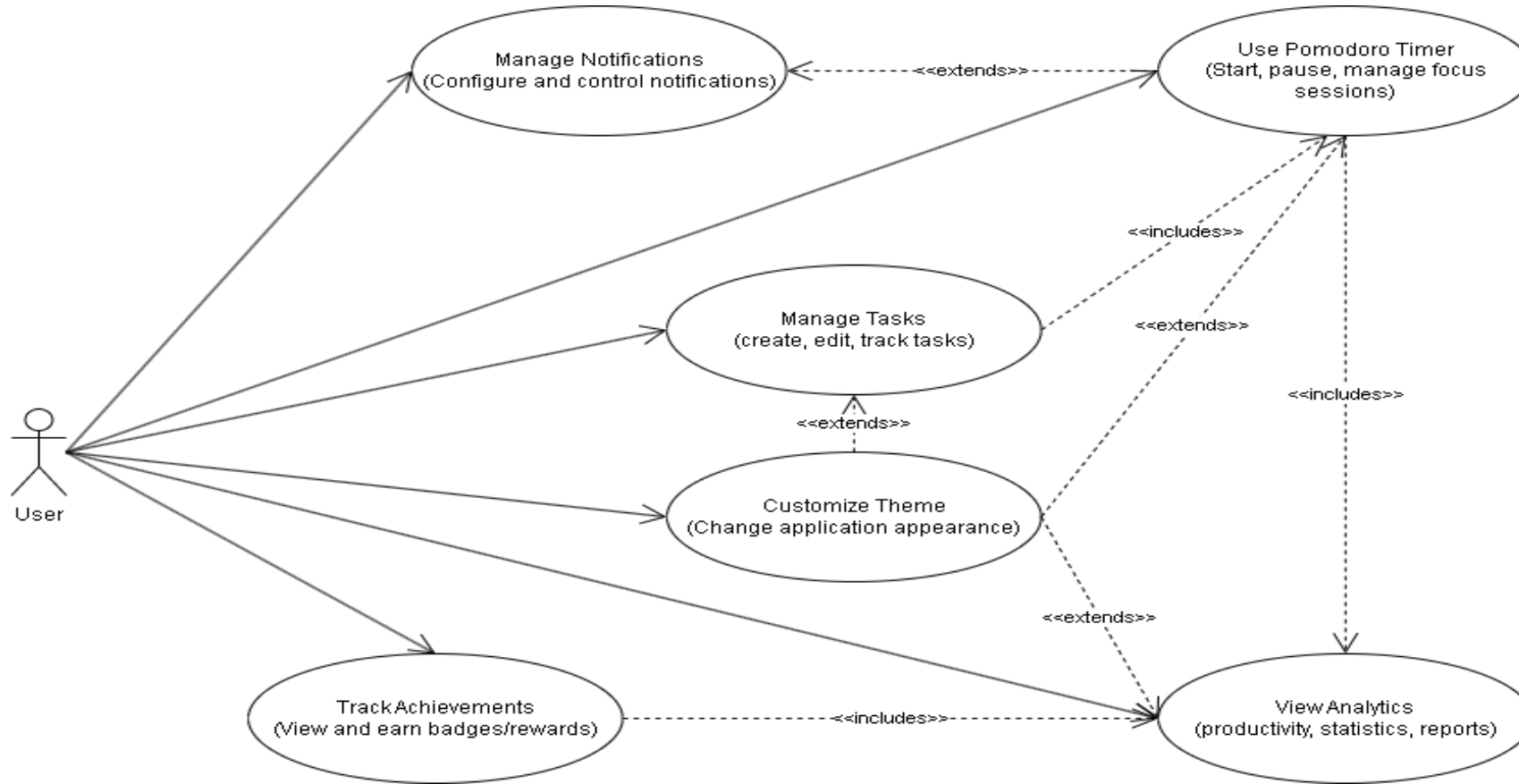
User Story

- As a busy college student, it's imperative to find a productivity tool that helps you manage your time efficiently. When you open FocusFlow, you're immediately presented with your task list, and you can start a Pomodoro session with a single click.

- During study sessions, the timer keeps you focused, and gentle notifications let you know when it's time for a break. You can easily add new tasks as they come and check them off once completed.

- The basic analytics show how many tasks you've completed and how much focused time you've accumulated, helping you understand your productivity patterns. Theme customization allows you to work comfortably, even at the end of a long day.

- The more you use the app, the more you can organize your tasks into categories and break them down into manageable subtasks.

- FocusFlow helps you stay on track without overwhelming you with complex features. It's straightforward: add a task, do the task, complete the task. Nice and easy.

Technical Diagrams: UML

Technical Diagrams: Use-case

Backlog: Must have features

- Task Management System (4 days)
  - Create, edit, delete tasks
  - Set task priorities
  - View task list
  - Due: May 12

- Pomodoro Timer (3 days)
  - 25/5 minute work/break intervals
  - Start/pause/reset functionality
  - Session counter
  - Due: May 12

- Basic User Interface (3 days)
  - Main dashboard
  - Task list view
  - Timer display
  - Due: May 12

Backlog: High priority

1. Basic Analytics (3 days)
    1. Track completed tasks
    2. Record focus sessions
    3. Simple statistics display
    4. Due: May 19

2. Notification System (2 days)
    1. Timer alerts
    2. Break reminders
    3. Due: May 19

3. Data Persistence (2 days)
    1. Save tasks locally
    2. Store session history
    3. Due: May 19

Backlog: Medium priority

1. Basic Analytics (3 days)
   1. Theme support (2 days)
      1. Light/Dark mode
      2. Basic color customization
      3. Due: May 24
   2. Achievement system (3 days)
      1. Basic achievements
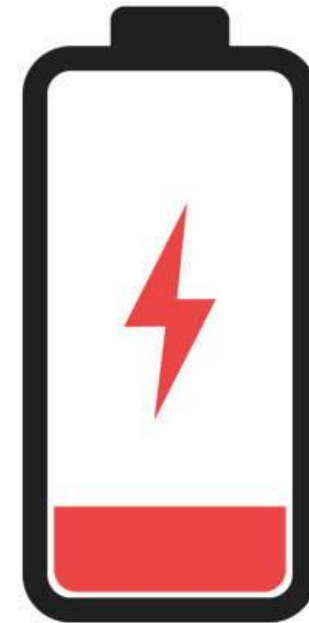   2. Progress tracking
      3. Due: May 24

Backlog: Low priority

1. Enhanced Task Features (2 days)
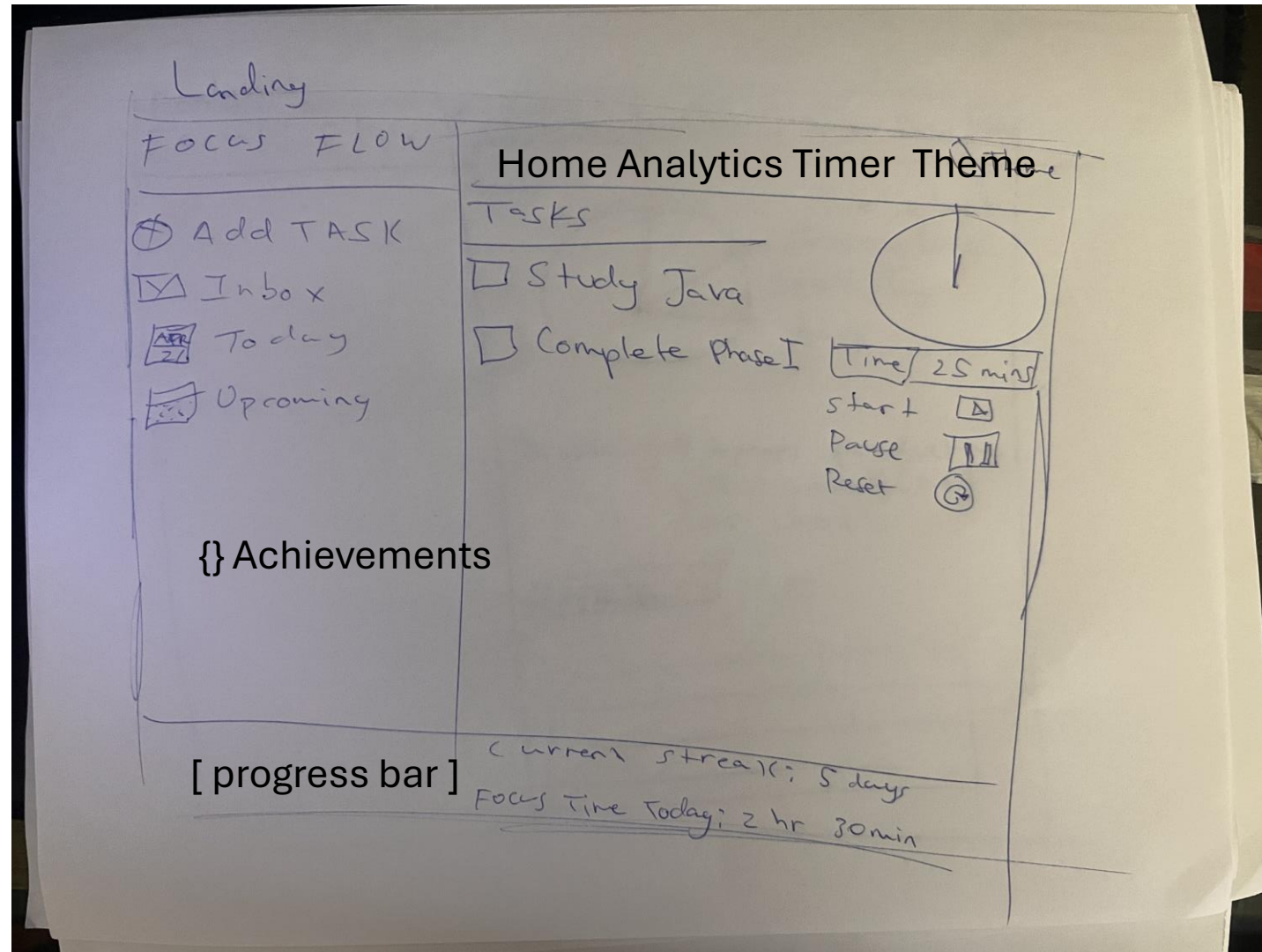   1. Subtasks
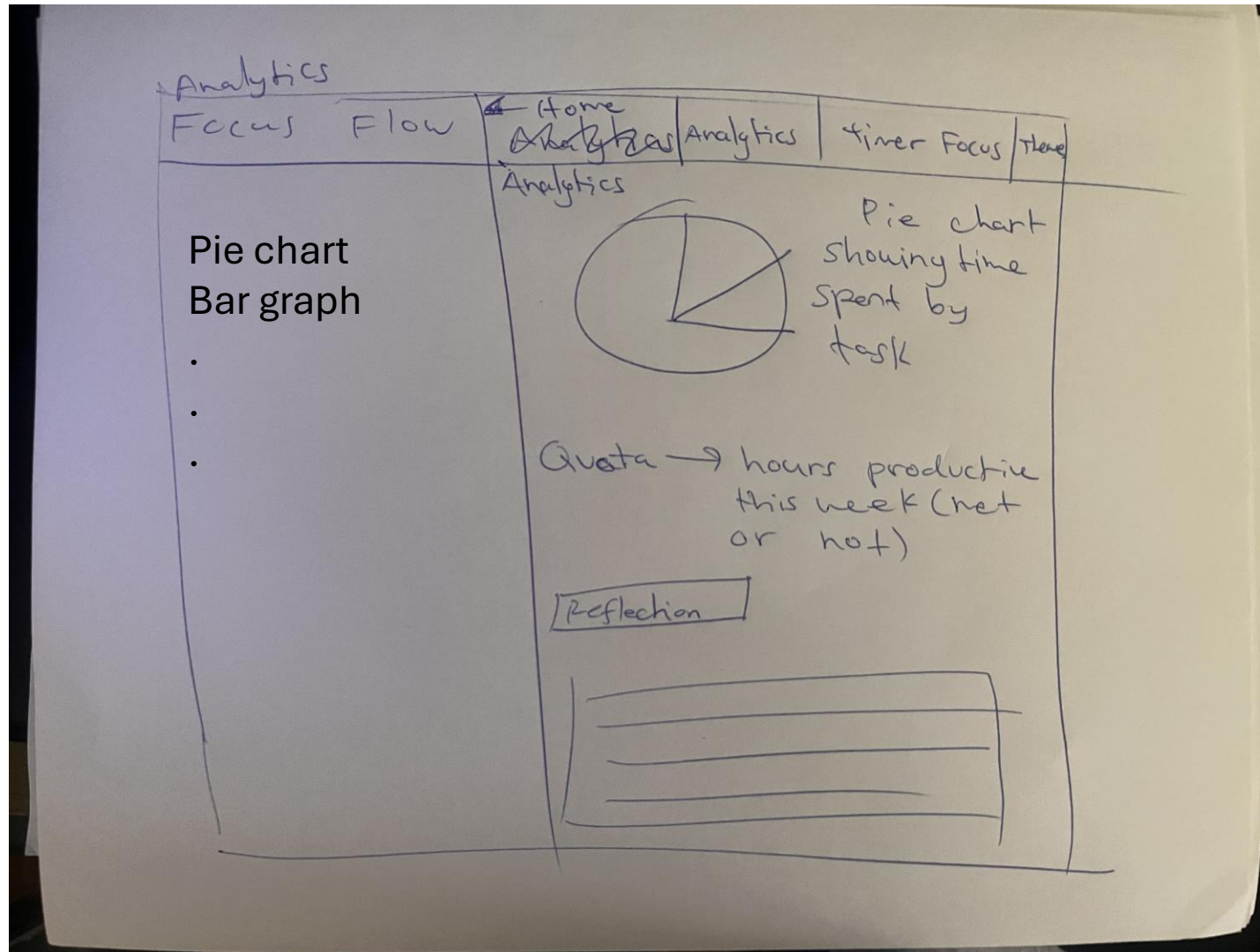   2. Basic categories
    3. Due: May 29
2. Final Polish (3 days)
    1. UI refinements
    2. Bug fixes
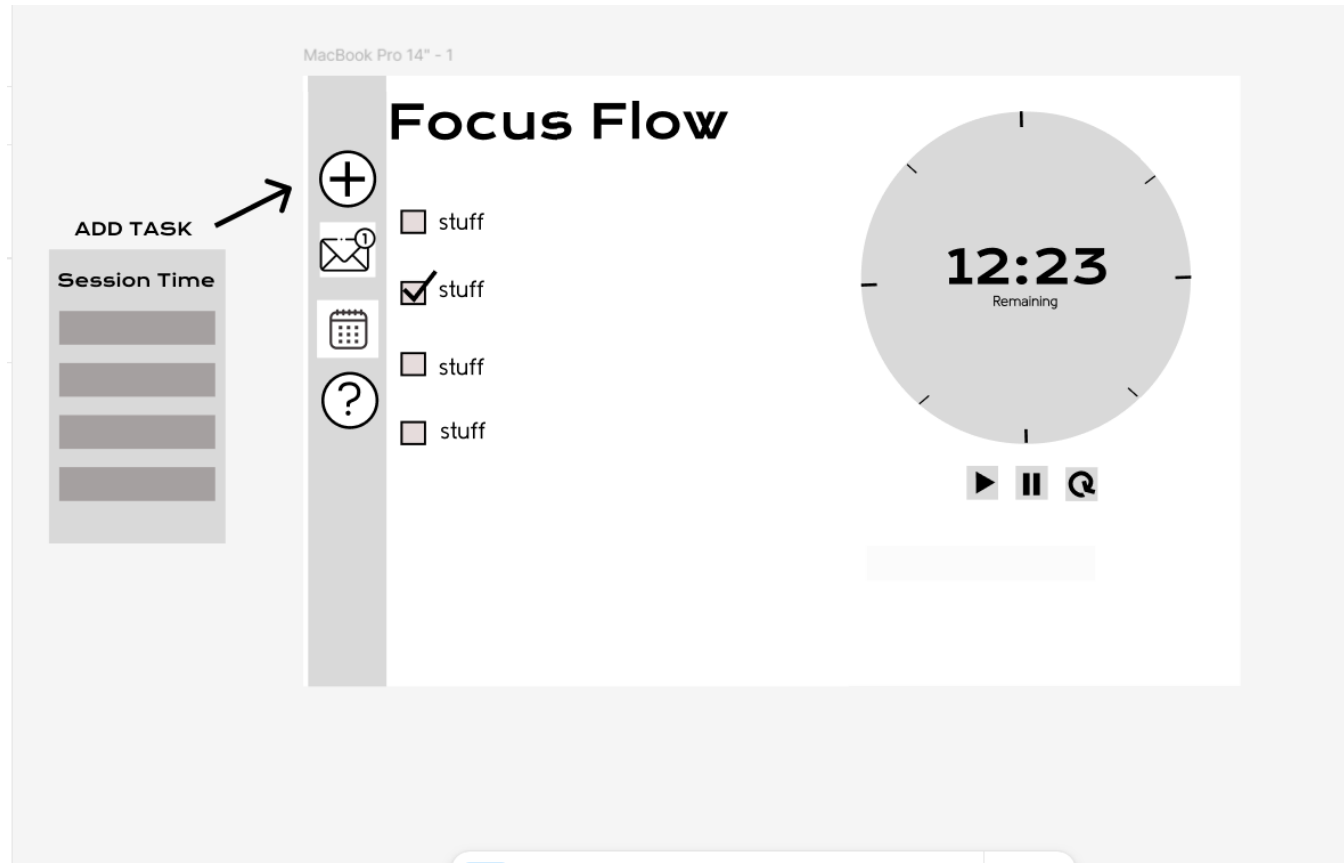   3. Performance optimization
    4. Due: May 29

Mock design: Landing page

Landing

FOCUS FLOW

Home Analytics Timer Theme

⊕ Add TASK

☑ Inbox

📅 Today

📅 Upcoming

Tasks

☐ Study Java

☐ Complete Phase I

⭕

[Time] 25 mins

start ▷

Pause ❚❚

Reset ↻

{} Achievements

[progress bar]

Current streak: 5 days

Focus Time Today: 2 hr 30min

Mock design: Analytics

Mock design: Styling

Questions?