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

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID21213 |
| Project Name | Visualizing and Predicting Heart Diseases with an Interactive Dashboard Technology |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

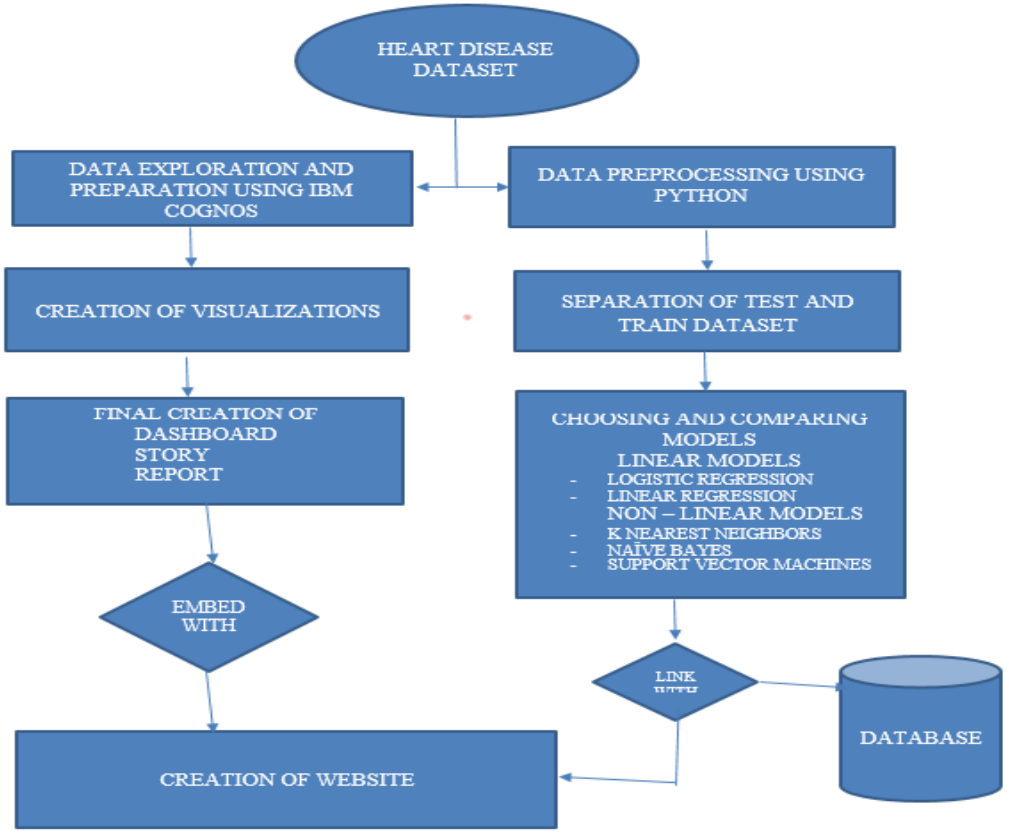

**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | The user interacts with the application through web UI. | HTML, CSS, python, JS, Bootstrap |
| 2. | Application Logic-1 | Logic for login in the application | JS |
| 3. | Application Logic-2 | Logic for registration in the application | JS |
| 4. | Application Logic-3 | Logic for a process in the application | Python, JS |
| 5. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 6. | File Storage | To store files such as prediction report | Local Filesystem |
| 7. | Data Analytics Model | Predictive modeling solutions are a form of data-mining technology that works by analyzing historical and current data and generating a model to help predict future outcomes. | Predictive modeling |

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|---|---|---|---|
| 8. | Infrastructure (Server / Cloud) | Application Deployment on Local System | Local web server |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | Bootstrap | Bootstrap |
| 2. | Security Implementations | Basic HTTP authentication, Session based authentication,<br>User Registration, Login Tracking | JS |
| 3. | Scalable Architecture | Here we can add any number of data and user to our database which will process them and store them/ For higher data we can connect to cloud storage and use it. Also deployment of website in cloud will help us scale it .ML model logic will work on any number of population set. | Flask |

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|---|---|---|---|
| 4. | Availability | Higher compatibility with latest technologies and allows<br>customization | Python , IBM cloud |
| 5. | Performance | ➔ Integrated support for unit testing.<br>➔ The security and authentication is added as required<br>➔ Support for secure cookies (client side sessions) 100% WSGI 1.0 compliant. | |

References:


https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

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https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d