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

Date	30 October 2022
Team ID	PNT2022TMID10242
Project Name	Developing a Flight Delay Prediction Model using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

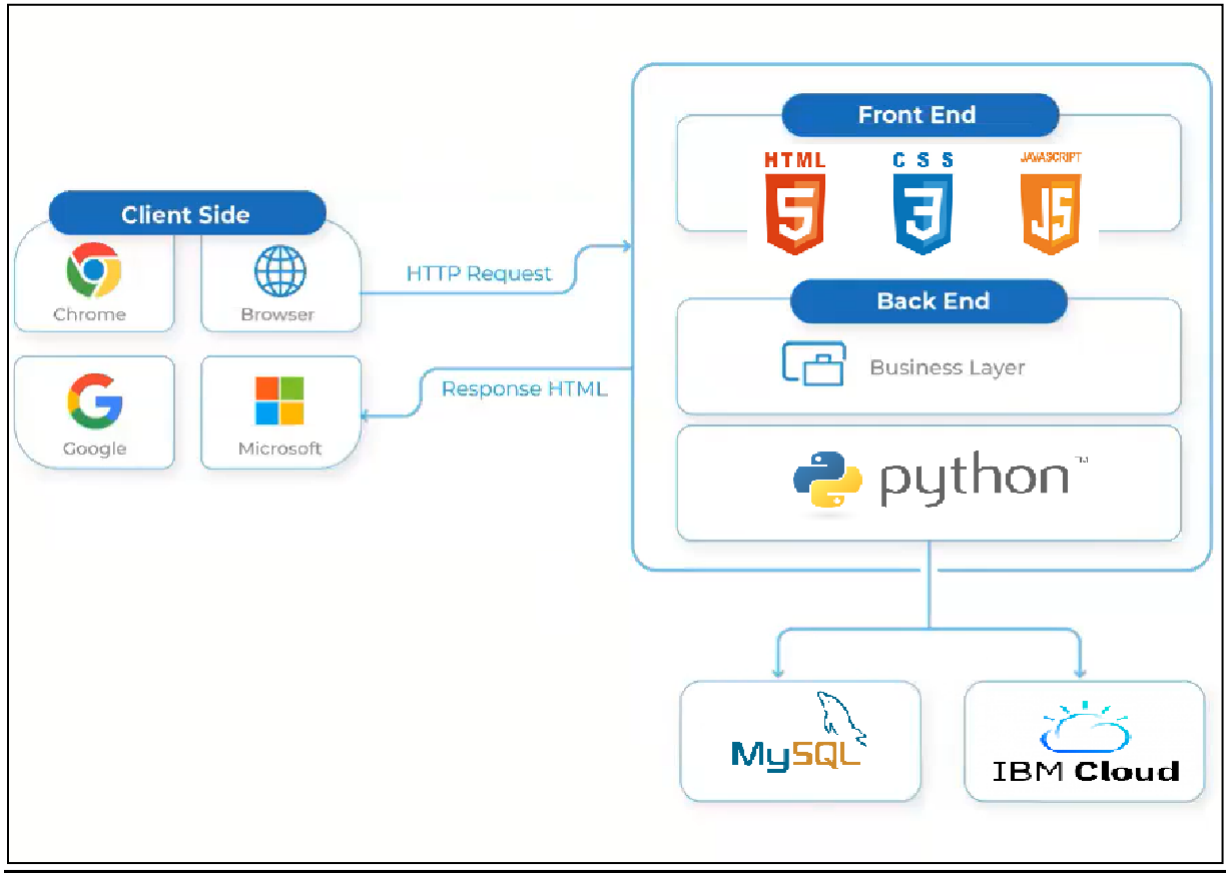

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson Studio
4.	Application Logic-3	Logic for a process in the application	IBM Watson Machine learning
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API
9.	Machine Learning Model	Purpose of Machine Learning Model	Decision tree classifier, logistic regression, simple neural network
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Flask
2.	Security Implementations	List all the security / access controls implemented,use of firewalls etc.	IAMControls
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Local, Cloud Foundry
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Cloud Foundry
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Cloud Foundry