

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

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| Date | 20 October 2022 |
| Team ID | PNT2022TMID21545 |
| Project Name | Analytics For Hospitals'Health-Care Data |
| Maximum Marks | 4 Marks |

Technical Architecture:



Architectural Diagram:

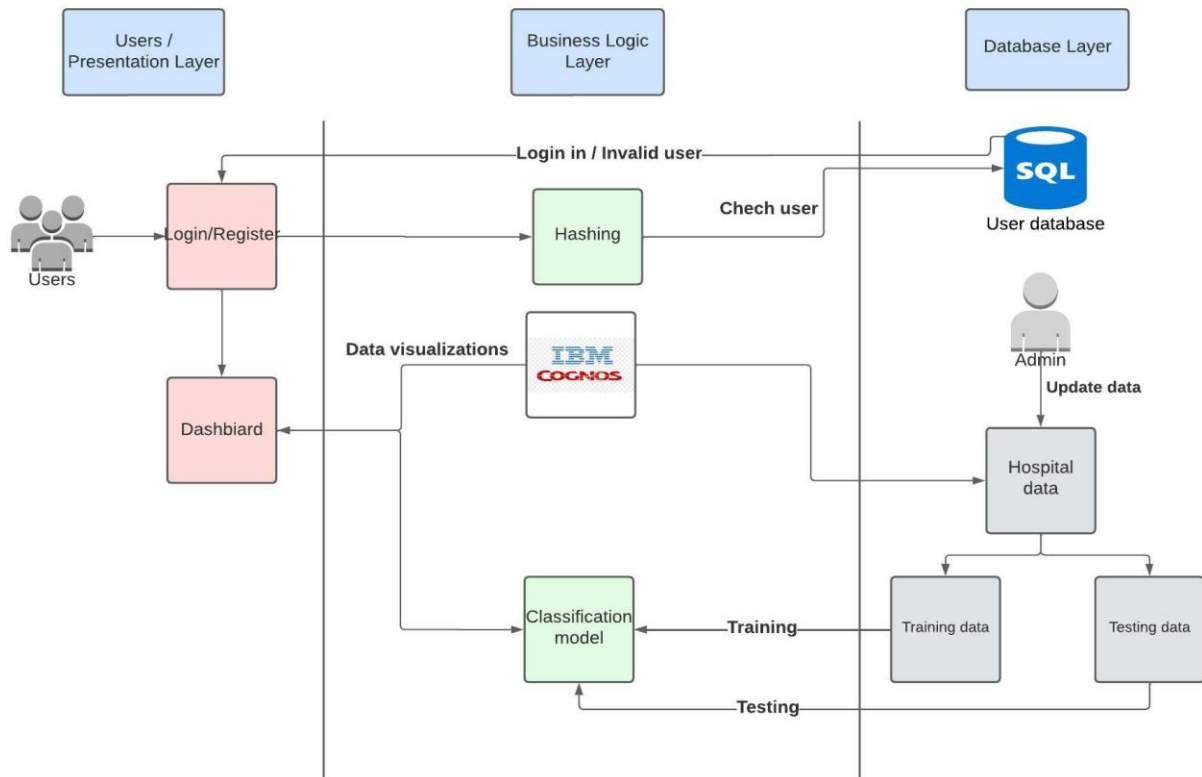


Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|------------------------|---|---|
| 1. | User Interface | user interacts with application in Web UI. | HTML, CSS, JavaScript / Angular Js etc. |
| 2. | Data Visualization | Data is visualized so that the users can understand the important patterns in data. | IBM Watson |
| 3. | Data Classification | Data is classified using classification algorithms to classify the data into 10 classifications | IBM Watson , colab |
| 4. | Data Prediction | Logic for a process in the application | colab, IBM watson |
| 5. | Database | All the datasets of the patients and the hospital | MySQL, etc. |
| 6. | File Storage | File storage requirements | Local Filesystem |
| 7. | External API-1 | Build models and helps in predict the data | IBM watson api |
| 8 | Machine Learning Model | Helps in developing the model | Classification algorithms |
| 8. | Infrastructure | The application is deployed in cloud | IBM cloud |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|---|--|
| 1. | Open-Source Frameworks | The data prediction is done in open-source framework | Colab ,python |
| 2. | Security Implementations | The login and sign in purpose are implemented with security concerns. | Salt hashing |
| 3. | Scalable Architecture | The application is done 3 tier architecture | Presentation layer-HTML/CSS javascript Business Logic Layer-colab, IBM cognos Database layer-IBM db2 |
| 4. | Availability | The application is available for all the users at anytime | IBM Cognos |
| 5. | Performance | The application provides various visualization types in the dashboard | IBM cognos |