

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

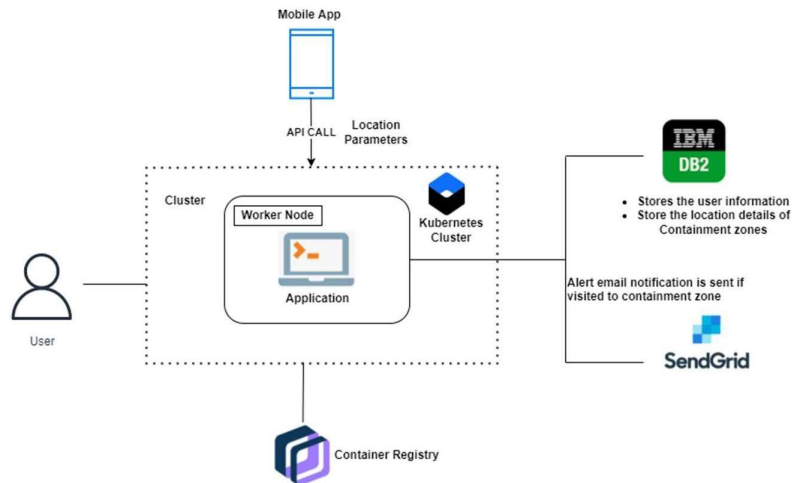
Date	11 November 2022
Team ID	PNT2022TMID51548
Project Name	Containment Zone Alerting Application
Maximum Marks	4 Marks

Technical Architecture:

The Deliverables shall include the architectural diagrams below and the information as per the table 1 & table 2

Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>



Guidelines:

1. Include all the processes (As an application logic/Technology Block)
2. Provide infrastructural demarcation (Local/Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components/services
5. Indicate interface to machine learning models (if applicable)

Table-1:Components&Technologies:

S.No	Component	Description	Technology
1.	UserInterface	Howuserinteractswithapplicatione.g.WebUI, MobileApp,Chatbotetc.	HTML,CSS, JavaScript&Bootstrap
2.	Routing	Connectbackendtotheuserinterface	PythonFlask
3.	ApplicationLogic-2	Accesstheuserlocationandupdatingthenewinfected zonebyadmin	Python,JavaScript
4.	ApplicationLogic-3	Alerttheuser bysendingthenotificationwhileentersintothemarked zoneusinggeofencing	IBMWatsonAssistant,Python
5.	Database	Storingthecoordinatesofthegeofencing	SQL
6.	CloudDatabase	Topushtheobjects,filesintothestorageanduseinthe application	IBMDB2,IBMstorageobject
7.	FileStorage	Filestoragerequirementsandstoresitinabinarydata	IBMBlockStorage
8.	GoogleMapAPI	Tointegratethegooglemapinourwebsite	JavaScriptAPI,PlacesAPI,GeocodingAP letc..
9.	Infrastructure(Server/Cloud)	ApplicationDeploymentonLocalSystem/CloudLocal Server Configuration: Show the nearbyinfectedzonebygeofencing CloudServerConfiguration:updatedthenewly affectedzone	Local,CloudFoundry,Kubernetesetc..

Table-2:ApplicationCharacteristics:

S.No	Characteristics	Description	Technology
1.	Open-SourceFrameworks	Flask	Pythonflask
2.	SecurityImplementations	Accesspermissionforloginandencrypttheuser's password	PythonEncryptionalgorithm- bycrypt
3.	ScalableArchitecture	Theapplicationrespondmuchmorequickly	Pythonflask
4.	Availability	The system shouldbe handle many numberofuser's account	Pythonflask

S.No	Characteristics	Description	Technology
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Python Flask framework

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture><https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>