Chapter 3 Functional Requirements

3.1 Login

3.1.1 Enter Username and password

The users can enter their username and password in the input box. The user can click on the Show Password button in the password box. When the user clicks on this button, the password will be displayed in plaintext in the password box so that the user can check if the password is correct before logging in.

3.1.2 Validate

When the user clicks on the login button, if the user enters an incorrect password or username, the message "Username or password error" will be displayed. If the user enters the correct username and password, the system will automatically jump to the home page, and the user's login status will be displayed on the home page.

3.2 Register

Users can create a new account by entering a username, name, password, email, and other relevant personal information.

3.2.1 Enter Personal Information

When the user clicks on the register button, the page will display several input fields to let the user enter their personal information. After finishing the input, the user can click the “Create” button to create a new account.

3.2.2 Verify Email Address

After the user inputs their email address, they can click the “Verify the

email” button, and then the system will send an email to the address. The user should open the email and click the link in the email to finish the registration. If the user doesn't receive the email, they can click the “don’t receive the email” button, and the system will send another email.

3.3 Editing Personal Information

Logged-in users can edit their personal information, including passwords, e-mail, phone numbers, etc.

3.3.1 Change Password

When the user wants to change their password, they can enter their own account page, and click “Change the password” to edit it. The user needs to type the old password first to ensure safety. If the user inputs the wrong password, a system will display the message “ wrong password. You can’t change the password.” If the password is right, the user can type the new password and they should input it for the second time to confirm the new password. After confirming the new password, the user clicks on the “Save” button to save the change.

3.3.2 Update Email Address

When the user wants to change their email address, they can enter their own account page, and click “Change the email address” to edit it. The user can input the new email address and click the “Verify the email” button, and then the system will send an email to the address. The user should open the email and click the link in the email to finish the update. If the user doesn't receive the

email, they can click the “don’t receive the email” button, and the system will send another email.

3.3.3 Edit Other Information

When the user wants to change other personal information, they can enter their own account page to edit it. After inputting the new information, click the “Save” button to save the edit.

3.4 Search

Users can enter keywords, locations, or other criteria to search for travel destinations.

A list of related travel destinations is displayed and the user can click to view details.

3.4.1 Search Method

Users should be able to search for the information by using the search bar. When users are typing, the system will list the related entries under the search bar to help users to search. Moreover, Users should be able to use filters and restrictions to narrow down search results. The system should be able to save the user's search history so that the user can quickly find the required information the next time.

3.4.2 Search Result Display

Search results should be clear and sorted in order of relevance so that users can quickly find the information they need. When there are too many search results, pagination should be supported. Users can enter the details

page by displaying the results, which introduces specific information about the scenic spot, and the user can enter the official page of the tourist destination through the link displayed on the website to learn more.

3.5 Intelligent Recommendations

Users can fill out a questionnaire describing their travel preferences. Based on the user's questionnaire responses, the system will automatically recommend suitable travel destinations.

3.5.1 Questionnaire

After the user registers, the user is asked to choose to skip the location recommendation or make a location recommendation. If the user chooses to recommend a location, the system will jump to the questionnaire page, and then after completing a simple questionnaire, the system will send the questionnaire information into the ICDE system for processing, and return and save the results of the recommendation to the user's database.

3.5.2 Recommendation

When a user clicks on the questionnaire button after registration and completes the questionnaire, the system will analyze the results of the questionnaire and display results in the Recommendations module on the home page of the website.

If you are a guest or a registered user who skipped the survey, the currently popular destinations, highly rated restaurants, and hotels will be displayed in the Recommendations module of the web page.

Chapter 4 Nonfunctional Requirements

4.1 Performance

In order to cope with high concurrency scenarios, it ensures that users still get fast responses during high loads, while maximizing the utilization of server resources. The system should be able to support multi-threaded processing, making full use of the server's multi-core resources to improve response speed and processing efficiency.

4.2 Usability

The website's interface should be easy to use, clear, and appropriate for all age groups of users. The user interface should be simple and intuitive. Elements such as color, fonts, and layout should all contribute to the user experience. When the user enters incorrect information, there will be a clear error message to guide the user on how to correct the error.

4.3 Security

To ensure the security of user passwords, the system performs hash processing to encrypt the passwords instead of storing them in the database in plaintext.

4.4 Compatibility

4.4.1 Browser compatibility

The website is compatible with mainstream browsers such as Chrome, Firefox, Safari, etc.

4.4.2 Operate System compatibility

Users can access the server page through computer operating systems such as Linux, Windows, macOS and mobile device operating systems such as iOS and Android.