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

Date	6 November 2022
Team ID	PNT2022TMID32512
Project Name	Digital Naturalist - AI Enabled tool for Biodiversity Researchers
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	**Classification**	It indicates "class," .The category to which which picture belongs. Recall that an just one image can have one course.
FR-2	**Tagging**	It is a classification task that requires more accuracy. It is useful to recognise various objects in an image.
FR-3	**Localization**	It facilitates inserting the image into the specified class and builds a bounding box to show the object. where it appears in the picture
FR-4	**Detection**	It aids in organising the numerous objects in the construct a bounding box around the image to find each one of them. It is an alternative to the activities including categorization and localisation for multiple objects.
FR-5	**Semantic Segmentation**	Segmentation helps to locate an element on an image to the nearest pixel.
FR-6	**Instance Segmentation**	It facilitates the differentiation of various items. being a member of the same class

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	This tool demonstrates how crucial and unique usability is a viewpoint to evaluate user needs, which can boost the tool's quality even more. In the hypothetical process,with user experience at its centre and usability examination of users can in fact aid designers in understanding users' possible requirements, behaviour, and experience.
FR-2	**Security**	By seeing the threat and poisoning the wildlife and plants.It increases the human's protection against attack animals.
NFR-3	**Reliability**	Deep learning is used to train the model, making the tools more effective for picture recognition with this it become dependable.
NFR-4	**Performance**	The traditional method of image analysis using computer vision The process of recognition involves picture filtering,Rule, segmentation, and feature extraction-based classification. The pictures in the generated dataset are supplied into an algorithm for a neural network. That's the Aspect of image creation using deep or machine learning model for recognition. The development of an image using a recognition algorithm enables image recognition using convolutional neural networks cite particular classes.
NFR-5	**Availability**	By creating and utilising resilient tools, we enable user knowledge through thorough flora and fauna understanding.
NFR-6	**Scalability**	By using this tool, the user gains knowledge of the specific item. If they don't not knowledgeable about that,This programme is accessible online around-theclock.