Project Design Phase-
IITechnologyStack(Architecture&Stack)

Date	19 November 2022
TeamID	PNT2022TMID30401
ProjectName	GasLeakageMonitoring&AlertingSystem
MaximumMarks	4 Marks

TechnicalArchitecture:

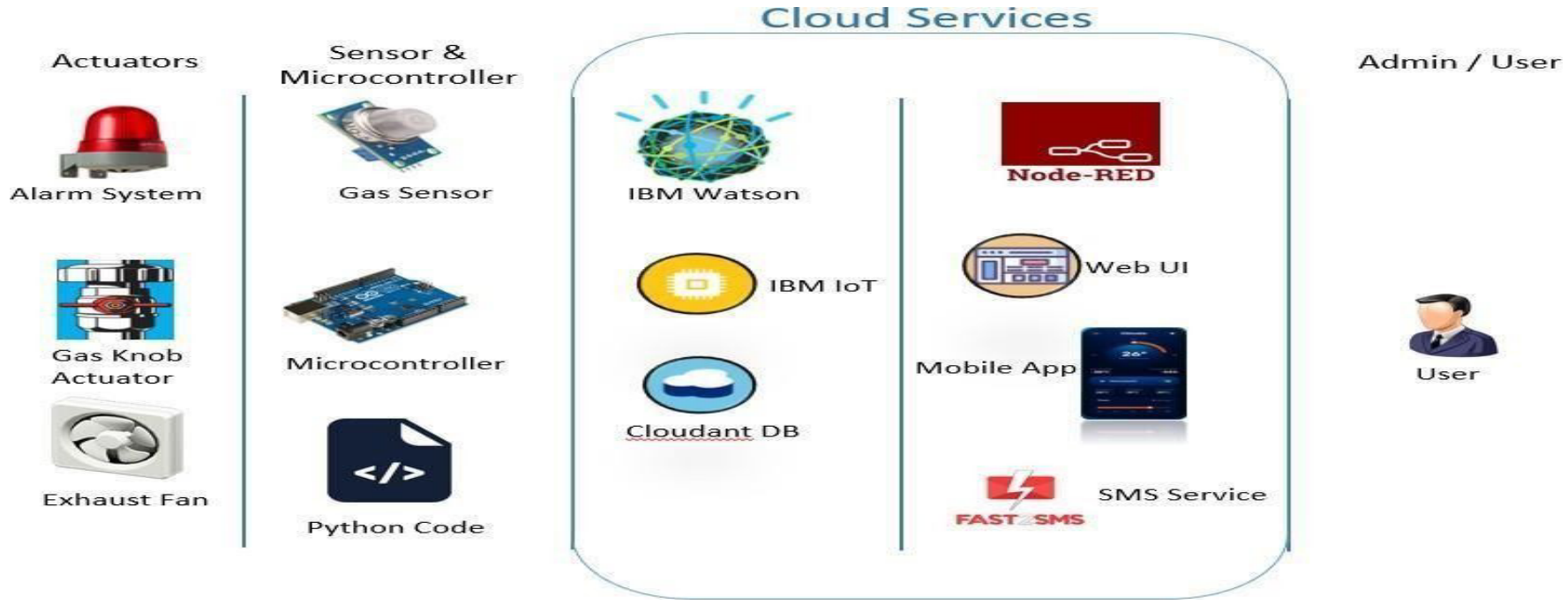

Table-1:Components&Technologies:

S.No	Component	Description	Technology
1.	UserInterface	How user interacts with application e.g. WebUI,Mobile App,Chatbotetc.	HTML,CSS,JavaScript/AngularJs/ReactJs etc.
2.	ApplicationLogic-1	Logic foraprocessinthe application	Java /Python
3.	ApplicationLogic-2	Logic foraprocessinthe application	IBMWatsonSTTservice
4.	ApplicationLogic-3	Logic foraprocessinthe application	IBMWatsonAssistant
5.	Database	DataType,Configurationsetc.	MySQL, NoSQL,etc.
6.	CloudDatabase	DatabaseServiceonCloud	IBMDB2,IBMCloudantetc.
7.	FileStorage	Filestoragerequirements	IBM Block Storage or Other StorageServiceorLocalFilesystem
8.	ExternalAPI-1	PurposeofExternalAPIusedintheapplication	IBMWatsonIoT Platform,etc.
9.	ExternalAPI-2	PurposeofExternalAPIusedintheapplication	FastSMSAPI, etc.
10.	Infrastructure(Server/Cloud)	Application Deployment on Local System / CloudLocalServerConfiguration: CloudServerConfiguration:	Local, CloudFoundry,CloudantDB,etc.

Table-2:ApplicationCharacteristics:

S.No	Characteristics	Description	Technology
1.	Open-SourceFrameworks	Listtheopen-sourceframeworksused	Python,NodeREDDashboard,MITApp Inventor,Fast SMS
2.	SecurityImplementations	Listallthesecurity/accesscontrolsimplemented, useoffirewalls etc.	e.g.SHA-256,Encryptions,IAMControls etc.
3.	ScalableArchitecture	The user can also increase the range of the gasleakage monitoring system by increasing thenumberofsensorsinstalledintheindustry.Thus, makingthesystemhighly scalable.	
4.	Availability	Itallowsrealtimemonitoringofgasleakagesystem anywhereeveninremoteareas.	
5.	Performance	Fast SMS,NodeREDprovidesrealtimemonitoring of sensorstatus.	