

Functional requirements

1. Sing up

- 1.1 User registration form should allow users to create an account on the app by entering name, user_name, email, and password.
- 1.2 Email verification process to confirm the validity of the email address.
- 1.3 User_name & Password which will be used to log into the site.
- 1.4 Option to log in using a social media account (e.g. Facebook, Google).

2. Software Login

- 2.1 The software shall allow users to login with their given username and password.
- 2.2 The login credentials (username and password) will be verified with database records.
- 2.3 If the login successful the home page of the user account will be displayed.
- 2.4 If the username and/or password has been inserted wrong, the random verification code will be generated and sent to the user's email address by the system to retry login.
- 2.5 If the number of login attempt exceed its limit (3 times), the system shall block the user account login for one hour [optional function]

3. Weather forecast

- 3.1 The app should display the current weather conditions for the user's preferred location, including temperature, humidity, possibility of raining and wind speed. The information should be updated in real-time to provide the most accurate and up-to-date information.
- 3.2 Option to view 7-day forecast, including high and low temperatures and weather conditions. This will help users plan for the week ahead and prepare for any adverse weather conditions.
- 3.3 Ability to change the location to view weather forecasts for different cities.

4. Settings

- 4.1 Location: Ability to set a preferred location to view weather forecasts.
- 4.2 Language: Option to select a preferred language for the app.
- 4.3 Profile: Ability to view and edit personal information, such as name and email address. This will allow them to keep their information up-to-date.

5. Community feedback

- 5.1 Ability for users to provide feedback on the app, including suggestions for improvement.
- 5.2 Option for users to rate the app and leave reviews.
- 5.3 Ability for the developers to respond to user feedback and address any concerns. This will help build trust with users and demonstrate the developers' commitment to improving the app.

6. Check soil moisture

- 6.1 The app should provide users with the ability to check the moisture levels in their soil. This is useful for farmers to monitor the health of their crops and ensure they are getting the water they need.
- 6.2 To provide the most accurate readings, the app should allow users to select their preferred soil type. This will take into account the different moisture requirements of different types of soil.
- 6.3 Ability to view historical data on soil moisture levels.

7. Notifications

- 7.1 Option to receive notifications for important events, such as changes in weather alerts or reminders to check soil moisture.
- 7.2 Also gives notification for agriculture articles, news etc.

8. Helpline

- 8.1 Access to a helpline or support center for assistance with any issues or questions.
- 8.2 Option to contact support via email, phone.
- 8.3 FAQs: The app should have a section with frequently asked questions and answers to help users find the information they need quickly and easily.

9. Irrigation system setting

- 9.1 Auto On/Off: The app should have the ability to turn the irrigation system on and off automatically, based on pre-defined settings such as weather conditions or soil moisture levels.
- 9.2 Set Timer: Ability to set a timer for the irrigation system to turn on and off.
- 9.3 Set Water Level: Option to set a preferred water level for the irrigation system.