Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	18 October 2022
Team ID	PNT2022TMID21292
Project Name	Corporate Employee Attrition Analysis
Maximum Marks	4 Marks

Technical architecture:

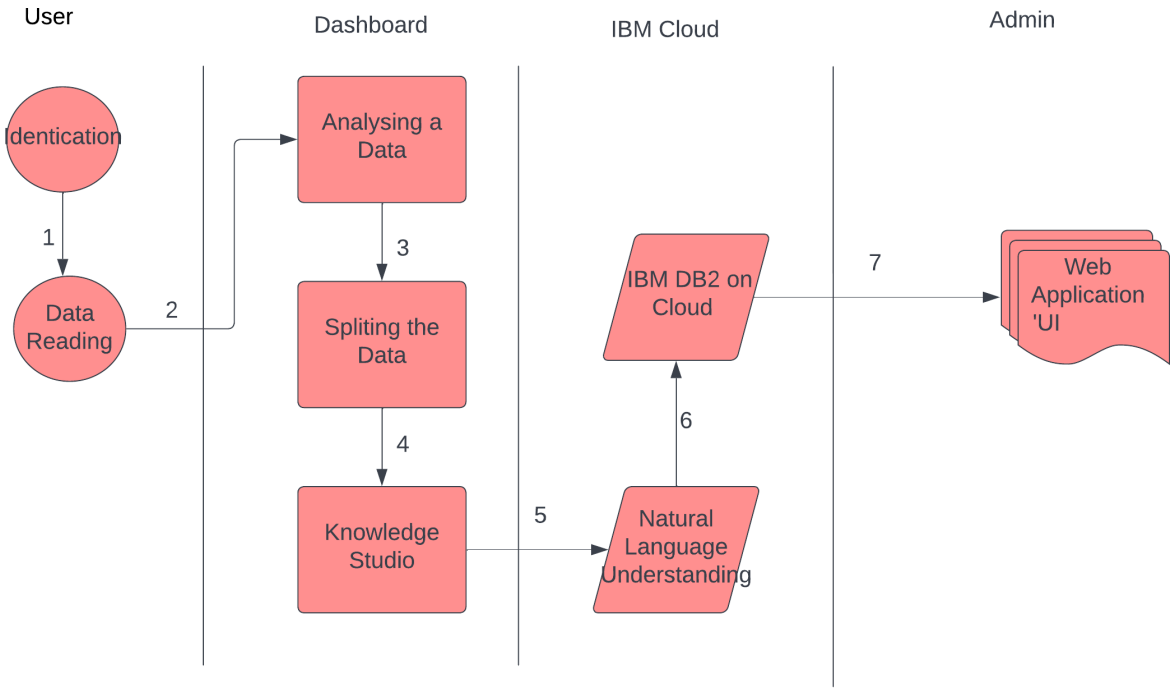

Table-1 : Components & Technologies:

S No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g.Web UI, Mobile application	HTML, CSS, JavaScript / Angular Js /React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other StorageService or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	To predict the employee attrition level
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / CloudLocal Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Visualizati on Dashboard	Python and IBM Cognos
2.	Security Implementations	Access permissions for the particular system information may only be changed by the system's data administrator. The user's data must be having an high security measures.	Encryption , Information verification andFace identification
3.	Scalable Architecture	The website attendance limit must be scalable enough to support 200,000 users at a time. The dashboard is scalable for the companies when their employee's dataset is used for analysis. The model can successfully predict the futuristic approach and suggests preventive measures.	Front end languages , database andbackend process
4.	Availability	New module deployment mustn't impact front page, dashboard and check out pages availabilityand mustn't take longer than one hour. The rest ofthe pages that may experience problems must display a notification with a timer showing when the system is going to be up again.	Encryption, Machine Learning Algorithm and Natural LanguageProcess

5.	Performance	The performance of the dashboard is flexible to every user's. The front-page load time must be nomore than 2 seconds for users that access the website using an LTE mobile connection.	Content delivery Network