**Online Activity No. 8 and 9: Applying the User-Centred System Design Process**

# Chapter I: Introduction

## Background of the Study

In today's fast-paced world, effective time management is crucial for personal and professional success. While numerous scheduling apps exist, many users still struggle with efficiently organizing their time and achieving their goals. This study aims to innovate an existing user-friendly scheduling app by applying User-Centered System Design (UCSD) principles to enhance its functionality and user experience.

## Statement of the Problem

1. Users often struggle to prioritize tasks effectively within their schedules.
2. Many scheduling apps lack personalization features to adapt to individual user needs and preferences.
3. Integration with other productivity tools is often limited, causing fragmentation in users' digital workflows.
4. Existing apps may not provide adequate support for long-term goal setting and tracking.
5. Users frequently experience difficulty in managing shared schedules or collaborative tasks.

## Assumptions of the Study

1. By implementing an AI-driven task prioritization system, users will be able to manage their time more effectively.
2. Introducing customizable interfaces and workflow options will increase user satisfaction and app adoption.
3. Enhancing integration capabilities with popular productivity tools will streamline users' digital ecosystems.
4. Incorporating features for setting and tracking long-term goals will improve user engagement and goal achievement rates.
5. Developing robust collaboration features will facilitate better team coordination and shared scheduling.

## Significance of the Study

1. End Users: Will benefit from a more intuitive, personalized, and effective scheduling tool that helps them achieve their goals and improve productivity.
2. Businesses and Organizations: Can leverage the improved app to enhance team coordination, project management, and overall organizational efficiency.
3. App Developers: Will gain insights into applying UCSD principles to create more user-friendly and effective productivity tools.
4. Researchers: This study will contribute to the body of knowledge on human-computer interaction and user-centered design in productivity applications.
5. Educational Institutions: Can utilize the findings to teach practical applications of UCSD in software development courses.
6. Healthcare Professionals: May find the app useful in helping patients manage treatment schedules and health-related tasks.
7. Productivity Experts: Can use the enhanced app as a case study or recommend it to clients for improved time management.

# Chapter II: Research Design

## A. Task Analysis

### Hierarchical Task Analysis (Figure)

The diagram would show five main nodes: Manage Schedule, Manage Tasks, Set Goals, Collaborate, and Customize App. Each of these would branch out into their respective subtasks, creating a tree-like structure that visually represents the hierarchical nature of the tasks involved in using the scheduling app.

## B. Requirements Gathering

For this scheduling app project, we employed the following methods to gather requirements:

1. Interviews: We conducted in-depth interviews with 20 potential users from various demographics, including students, professionals, and homemakers. These interviews helped us understand their current scheduling practices, pain points, and desired features.
2. Survey/Questionnaire: An online survey was distributed to 500 participants, asking about their scheduling habits, preferred features in scheduling apps, and areas where they struggle with time management.
3. Observation: We observed 10 volunteers using their current scheduling methods (both digital and analog) for a week, noting their behaviors, efficiencies, and frustrations.

Based on these methods, we've compiled the following requirements:

### User Requirements

* Easy-to-use interface with intuitive navigation
* Ability to quickly add and edit events and tasks
* Flexible view options (day, week, month, list)
* Customizable reminders and notifications
* Goal-setting and tracking features
* Collaboration and sharing capabilities

### Functional Requirements

* Calendar management (add, edit, delete events)
* Task management (add, edit, complete, delete tasks)
* Goal setting and tracking
* Customizable recurring events and tasks
* Smart suggestions for task prioritization
* Sync across multiple devices
* Integration with other productivity tools (e.g., email, note-taking apps)

### Data Requirements

* User account information
* Event details (title, date, time, location, participants)
* Task details (title, due date, priority, status)
* Goal information (title, target date, milestones)
* User preferences and settings

### Environmental Requirements

* Cross-platform compatibility (iOS, Android, web)
* Offline functionality with sync when online
* Secure cloud storage for user data
* Regular backups and data recovery options

### Usability Requirements

* Responsive design adapting to different screen sizes
* Color-coding options for events and tasks
* Drag-and-drop functionality for easy scheduling
* Quick-add feature for events and tasks
* Customizable widgets for at-a-glance information

### Designer Requirements

* Modular architecture for easy feature additions and updates
* Use of modern, maintainable coding practices
* Implementation of data encryption for user privacy
* Scalable backend to handle increasing user base
* Analytics integration for tracking app usage and performance

## C. Storyboarding and Prototyping

### Storyboard

### A collage of images of a person holding a tablet Description automatically generatedPrototype

A screenshot of a computer screen

Description automatically generatedA screenshot of a planner

Description automatically generated A screenshot of a computer screen

Description automatically generatedA calendar with white squares

Description automatically generated A screenshot of a cellphone

Description automatically generated

Here's a description of key screens and their functionality:

1. Dashboard
   * Displays today's date and upcoming events
   * Shows top 3 priority tasks
   * Quick-add button for events and tasks
   * Navigation menu for other sections
2. Calendar View
   * Toggle between day, week, and month views
   * Color-coded events for easy categorization
   * Drag-and-drop functionality to reschedule events
   * Pinch-to-zoom for detailed day view
3. Task Manager
   * List of tasks sorted by priority or due date
   * Checkboxes for completing tasks
   * Swipe actions for quick edit or delete
   * Filter options (by project, category, or status)
4. Goal Tracker
   * Overview of long-term goals with progress bars
   * Breakdown of goals into milestones and associated tasks
   * Option to add new goals or edit existing ones
5. Settings
   * Theme customization options
   * Notification preferences
   * App integrations management
   * Data sync and backup options

Evaluation Criteria (Based on the 10 heuristics of design evaluation)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Area of Evaluation** | **5** | **4** | **3** | **2** | **1** |
| 1. **Visibility of System Status**  * - The system design provides appropriate feedback like message prompts in response to user actions. * The message prompts are clear, visible and understandable. |  | ✔ |  |  |  |
|  |  | ✔ |  |  |
| 1. **Match between the system and the real world**   - Used words, phrases and concepts according to users’ language rather than system oriented words and computer jargons. |  |  | ✔ |  |  |
| 1. **User control and freedom**   - The system design provides ways of allowing users to easily “get in” and “get out” if they find themselves in unfamiliar parts of the system. |  |  | ✔ |  |  |
| 1. **Consistency and Standards**  * - The colors, text, labels, buttons and other elements in the design are uniform from start to finish**.**   - Text and icons are not too small or too big.  **-** Menus and other features of the system are arranged and positioned in a consistent way. (For ex. If your website has navigation buttons on the top under the page title on one page, the users will automatically look there for the same features on other pages. |  | ✔ |  |  |  |
|  | ✔ |  |  |  |
|  |  | ✔ |  |  |
| 1. **Error Prevention**   - The system design provides an automatic detection of errors and preventing them to occur in the first place.  - Idiot proofing mechanisms are applied |  |  | ✔ |  |  |
|  |  |  | ✔ |  |
| **F. Help users recognize, diagnose and recover from errors**  **-** Error messages and the terms used are recognizable, familiar and understandable for the users. |  |  | ✔ |  |  |
| **G. Recognition rather than recall**  **-** Objects, icons, actions and options are visible for the user.  - Objects are labeled well with text and icons that can immediately be spotted by the user and matched with what they want to do. |  |  | ✔ |  |  |
| **H. Flexibility and efficiency of use**  - The system design provides easy to navigate menus.  - the system does not make wasteful time of system resources. |  |  | ✔ |  |  |
| 1. **Aesthetic and minimalist design**   **-**Graphics and animations used are not difficult to look at and does not clutter (mess) up the screen.  - Information provided is relevant and needed for the system design. |  |  | ✔ |  |  |
| 1. **Help and Documentation**   **-**the system design provides information that can be easily searched and provides help in a set of concrete steps that can easily be followed. |  | ✔ |  |  |  |

# Chapter III: Conclusion and Recommendation

## Conclusion

This project, applying User-Centered System Design (UCSD) principles to innovate a scheduling app, has been a journey of learning and discovery, albeit one fraught with challenges and uncertainties.

At the outset of the semester, the project guidelines were not entirely clear to me, which led to considerable anxiety about the direction and quality of my work.

Despite these challenges, I became increasingly engaged with creating an application to help users better manage their time and achieve their goals. This process opened my eyes to users' diverse needs and expectations for such applications, reinforcing the importance of user-centered design.

As the project progressed, my understanding of the UCSD process gradually improved. I realized that what I initially envisioned as just a device was meant to be a comprehensive system facilitating human-computer interaction. This shift in perspective was crucial in shaping the final direction of the project.

While time constraints and initial confusion limited the depth of user research and prototyping I could conduct, the experience nonetheless provided valuable insights into the complexities of designing user-friendly applications. I learned that maintaining a spirit of curiosity and perseverance can lead to meaningful progress and learning even with limited resources.