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

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Date	18 October 2022
Team ID	PNT2022TMID32830
Project Name	Project – Flight Delay Prediction Using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

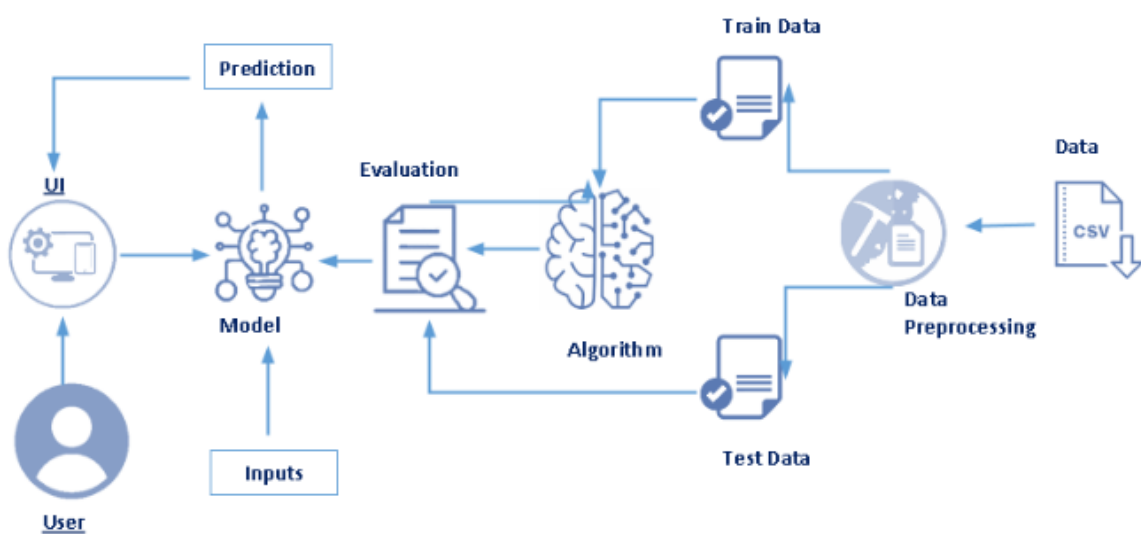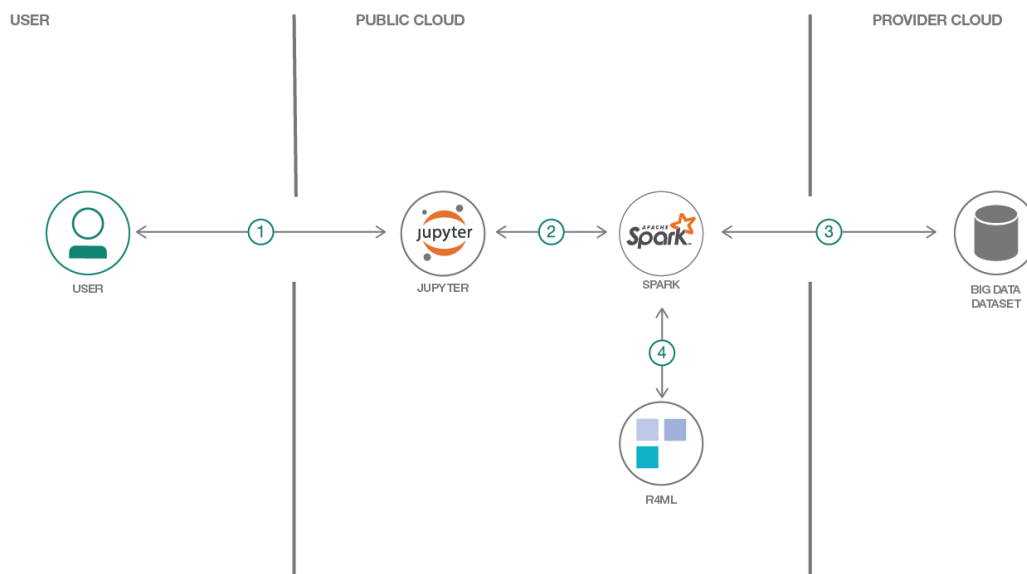The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, Flask
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 STT service
4.	Data processing	To clean data	Pandas, NumPy, Matplotli etc.,
5.	Database	Store data	MySQL
6.	File Storage	Storing files	IBM Block Storage
7.	External API-1	External API used in the system	IBM Weather API
8.	External API-2	External API used in the system	Email API
9.	Machine Learning Model	Purpose of Machine Learning Model	Evaluation and prediction model
10.	Infrastructure (Server / Cloud)	Application Deployment	IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used	Python - flask
2.	Security Implementations	Security / access controls implemented	Encryptions, SHA2
3.	Scalable Architecture	Scalability of architecture	Python
4.	Availability	Availability of application	IBM cloud
5.	Performance	Consideration for the performance of the application	Python, Flask