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

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|---|---|
| Date | 15 October 2022 |
| Team ID | PNT2022TMID30154 |
| Project Name | Project – Early Detection of Chronic Kidney Disease |
| Maximum Marks | 4 Marks |

## Technical Architecture:

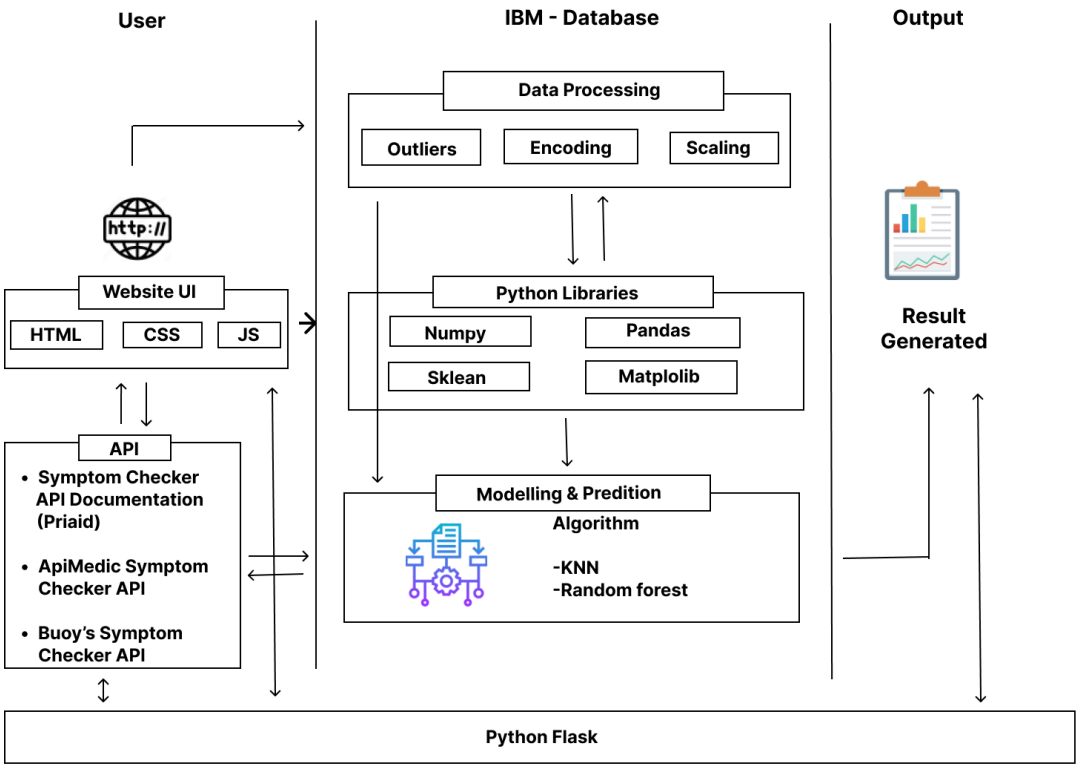

**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | User interacts with the prediction model through website. | HTML, CSS, JavaScript |
| 2. | Cloud Database | The model is provided with data from IBM cloud database. | IBM Database(CSV) |
| 3. | Application Logic-1 | Logic for a process in the application | Python (Jupyter) |
| 4. | Machine Learning Model | This model is developed to predict the disease using ML algorithm | Random forest algorithm, KNN, Decision tree |
| 5. | External API | Purpose of External API used in the application | Symptom Checker API Documentation (Priaid), ApiMedic Symptom Checker API, Buoy's Symptom Checker API |
| 6. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Local, Cloud etc. |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | Python for Backend purpose and flask is imported for front end purpose | Python Flask, IBM Cloud DB |
| 2. | Security Implementations | The user profile and given inputs will be secure | Encryptions, OWASP, Etc., |
| 3. | Scalable Architecture | The accuracy that they affected by the disease and its description will be provided | Random Forest ML Algorithm, Python libraries. |
| 4. | Availability | Anyone and in anytime they can visit our website | IBM Load Balancer |
| 5. | Performance | The user can get the knowledge of the disease and the percentage of affected by the disease. | Random Forest ML Algorithm |