# Project Design Phase-II
## TechnologyStack(Architecture&Stack)
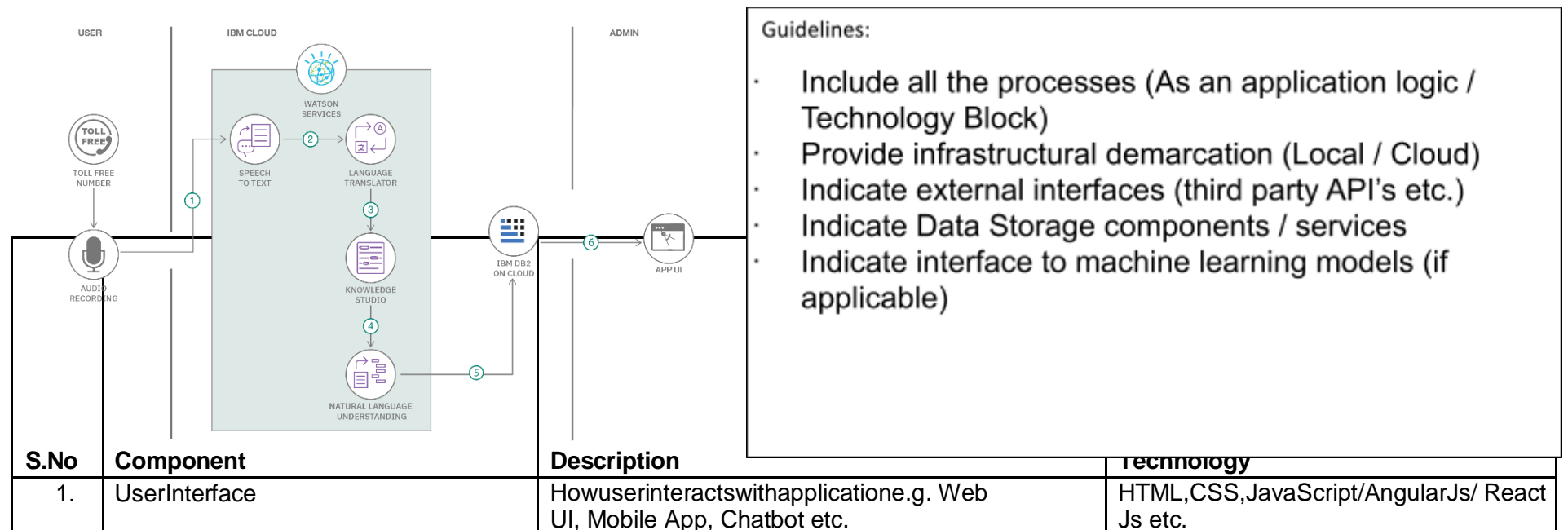
| Date | 31January 3035 |
|---|---|
| TeamID | LTVIP2025TMID50208 |
| ProjectName | ToyCraftTales_Tableau'sVisionintoToyManufacturerDat |
| MaximumMarks | 4Marks |

**TechnicalArchitecture:**

TheDeliverableshallincludethearchitecturaldiagramasbelowandtheinformationasperthetable1&table2

**Example:Orderprocessingduringpandemicsforofflinemode**

**Reference:https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/**



Guidelines:
- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | UserInterface | Howuserinteractswithapplicatione.g. Web UI, Mobile App, Chatbot etc. | HTML,CSS,JavaScript/AngularJs/ React Js etc. |

| | | | |
|---|---|---|---|
| 2. | ApplicationLogic-1 | Logicforaprocessintheapplication | Java/ Python |
| 3. | ApplicationLogic-2 | Logicforaprocessintheapplication | IBMWatsonSTTservice |
| 4. | ApplicationLogic-3 | Logicforaprocessintheapplication | IBMWatsonAssistant |
| 5. | Database | DataType,Configurationsetc. | MySQL,NoSQL,etc. |
| 6. | CloudDatabase | DatabaseServiceonCloud | IBMDB2,IBMCloudant etc. |
| 7. | FileStorage | Filestoragerequirements | IBMBlockStorageorOtherStorage ServiceorLocalFilesystem |
| 8. | ExternalAPI-1 | PurposeofExternalAPIusedintheapplication | IBMWeatherAPI,etc. |
| 9. | ExternalAPI-2 | PurposeofExternalAPIusedintheapplication | AadharAPI,etc. |
| 10. | MachineLearningModel | PurposeofMachineLearningModel | ObjectRecognitionModel,etc. |
| 11. | Infrastructure(Server/Cloud) | ApplicationDeploymentonLocalSystem/Cloud Local Server Configuration: CloudServerConfiguration: | Local,CloudFoundry,Kubernetes,etc. |

**Table-2:ApplicationCharacteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-SourceFrameworks | Listtheopen-sourceframeworksused | TechnologyofOpensourceframework |
| 2. | SecurityImplementations | Listallthesecurity/accesscontrolsimplemented, use of firewalls etc. | e.g.SHA-256,Encryptions,IAM Controls, OWASP etc. |
| 3. | ScalableArchitecture | Justifythescalabilityofarchitecture(3–tier, Micro-services) | Technologyused |
| 4. | Availability | Justifytheavailabilityofapplication(e.g.useof load balancers, distributed servers etc.) | Technologyused |

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 5. | Performance | Designconsiderationfortheperformanceofthe application (number of requests per sec, use of Cache, use of CDN's) etc. | Technologyused |

**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**