PROJECT DESIGN PHASE-II

TECHNOLOGY STACK (ARCHITECTURE & STACK)

TEAM ID	PNT2022TMID44357
PROJECT DOMAIN	INTERNET OF THINGS
PROJECT TITLE	IoT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE
DATE	15 OCTOBER 2022
MAXIMUM MARKS	4 MARKS

TECHNICAL ARCHITECTURE:

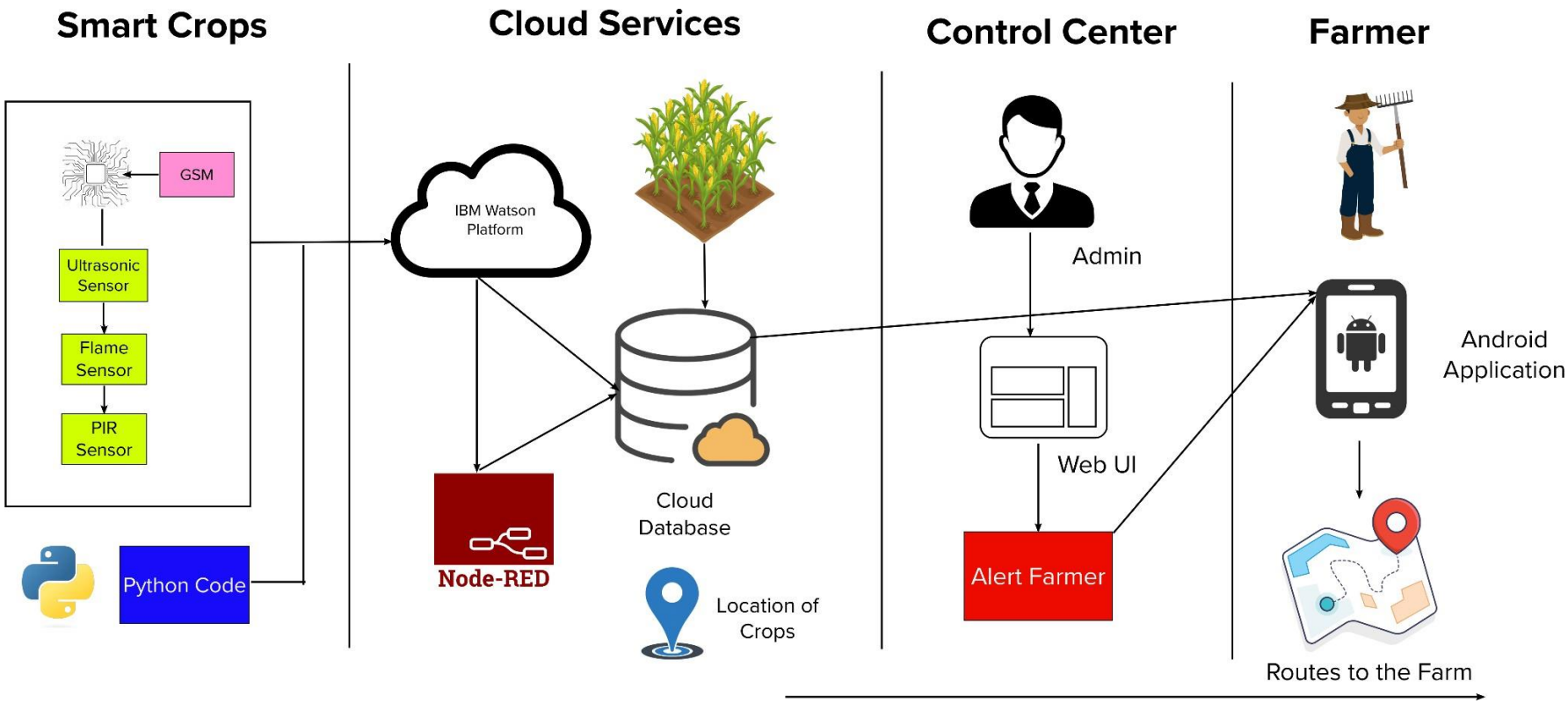

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TABLE-1 : COMPONENTS & TECHNOLOGIES:

S.NO	COMPONENT	DESCRIPTION	TECHNOLOGY
1.	Arduino Uno	The Arduino Uno is an open-source microcontrollerboard based on the Microchip ATmega328P microcontroller.	Arduino programming itself is donein **C++.**
2.	Application Logic-1	Logic for Ultrasonic sensor data.	C++/Python
3.	Application Logic-2	Logic for Flame sensor data.	C++/Python
4.	Application Logic-3	Logic for a PIR sensor data	C++/Python
5.	GSM	The Arduino GSM shield allows an Arduino boardto connect to the internet, send and receive SMS, and make voice calls using the GSM library.	C++/Python
6.	Cloud Sever	Application deployment on Local System / Cloud	IBM Watson IoT Platform, Node Red
7.	Cloud Database	Database Service on Cloud	IBM Watson IoT platform, Cloudant DB
8.	User Interface	How user interacts with application to alert theFarmer.	HTML, CSS, JavaScript , Python etc.
9.	External API-1	Purpose of External API used in the application tolocate the crops.	Google Maps Geolocation API

TABLE-2: APPLICATION CHARACTERISTICS:

S.NO	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1.	Open-Source Microcontroller	Arduino Uno is used to make the IoT device	C++/Python
2.	Security	Encryption/Decryption used for security purpose	GSM, Python
3.	Scalable Architecture	New features can be added.	Node Red
4.	Availability	Web application can be accessed from anywhere	IBM Watson IoT Platform, HTML, CSS,JavaScript
5.	Performance	All Farmers can access the application at same time	Cloudant DB, IBM Watson IoTPlatform