**Project Design Phase-II**

**Technology Architecture**

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|---|---|
| Date | 12 October 2022 |
| Team ID | PNT2022TMID39828 |
| Project Name | Inventory Management System for Retailers |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

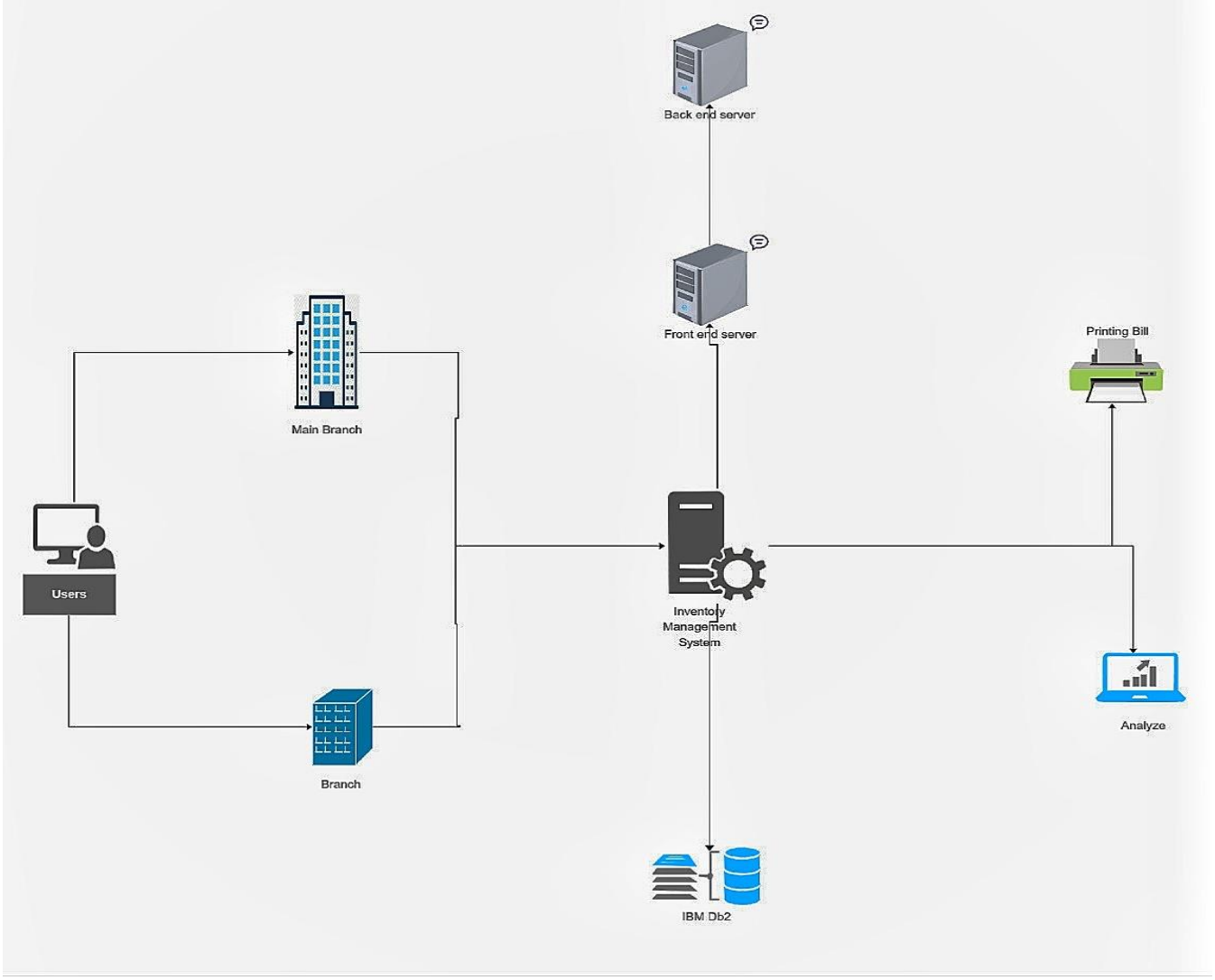

**Table-1: Components & Technologies:**

| S. No | Component | Description | Technology |
|---|---|---|---|
| 1 | User Interface | Web UI with Chatbot | HTML, CSS, Bootstrap |
| 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 Mat plot 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, Java script<br>Application server - Python Flask, Docker, Container Registry<br>Database server - IBM DB2 |
| 4. | Availability | availability of application | IBM Load Balancer |
| 5. | Performance | 5 requests per seconds,<br>Use of Local Machine Cache Memory | IBM Cloud, CDN |