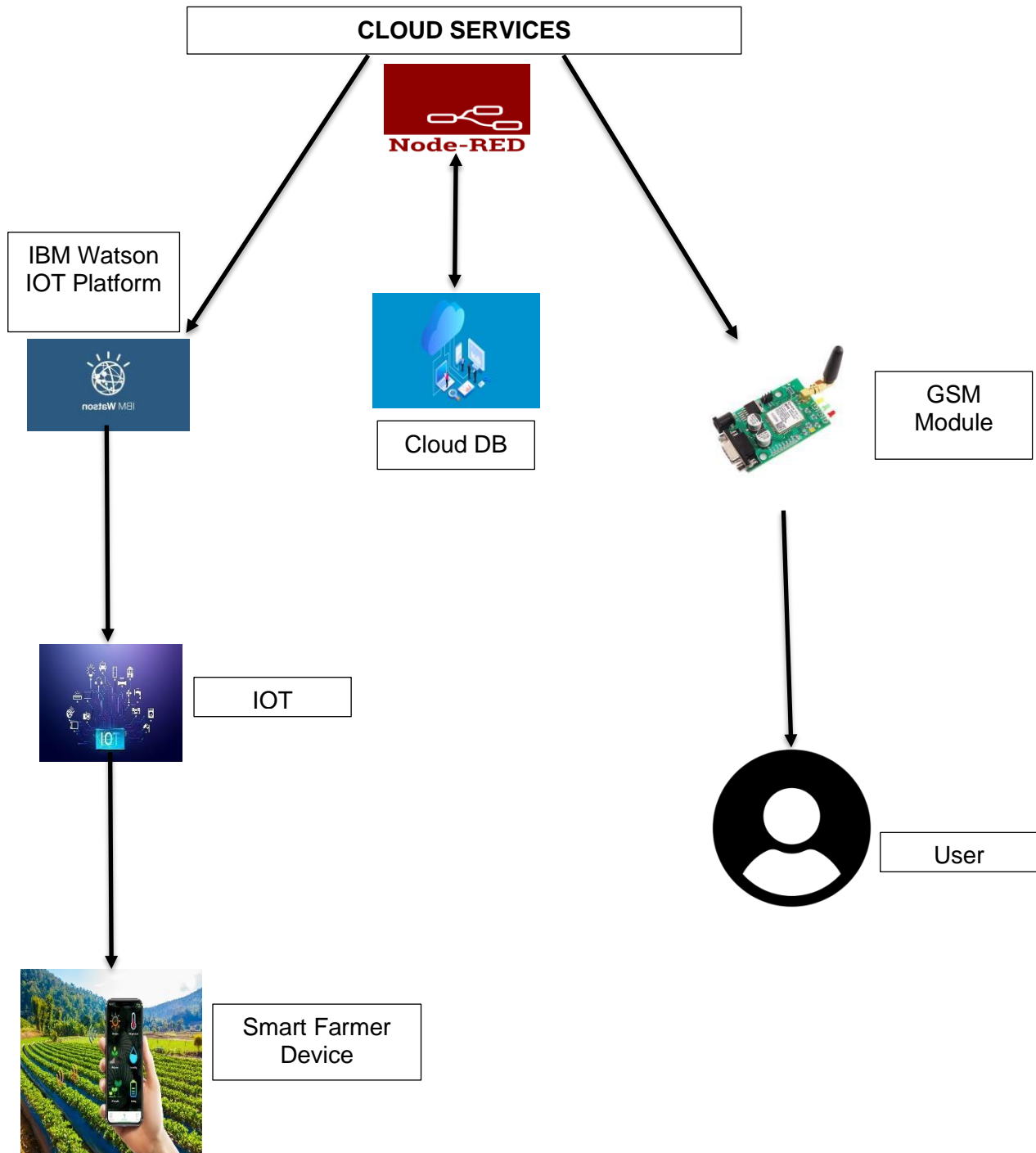


## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMID06181
Project Name	Project – Smart Farmer-IOT Enabled Smart Farming Application
Maximum Marks	4 Marks

### Technical architecture:

Figure: Smart Farmer-IOT Enabled Smart Farming Application



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	User register and we can able to view the other device. ex: using web UI, mobile app etc.,	HTML, CSS, JavaScript
2.	IOT Application Logic-1	Farmer's device should beconnected to the system	Python
3.	IOT Application Logic-2	Farmer's device should be in oncondition	IBM Watson STT service
4.	IOT Application Logic-3	If Crop field any changes is detected the notification message is send to the farmer	IBM Watson Assistant
5.	Database	Data type can be any form such as text, User defined blob of data sent from cloud IOT core device etc.,	SQ lite, In Flux DB
6.	File Storage	File with be labelled with what they contain and how long they should be kept	IBM Block Storage or Local File system
7.	External API-1	Purpose of External API used in the device is to use the internet for communicating and conducting allotted operations efficiency.	Aadhar API, etc.

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Device that removes much of the manual work needed to write and configure code. It provides rapid development, iseasy to setup and has a strong support base	IOT Zeta for nonstop streaming of detecting crop field.
2.	Security Implementations	Alert notification Enabled with in gps module received in Farmermobile.	e.g., SHA-256, Encryptionsof data regarding gas level, firewalls, Antivirus, data loss prevention etc.,
3.	Scalable Architecture	If any problems arise the field and farmer see the problem in mobile application	Multiple Data store Technologies, Reliable, Micro services Automated Bootstrapping
4.	Availability	Sensor to detect the changes condition and send to application see the values	GSM module, raspberry pi

S.No	Characteristics	Description	Technology
5.	Performance	The alert notification is sent the owner without any delay when any changes sensor values are detected. Immediate takes the actions	High durable device battery

