**GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE**

**Computer Science and Engineering**

**IBM**

**NALAIYA THIRAN**

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

|  |  |
| --- | --- |
| Date | 15 October 2022 |
| Team ID | PNT2022TMID06858 |
| Project Name | Project – Realtime Communication System Powered by AI for specially Abled. |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2.

**IMAGE**



PROCESSING

**Table 1:**

**Components & Technologies:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1. | User Interface | User interface is where the human and computer interaction takes place. | HTML, CSS, JavaScript,  Vue Js , Node Js, React Js, Bootstrap. . |
| 2. | Application Logic-1 | Conversion of speech into sign language | Java / Python |
| 3. | Application Logic-2 | Conversion of sign language into speech | IBM Watson STT service |
| 4. | Application Logic-3 | Conversion of speech to Readable content | IBM Watson Assistant |
| 5. | Database | Data Type, Configurations etc. | MySQL, NoSQL, etc. |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 7. | File Storage | Method used to organize and store data on Hard drive | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | External API | Defines the communication Between normal and deaf people | IBM Weather API, etc. |
| 9. | Machine Learning Model | Training | Object Recognition Model, etc. |

**Table 2:**

**Application Characteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | It is a open source which enables rapid development of secure and maintainable  websites. | Bootstrap, Spring boot, React JS etc.. |
| 2. | Security Implementations | Technical tools and  techniques that are used to implement security services | SHA-256, Encryptions,  IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Supports High Workloads without any Fundamental  changes | Devops |
| 4. | Availability | Check Whether the  application is working properly. | Conferencing Technology |