Project Design Phase-II

Technology Architecture

Date	15 October 2022
Team ID	PNT2022TMID27048
Project Name	Inventory Management System for Retailers
Maximum Marks	4 Marks

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Technical Architecture:

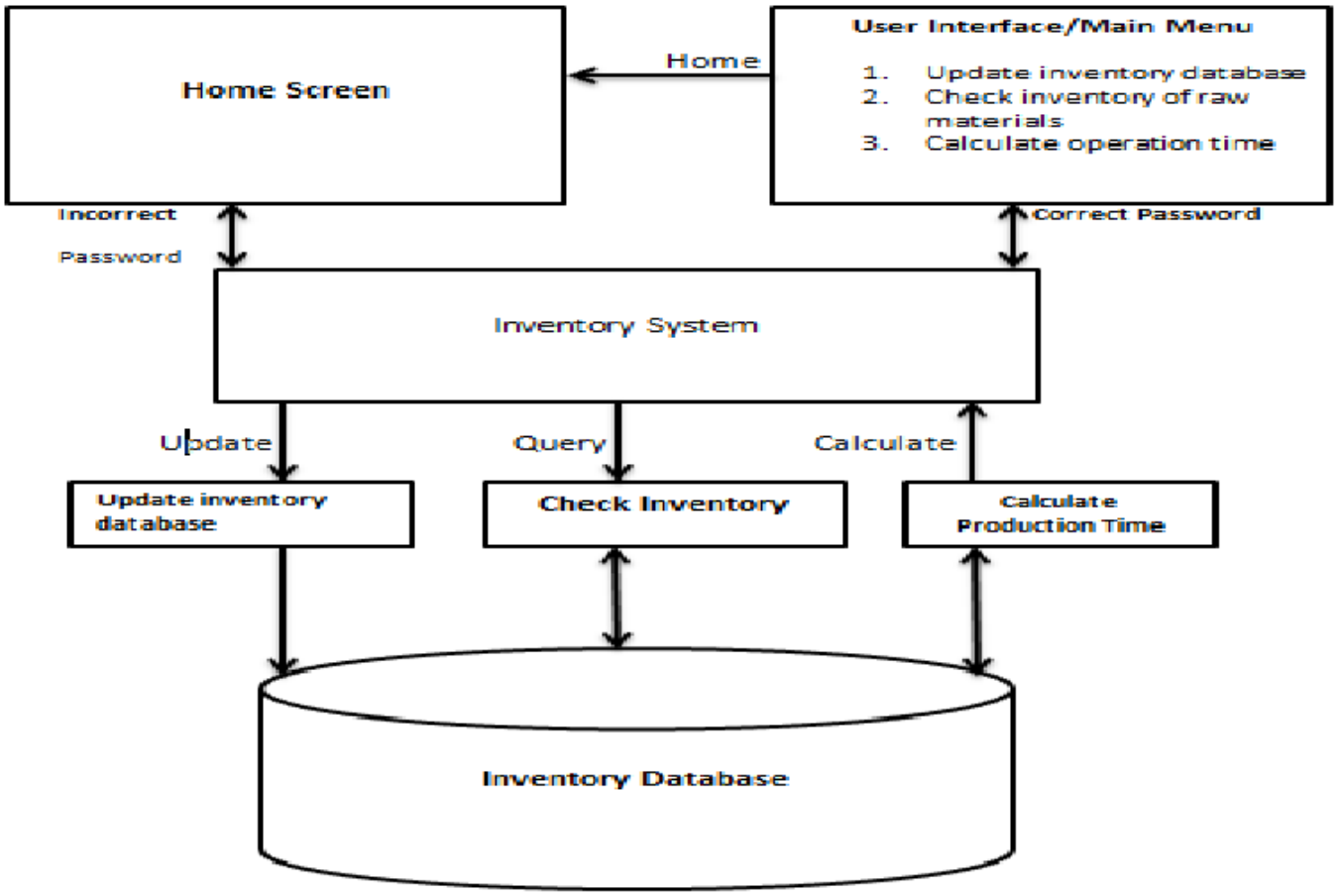

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Web UI with Chatbot	HTML, CSS, Bootstrap, Jquery
2	Calculating Products Count	By entering barcode details into the application	Zia Barcode Scanner
3	Showing high demand product	By the products data in IBMdb2	Data Visualization using Python Bar plot by Matplot Library
4.	Alert and Notification	Alerting the retailers regarding the low stock count of the product	SendGrid
5	Chat	Chat with watson assistant	IBM Watson Assistant
6	Cloud Database	Database Service on Cloud	IBM DB2
7	File Storage	File storage requirements	IBM Object Storage
8	External API-1 Barcode	To Scan the product barcode	Zia Barcode Scanner
9	Infrastructure (Server / Cloud)	Cloud Server Configuration	Cloud Foundry, Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Styling our page,Python flask microframework	Python Flask, Bootstrap
2.	Security Implementations	For securing our cloud data	SSL Certificates
3.	Scalable Architecture	Three – tier architecture (MVC)	Web server - HTML, CSS, Javascript Application server - Python Flask, Docker, Container Registry Database server - IBM DB2
4.	Availability	availability of application	IBM Load Balancer
5.	Performance	5 requests per seconds, Use of Local Machine Cache Memory	IBM Cloud, CDN