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

Date	16 October 2022
Team ID	PNT2022TMID26984
Project Name	Project - Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	4 Marks

Technical Architecture:

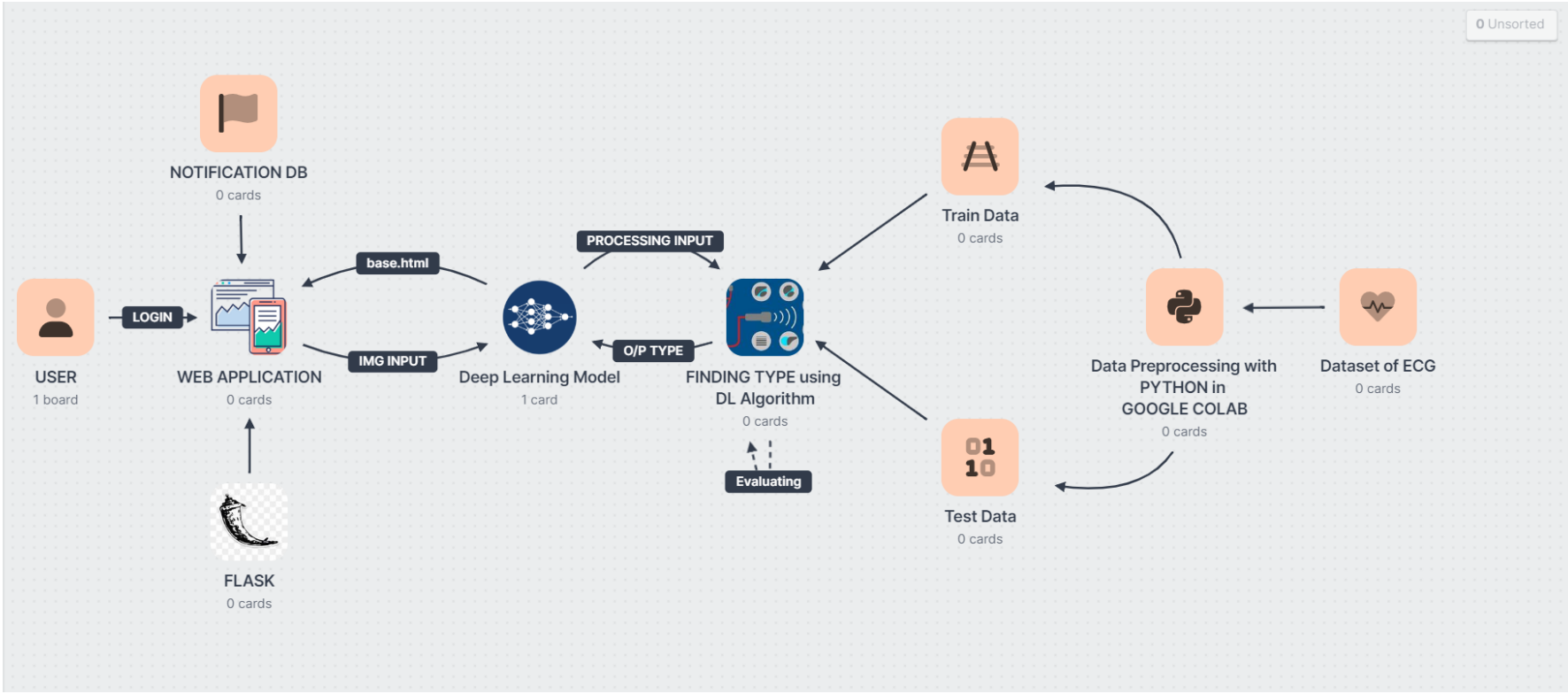

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Entering of LOGIN Details and logging in	Python
3.	Application Logic-2	Updation of ECG and detection	MySQL
4.	Application Logic-3	Remainder for regulations and challenges	Python - Push Notifications
5.	Database	Images,.	MySQL.
6.	Cloud Database	Database Service on Cloud	IBM Cloudant.
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	IBM Web Application
9.	Machine Learning Model	Purpose of Machine Learning Model	Detects type of arrhythmia.
10.	Infrastructure (Server / Cloud)	Application Deployment on Cloud Server Configuration	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Tools and features for creating web applications
2.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
3.	Availability	Justify the availability of applications (e.g. use of load balancers, distributed servers etc.)	The technology used
4.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	The technology used

References:

https://arxiv.org/abs/2005.06902

https://www.mdpi.com/2072-4292/12/10/1685