

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

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| Date | 16-10-2022 |
| Team ID | PNT2022TMID09801 |
| 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 | ❖ <i>User Registration</i> | <ul style="list-style-type: none"> ✓ <i>Registration through Gmail</i> ✓ <i>Registration through phone number</i> |
| FR-2 | ❖ <i>User Confirmation</i> | <ul style="list-style-type: none"> ✓ <i>Confirmation via Email</i> ✓ <i>Confirmation via OTP</i> ✓ <i>Confirmation via verification link sent to registered mail id</i> |
| FR-3 | ❖ <i>Roles and service</i> | <ul style="list-style-type: none"> ✓ <i>Choose roles (ex: farmer, student etc.)</i> ✓ <i>Enter the personal details.</i> ✓ <i>Choose the type of service or options (ex: irrigation, pest management, crop management etc.)</i> |
| FR-4 | ❖ <i>Terms and conditions</i> | <ul style="list-style-type: none"> ✓ <i>Accepts the terms and condition for the chosen role and options</i> |
| FR-5 | ❖ <i>Details of farm and plans</i> | <ul style="list-style-type: none"> ✓ <i>Enter the details of farming land and vegetation.</i> ✓ <i>Choose the crop you want to plant</i> ✓ <i>Choose the types of plans (ex: regular and premium)</i> |
| FR-6 | ❖ <i>Details according to farm information</i> | <ul style="list-style-type: none"> ✓ <i>Check the weather information</i> ✓ <i>Enter the soil nutrient and pH value</i> ✓ <i>click SAVE</i> ✓ <i>Soon the details will share to registered mail</i> ✓ <i>EXIT</i> |

Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------------|----------------------------|--|
| NFR-1 | ❖ Usability | ✓ <i>A system is built for monitoring the crop field with the help of sensors and automating the irrigation system and helps the farmer to understand the important aspects.</i> |
| NFR-2 | ❖ Security | ✓ <i>Applications must be designed with the security of their use in mind. This includes personal data and their user's well-being.</i> |
| NFR-3 | ❖ Reliability | ✓ <i>It allows farmers to maximize yields using minimum resources such as water, fertilizers, seeds etc.</i> |
| NFR-4 | ❖ Performance | ✓ <i>It increases efficiency and reduce the environmental impacts and to implement technology properly to minimize cost.</i> |
| NFR-5 | ❖ Availability | ✓ <i>This concept focused on providing the agricultural industry with the infrastructure to leverage advanced technology.</i> |
| NFR-6 | ❖ Scalability | ✓ <i>It provides the recognition of each object that makes up a solution and ensure communication. The system must remain operational regardless.</i> |