**Usability Testing**

**1.Define Test Goals**

Our goal is to evaluate the usability of the website’s features, including photo uploads, 3D garden design, collaborative design, and the map function, as well as assess whether these features meet user needs. Additionally, we aim to test the practical applicability of our project to ensure it functions effectively in real-world scenarios.

**2.Choose Target Users**

I selected three target users: Linda, Cindy, and Sandra. They are my landlord and two neighbors, all of whom have experience in garden management. This made them ideal candidates to participate in this user survey.

**3.User Tasks**

（1）Browse and explore the website.

（2）Try using the map feature to search for garden-related locations nearby.

（3）Engage in Collaborative Garden Design.

（4）Experience the 3D Virtual Garden Design tool.

（5）Attempt to upload garden photos and interact with other users' comments.

**4. Test Process**

（1）Linda：During the testing, Linda first attempted to upload a garden photo. While she appreciated the clean design of the website, she quickly noticed that the system did not display a preview of the uploaded photo. This left her feeling confused and disappointed, as she found the feature to lack intuitiveness and usability. After multiple attempts to refresh the page, she still couldn’t see the result, which was due to the feature being a simulated function. In the 3D design tool test, Linda showed great interest but was frustrated by the limited customization options for plant size and angles. She suggested that adding more detailed customization options and providing a user guide or tutorial would significantly enhance the user experience.

（2）Cindy：Cindy, being very familiar with computers, quickly completed the photo upload task without any issues. She then explored the 3D garden design tool and other features. While she understood the overall functionality of the website, she encountered some inconvenience when searching for specific garden tools. Cindy pointed out that the system lacked filtering or categorization options, which made it harder to find specific items, such as gardening tools or seeds. She suggested adding filtering options based on tool types or uses to enhance user efficiency and ease of navigation.

（3）Sandra：Sandra was very excited about the "Collaborative Design" feature. She quickly completed the photo upload and explored the 3D tool before focusing on inviting community members to design the garden together. Although she was thrilled about collaborating, she discovered the lack of real-time interaction, which hindered smooth communication. Sandra expressed that being able to chat or use voice communication during design would make the process more efficient and enjoyable. She emphasized that real-time interaction is crucial for effective collaboration, allowing team members to better coordinate and adjust their design plans.

**5.Test Results**

In the overall usability testing, Linda, Cindy, and Sandra encountered some issues. Linda had no preview feedback when uploading photos and found the 3D design tool lacking customization options. Cindy quickly adapted but noted that the tools lacked filtering and categorization, impacting her efficiency. Sandra enjoyed the collaborative design feature but was disappointed by the lack of real-time communication.

Overall, Garden Craft is highly practical and positively influences users' garden management behavior. However, there is room for improvement in user experience. For instance, adding a preview function for photo uploads would enhance feedback; the 3D design tool should offer more customization and interaction options to help users adjust garden layouts more effectively. Tool filtering and categorization on the map feature can significantly improve efficiency, especially for experienced users. Moreover, adding real-time chat or voice functions in the collaborative design feature would greatly enhance collaboration.

In conclusion, Garden Craft has great potential, and with these improvements, it can better meet user needs and achieve a more user-centered design.