

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

|               |  |
|---------------|--|
| Date          | 06 November 2022                                     |
| Team ID       | PNT2022TMID22120                                     |
| Project Name  | Smart Farmer – IOT Enabled Smart Farming Application |
| Maximum Marks | 4 Marks  |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task)                                     |
|--------|-------------------------------|--|
| FR-1   | User Registration             | Registration through Gmail   |
| FR-2   | User Confirmation             | Confirmation via Email<br>Confirmation via OTP                         |
| FR-3   | Log in to system              | Check Roles of Access<br>Check Credentials                             |
| FR-4   | Manage Modules                | Manage System Admins<br>Manage Roles of User<br>Manage User permission |
| FR-5   | Check whether details         | Temperature details<br>Humidity details                                |
| FR-6   | Log out                       | Exit   |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description   |
|--------|----------------------------|---|
| NFR-1  | <b>Usability</b>           | Usability is the capacity to pick something up fast, utilise it efficiently, retain it, use it without making a mistake, and enjoy it.  |
| NFR-2  | <b>Security</b>            | Information that is private or confidential must always be kept secure, including when being gathered, processed, and stored.   |
| NFR-3  | <b>Reliability</b>         | With shared protection, a better cost-to-reliability trade-off is realised.<br>The strategy makes use of specialised and shared protective techniques to prevent interruptions in agricultural service. |
| NFR-4  | <b>Performance</b>         | If integrated sensors are employed to monitor soil and environmental features, farming operations will be monitored more successfully overall.  |

|       |                     |   |
|-------|---------------------|---|
| NFR-5 | <b>Availability</b> | It is possible to automatically change temperature, humidity, and other aspects of farming equipment by connecting data about crops, weather, and equipment.  |
| NFR-6 | <b>Scalability</b>  | Scalability for IoT platforms is a significant concern. It has been shown that different architectural choices made for IoT platforms affect the scalability of the system and that automatic real-time decision-making is feasible even in a situation with a large number of users. |