

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

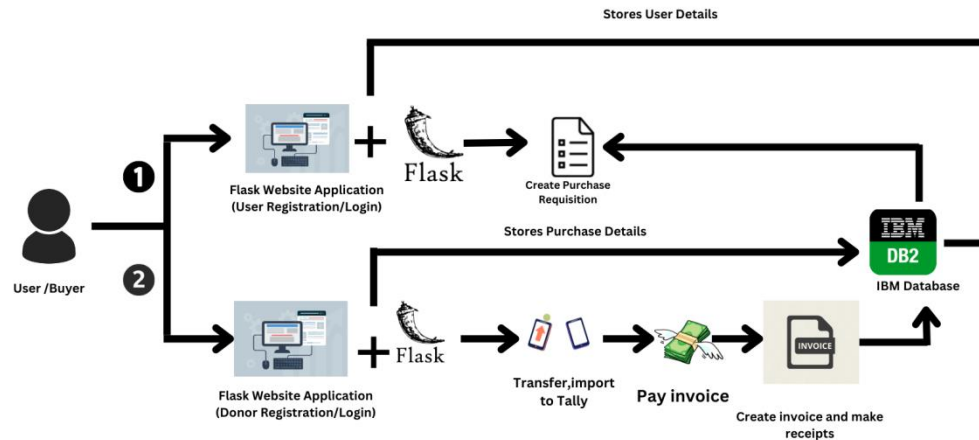
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|---------------|----------------------------|
| Date | 03October 2022 |
| Team ID | PNT2022TMID10872 |
| Project Name | Project – Technology Stack |
| Maximum Marks | 4 Marks |

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & 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/>



① - Flow of Buyer

② - Flow of Seller

Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|---------------------------------|---|--|
| 1. | User Interface | The user interacts with the web application and satisfy their provisions with best user experience using Web UI | HTML, CSS, JavaScript / React Js etc. |
| 2. | Application Logic-1 | Seller and buyer register themselves and once logged in then given with various features | Python |
| 3. | Application Logic-2 | Once the products are in need by the buyer they ask the seller to help with finding the products using the web | IBM Watson STT service |
| 4. | Application Logic-3 | The supplier will be notified by the admin and the products are fetched | IBM Watson Assistant |
| 5. | Database | SQL Data Type | MySQL |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 7. | File Storage | | |
| 8. | External API-1 | To Validate the buyer and seller | Email,Otp |
| 9. | External API-2 | | |
| 10. | Machine Learning Model | | |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration : | Local, Cloud Foundry, Kubernetes, etc. |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|------------------------|-------------|------------------------------------|
| 1. | Open-Source Frameworks | REACT JS | Technology of Opensource framework |

| S.No | Characteristics | Description | Technology |
|------|--------------------------|--|---|
| | | NODE JS FLASK | Javascript and python |
| 2. | Security Implementations | SHA-256 is used for security to protect the user details | SHA-256 |
| 3. | Scalable Architecture | This improves the scalability,because application servers can be deployed on many machines.The database does not make longer connections with every client-it only requires connections from a smaller number of application servers | Presentation layer-React JS(HTML,CSS,JS) Application Layer-Flask(python) Data Layer-IBM DB2 |
| 4. | Availability | In this system,we need to distribute evenly the network traffic to prevent failure caused by overloading of a particular resource.So we use load balancers to improve the performance and other computing resources. | |
| 5. | Performance | Hence it is used for creating a scalable application providing flexibility in deployment and making it possible to partition the application | |

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>

