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

Date	03 October 2022
Team ID	PNT2022TMID46724
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 Form ➢ Registration through Gmail ➢ Registration through LinkedIN
FR-2	User Confirmation	➢ Confirmation via Email ➢ Confirmation via OTP
FR-3	Login to the System	➢ Check Credentials Check Roles of Access.
FR-4	Sensor Function for Farming System	➢ Measure the Temperature and Humidity ➢ Measure the Soil Monitoring Check the crop diseases
FR-5	Manage Modules	➢ Manage Roles of User ➢ Manage User permission ➢ Manage System Admins
FR-6	Check Weather Details	➢ Temperature details ➢ Humidity details
FR-7	Data Management	➢ Manage the data of weather conditions ➢ Manage the data of crop conditions
FR-8	Logout	➢ Exit

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	➢ User friendly guidelines for users to avail the features. ➢ Usability includes easy learn ability, efficiency in use, remember ability, lack of errors in operation andSubjective pleasure.
NFR-2	**Security**	➢ Sensitive and private data must be protected from their production until the decision-making and storage stages. ➢ All the details about the user are protected from unauthorized access. ➢ Detection and identification of any malfunctions of sensors.
NFR-3	**Reliability**	➢ The shared protection achieves a better trade-off between costs and reliability. ➢ The model uses dedicated and shared protection schemes to avoid farm service outages. ➢ Implementing Mesh IoT Networks . ➢ Building a Multi-layered defence for IoT Networks.
NFR-4	**Performance**	➢ The use of modern technology solutions helps to achieve the maximum performances thus resulting in better quality and quantity yields. ➢ the idea of implementing integrated sensors with sensing soil and environmental or ambient parameters in farming will be more efficient for overall monitoring.
NFR-5	**Availability**	➢ Automatic adjustment of farming equipment made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc. ➢ This app is available for all platforms.
NFR-6	**Scalability**	➢ Scalability refers to the ability to increase available resources and system capability without the need to go through a major system redesign or implementation. ➢ It has shown that different architectural choices of IoT platforms affect system scalability and that automatic real time decision-making is feasible in an environment composed of dozens of thousand.