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

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID106311 |
| Project Name | Inventory management system for retailers |
| Maximum Marks | 4 Marks |

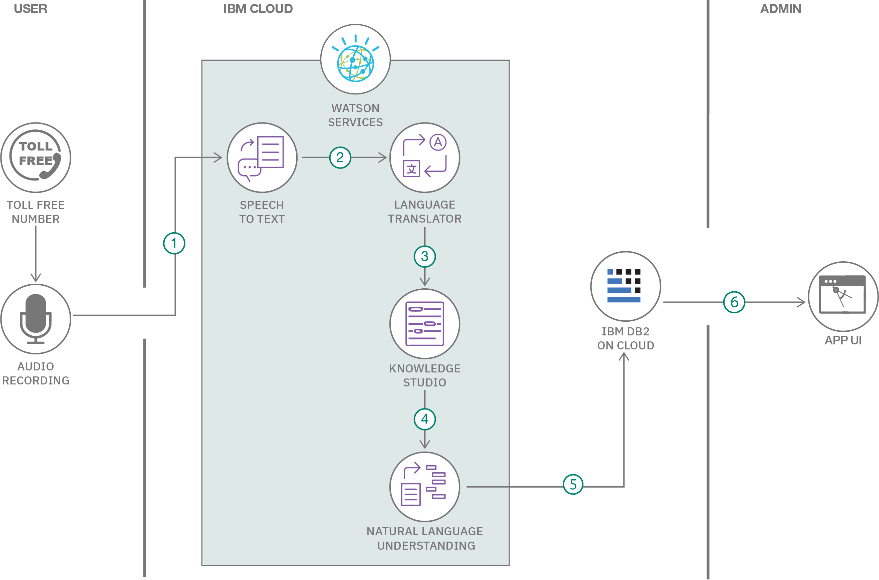
Technical Architecture:

The Deliverable shall include the architectural diagram 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/>

Table-1 : Components & Technologies:



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)

**Description**

**Technology**

**Component**

**S.No**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | Dart, TypeScript, Ruby, Java, Swift, Makefile |
| 2. | Application Logic-1 | The logic for a process in the application | Java |
| 3. | Application Logic-2 | The logic for a process in the application | TypeScript |
| 4. | Application Logic-3 | The logic for a process in the application | IBM Watson Assistant |
| 5. | Database | Data Type, Configurations, etc. | Makefile |
| 6. | Cloud Database | Database Service on Cloud | IBM Cloud |
| 7. | File Storage | File storage requirements | IBM Makefile storage |
| 8. | External API-1 | Purpose of External API used in the application | Ruby |
| 9. | External API-2 | Purpose of External API used in the application | API |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | IBM Assitant |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud Local Server Configuration:  Cloud Server Configuration : | IBM Cloud |

Table-2: Application Characteristics:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | List the open-source frameworks used | The technology of Opensource framework |
| 2. | Security Implementations | List all the security/access controls implemented, use of firewalls, etc. | IBM Cloud Encrypted Storage |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier,  Micro-services) | Secured IBM Architecture |
| 4. | Availability | Justify the availability of applications (e.g. use of load balancers, distributed servers etc.) | Anytime stock storage and availability |

|  |  |  |  |
| --- | --- | --- | --- |
| **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. | Reliable and scalable |

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>