

**PROJECT DESIGN PHASE 2**  
**TECHNOLOGY STACK (ARCHITECTURE AND STACK)**

DATE	13.10.2022
TEAM ID	PNT2022TMID42578
PROJECT NAME	INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

**Table 1: Components and Technologies**

S.No	Component	Description	Technology
1	User Interface	Web app user interaction	HTML, CSS, JS & etc...
2	Application Logic 1	Making and utilising web applications	Flask, Python
3	Notification	User Alert Notification	SendGrid, Python
4	Database	Data type Configurations	SQL & etc.
5	Cloud Database	Cloud database service	IBM DB2
6	File Storage	File Storage Requirements	IBM cloud object storage
7	Machine learning models	In order to forecast stock sales	Causal Model
8	RFID Tags	Storing details	Python,DB
9	Infrastructure (Server/Cloud)	Configuring an application for deployment on a cloud server	Local System, Kubernetes, Docker
10	App Container	Contains whole application in single container	Docker, IBM container registry

**Table 2: Application Characteristics**

S.No	Characteristics	Description	Technology
01	Open-Source Frameworks	For our open source application, we employ HTML, CSS, Bootstrap, and Flask.	HTML, CSS, Javascript, Bootstrap, Python-Flask
02	Security Implementations	Users must log in and be authenticated in order to access their accounts securely.	IBM Cloud Security, Cookies
03	Scalable Architecture	By utilising these technologies, the system may be quickly scaled to accommodate more users at once, upgrade and add new features, and assign enough bandwidth,etc	Docker, Kubernetes Cluster
04	Availability	System availability is high because we use SQL and code optimization to reduce unauthorised database access.	IBM DB2, IBM Container Registry
05	Performance	When an application is containerized, deployment is quick and simple. placing the application on the cloud to provide quick access and responsiveness.	Flask, Docker, IBM DB2

**Reference Link :**

<https://app.mural.co/t/jagadish0729/m/jagadish0729/1667059805650/52cdc602c474f846085e26cbaafa2e5d6b795ccb?sender=ua0fb2771a132c2eff76d9354>

## Technology Stack Architecture

