**Project Description**

StudyBuddy is a collaborative learning app designed to enhance the academic experience of high school and college students by fostering a supportive and interactive study environment. The app allows users to create and join study groups based on their subjects or courses, facilitating peer-to-peer learning and resource sharing. Key features include user registration and profile setup, real-time communication tools such as chat and virtual whiteboards, shared document and resource libraries, and scheduling tools for organizing study sessions. By providing a platform for students to connect, collaborate, and share knowledge, StudyBuddy aims to improve study habits, increase engagement, and enhance academic performance.

**Requirements Summary**

* **User roles**
  + **Student User:**
    - **Profile Creation:** Set up and manage their personal profile.
    - **Join/Create Study Groups:** Search for, join, or create study groups based on subjects or courses.
    - **Resource Sharing:** Upload, share, and access notes, documents, and other study materials.
    - **Communication:** Participate in real-time chats and use virtual whiteboards for collaborative problem-solving.
    - **Scheduling:** Organize and attend study sessions using the scheduling tool.
    - **Progress Tracking:** Monitor their participation and review their study session history.
  + **Group Leader:**
    - **Manage Group Membership:** Invite and approve new members to the study group.
    - **Facilitate Group Activities:** Schedule study sessions and coordinate group activities.
    - **Resource Management:** Oversee the organization and sharing of study materials within the group.
* **Core Features**
  + **User Registration and Profile Management:** Allows users to create and customize their profiles.
  + **Study Group Formation:** Enables users to search for, join, or create study groups based on subjects or courses.
  + **Real-Time Communication Tools:** Provides chat functionality and virtual whiteboards for interactive discussions and collaborative problem-solving.
  + **Resource Sharing:** Facilitates the upload, sharing, and access of notes, documents, and other study materials within groups.
  + **Scheduling Tools:** Allows users to organize and manage study sessions, with calendar integration and reminders.
  + **Progress Tracking:** Helps users monitor their participation, review study session history, and track their academic progress.
* **Non-Functional Requirements**
  + **Usability:**
    - Intuitive user interface that is easy to navigate for users of all technical skill levels.
    - Consistent design and user experience across different devices and platforms.
  + **Performance:**
    - Fast response times for loading pages, accessing resources, and real-time communication.
    - Scalability to handle a large number of concurrent users and study groups without performance degradation.
  + **Reliability:**
    - High availability with minimal downtime.
    - Robust error handling and recovery mechanisms to ensure continuous operation.
  + **Security:**
    - Data encryption for user data and communications.
    - Secure authentication and authorization mechanisms to protect user accounts and group activities.
    - Regular security updates and vulnerability assessments.
  + **Compatibility:**
    - Cross-platform compatibility, supporting various operating systems (iOS, Android, Windows, macOS) and devices (smartphones, tablets, desktops).
    - Integration with common calendar and notification systems for scheduling.

**Heuristics Evaluation**

1. **Visibility of System Status**
   * The app should provide clear feedback about the current status (e.g., loading screens, notifications for successful actions, error messages).
   * Users should always be informed about what is happening within the app, with appropriate and timely feedback.
2. **Match Between System and the Real World**
   * Use familiar language and concepts that match the users' understanding (e.g., terms like "study groups," "notes," "sessions").
   * The app should mimic real-world interactions where appropriate (e.g., virtual whiteboard simulating a real whiteboard).
3. **User Control and Freedom**
   * Provide easy ways to undo and redo actions (e.g., leaving a study group, deleting shared resources).
   * Allow users to exit from unwanted actions without navigating through complicated processes.
4. **Consistency and Standards**
   * Ensure consistency in the design, terminology, and actions throughout the app.
   * Follow platform conventions to make the app intuitive (e.g., standard icons, navigation patterns).
5. **Error Prevention**
   * Design the app to minimize the chance of user errors (e.g., confirmations before critical actions, clear instructions).
   * Highlight potential errors before they occur (e.g., warnings for unsaved changes).
6. **Recognition Rather Than Recall**
   * Reduce the user's memory load by making elements, actions, and options visible (e.g., show recently accessed notes, upcoming study sessions).
   * Use icons and visuals to aid recognition (e.g., group icons, subject-specific images).
7. **Flexibility and Efficiency of Use**
   * Provide shortcuts and advanced features for experienced users (e.g., keyboard shortcuts, swipe gestures).
   * Allow customization options to fit different user preferences (e.g., notification settings, group management tools).
8. **Aesthetic and Minimalist Design**
   * Keep the interface clean and uncluttered, showing only relevant information (e.g., a simple dashboard with essential features).
   * Avoid unnecessary elements that do not contribute to the user’s tasks (e.g., excessive animations, redundant text).
9. **Help Users Recognize, Diagnose, and Recover from Errors**
   * Provide clear and understandable error messages with guidance on how to resolve issues (e.g., "Failed to upload document. Check your internet connection and try again.").
   * Offer help documentation and support options within the app.
10. **Help and Documentation**
    * Provide accessible help resources (e.g., FAQs, tutorials, user guides) that users can refer to at any time.
    * Include contextual help within the app (e.g., tooltips, guided tours for new users).

### **Evaluation Method**

* **Evaluator Selection:** Choose a diverse group of evaluators, including UX experts, target users (students), and educators.
* **Task Scenarios:** Define common tasks for evaluators to perform, such as creating a study group, scheduling a session, and sharing resources.
* **Observation and Notes:** Observers should take detailed notes on usability issues encountered, including specific heuristics violated.
* **Severity Rating:** Assign severity ratings to each issue based on its impact on user experience (e.g., minor, major, critical).
* **Report and Recommendations:** Compile the findings into a report with actionable recommendations for improving the app's usability based on the heuristic evaluation.