

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

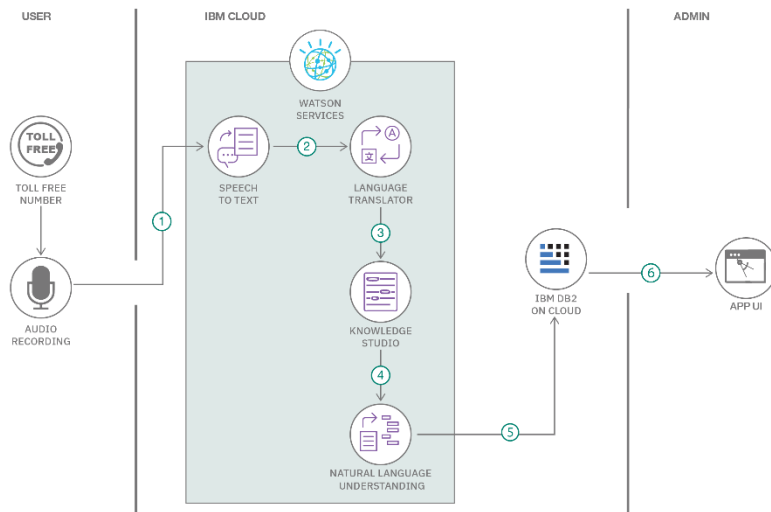
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| Date | 03 October 2022 |
| Team ID | PNT2022TMID37046 |
| Project Name | AI based discourse for Banking Industry |
| Maximum Marks | 4 Marks |

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/>



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)

Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|------------------------|---|---------------------------------------|
| 1. | User Interface | How user interacts with application e.g. Web UI , Chatbot. | HTML, CSS, JavaScript |
| 2. | Application Logic-1 | Logic for a process in the application | Python |
| 3. | Application Logic-2 | Logic for a process in the application | IBM Watson STT service |
| 4. | Application Logic-3 | Logic for a process in the application | IBM Watson Assistant |
| 5. | Database | Data Type, Configurations etc. | MySQL, DB(Excel) |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 7. | File Storage | File storage requirements | IBM Block Storage or Local Filesystem |
| 8. | External API-1 | Purpose of External API used in the application | IBM CLOUD API |
| 9. | External API-2 | Purpose of External API used in the application | Aadhar API |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | NLP,RNN |
| 11. | Infrastructure (Cloud) | Application Deployment on Cloud Cloud Server Configuration : | IBM Cloud |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|---|---------------------------|
| 1. | Open-Source Frameworks | List the open-source frameworks used | NLP,IBM DB, Python |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | OTP , capche verification |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Technology used |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Web api |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | AI |

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>