Task List

1. Planning & Design

1. **Research** existing sublease and housing platforms to identify useful features and design trends. *(Rakshana)*

2. **Specify** functional and non-functional requirements for Sub4You based on user needs. *(Rakshana)*

3. **Design** the overall architecture of Sub4You based on D0–D2 diagrams. *(Akarsh)*

4. **Document** the planned data flow between modules and subsystems. *(Akarsh)*

2. Front-End Development (Rakshana)

5. **Design** user interface mockups for all major screens (home, listings, messages, profile). *(Rakshana)*

6. **Develop** the main UI using React for web and mobile. *(Rakshana)*

7. **Implement** user registration and login forms connected to the back-end API. *(Rakshana)*

8. **Develop** search and filter components for listings. *(Rakshana)*

9. **Validate** all front-end forms to ensure correct input and usability. *(Rakshana)*

10. **Refine** interface and navigation based on feedback and testing results. *(Rakshana)*

3. Back-End Development (Akarsh)

11. **Design** RESTful API endpoints for listings, authentication, and chat. *(Akarsh)*

12. **Develop** server logic for posting, updating, and deleting listings. *(Akarsh)*

13. **Implement** secure user authentication using tokens or OAuth. *(Akarsh)*

14. **Integrate** messaging functionality (real-time or asynchronous). *(Akarsh)*

15. **Test** all API routes for performance and reliability. *(Akarsh)*

4. Database & Integration

16. **Design** database schema for users, listings, and messages. *(Akarsh)*

17. **Develop** database scripts and connect them to the API layer. *(Akarsh)*

18. **Integrate** back-end APIs with the front-end components. *(Rakshana & Akarsh)*

19. **Validate** data consistency and API responses across modules. *(Akarsh)*

5. Testing & Deployment

20. **Develop** test cases for UI, API, and data modules. *(Akarsh)*

21. **Conduct** user testing sessions to evaluate the interface and usability. *(Rakshana)*

22. **Refine** system design and fix bugs identified during testing. *(Rakshana & Akarsh)*

23. **Deploy** Sub4You on a cloud hosting platform (Firebase or AWS). *(Akarsh)*

24. **Validate** final system performance and prepare for demo. *(Rakshana & Akarsh)*

6. Documentation

25. **Document** final architecture, design diagrams, and implementation details. *(Rakshana)*