MAJOR / MINOR PROJECT ABSTRACT [Form – 1] (YEAR 2023-24)

NAME OF LAB COORDINATOR: MRS. SANJU CHAUDHARY

TITLE OF PROJECT: Smart Agriculture (Agri-Tech) to improve Yield and profitability

PROJECT TRACK: (Tick the appropriate one / ones)

1. R&D (Innovation)	2. CONSULTANCY (Fetched from Industry)	3 STARTUP (Self-Business Initiative)	4. PROJECT POOL (From IBM / INFOSYS)	5. HARDWARE / EMBEDDED

BRIEF INTRODUCTION OF PROJECT:

KisanVikas is an innovative mobile application aimed at revolutionizing agriculture by equipping farmers with advanced tools and knowledge. This project addresses the diverse needs of farmers, enhancing their ability to make informed decisions and optimize agricultural practices. Leveraging a combination of modern technology and traditional farming wisdom, KisanVikas is poised to make a substantial impact on the agricultural landscape.

TOOLS / TECHNOLOGIES TO BE USED:

NAME OF TOOL / TECHNOLOGY	VERSION	SOFTWARE / HARDWARE	PURPOSE OF USE
React Native	0.72	Software	Mobile Application to use all Features of our project
Express	4.19	Software	Back-End for Prediction using AI Models
Spring Boot	2.5	Software	Back-End for RESTful APIs & for User Login and Community forum
TensorFlow	2.16.1	Software	Library to use ML in this project
MongoDB	7.0	Software	Database Program
Postman	9.4	Software	API testing
Git	2.42	Software	Version Control
Docker	24.06.1	Software	To deploy Backend on cloud
Firebase SDK	32.1	Software	Mobile Phone OTP Authentication

PROPOSED PROJECT MODULES:

NAME OF MODULE	PROPOSED FUNCTIONALITY IN PROJECT
Select a Language	Multiple language options to cater to a diverse user base.
Login Module	Allows users to authenticate via mobile number input with OTP verification. Also includes a guest login option.
AskForLocation Module	Requests permission for device location and fetches latitude and longitude. Displays city and state information.
Select a Crops Module	Enables users to select fruits or vegetables they want to grow. Selected crops are displayed on the screen.
Add User Info Module	Collects user information such as name, contact number, address.

	farm NPK value, and farm size.
Weather Module	Displays current temperature, weather conditions, prediction, and today's date.
Market Value of Crop Module	Shows current maximum and minimum prices of crops in the market for the selected crop on the home screen.
Disease Detection Module	Provides information on crop diseases and allows users to capture or select images to send to the backend for disease prediction.
Ask AI Module	Allows users to ask queries via chat with the LLM model GEMINI Pro 1.5
Crop Suggestion Module	Suggests crops based on the NPK value filled by the user.
Main Screen Module	Centralized hub for essential agricultural information with navigation between home screen and dashboard tabs.
Notification Module	Displays notifications sent by the server with options to filter by offer, alert, and info.
Home Screen Module	Displays weather, selected crop, current location, and navigation buttons to disease detection and Ask AI.
Dashboard Module	Displays user information, navigation to personal and farm info, and logout button.

TEAM MEMBER DETAILS:

STUDENT NAME	CLASS & GROUP	MOBILE No.	EXPERTISE AREA	ROLE IN PROJECT
Abhishek Pandey	7ITA·G1	9413657543	Express, Tensor flow	AI Development
Aditya Agarwal	7ITA·G1	6375384116	Spring, React Native, Cloud	Project Lead, Full Stack
Akshat Jaiman	7ITA·G1	9057959620	React Native	Front-End Development

NOTE: 1. This form is to be submitted by a team of maximum 4 students in the starting of semester to lab coordinator.

2. Students must keep a Xerox copy of this form as reference for project work and attach it to final report