ProjectDesignPhase-II
SolutionRequirements(Functional&Non-functional)

Date	10October2022
TeamID	PNT2022TMID02387
ProjectName	IOTBasedSmartCropProtectionSystemforAgriculture
MaximumMarks	4Marks

FunctionalRequirements:

Followingarethefunctionalrequirementsoftheproposedsolution.

FR No.	FunctionalRequirement (Epic)	SubRequirement(Story/Sub-Task)
FR-1	Userregistration	Installtheappsigningu pwithGmailCreateap rofile Observetheguidelines
FR-2	UserConfirmation	Emailconfirmationrequired ReassuranceviaOTP
FR-3	Interfacesensor	Connectthesensorandtheapplicationsothatwhen animals enter the field, an alarm isgenerated.
FR-4	Accessingdatasets	Setsofdataareobtained fromthecloudantDB.
FR-5	Mobileapplication	Mobileapplicationscanbeusedtocontrolfieldsprinklersandmotors.

Non-functionalRequirements:

Followingarethe non-functionalrequirementsofthepproposedsolution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Theproject'scontributiontofarmprotectionisdemonstrated through the smart protectionsystem.
NFR-2	**Security**	Thisprojectwascreatedtoprotectthecropsfromanimals.
NFR-3	**Reliability**	With the help of this technology, farmers will beabletosafeguardtheirlandsandavoidsufferingsubstantialfinanciallosses.Theywillalsobenefitfromhigher cropyields,whichwill improvetheireconomicsituation.
NFR-4	**Performance**	When animals attempt to enter the field, IOTdevices and sensors alert the farmer viamessage. We also utilise an SD card modulethathelpstostorea specificsoundtofrightentheanimals.
NFR-5	**Availability**	Wecandefendthe cropsagainstwildanimalsby creating and implementing resilienthardwareandsoftware.
NFR-6	**Scalability**	This system's integration of computer visionalgorithmswithIBMcloudantservicesmakesitmoreefficienttoretrievephotosatscale, enhancingscalability.