

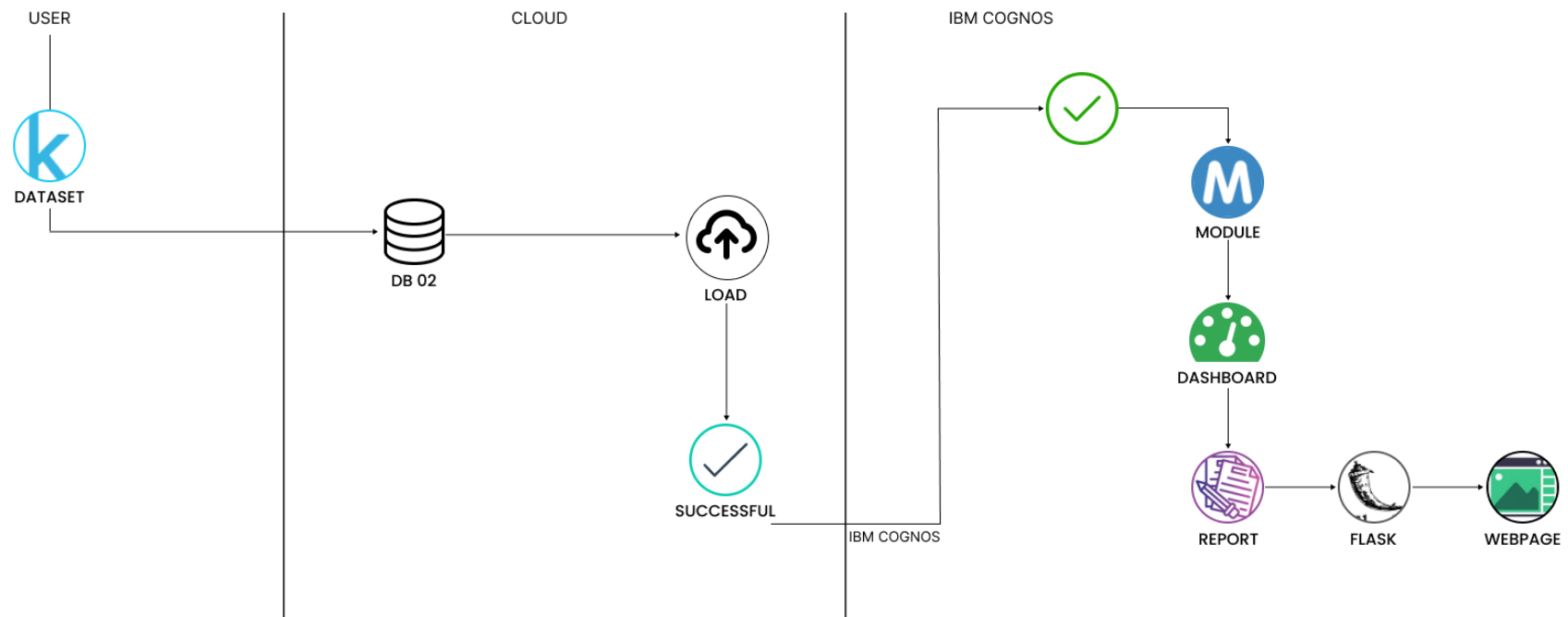
**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

Date	08 May 2023
Team ID	NM2023TMID11499
Project Name	Dissecting the Digital Landscape : A Comprehensive Analysis of Social Media

**Technical Architecture:**

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

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

S.No	Component	Description	Technology
1.	Data Collection	Gathering social media data from various platforms	APIs, Web scraping
2.	Data Module	Creating a module to process and manage collected data	Python, Pandas, SQL

3.	Visualization	Creating visual representations of analyzed data	Matplotlib, Plotly, D3.js
4.	Dashboard	Developing a web-based dashboard to present data visually	Flask, HTML, CSS, JavaScript
5.	Flask Integration	Embedding the dashboard within a Flask application	Flask, Jinja2 Templates
6.	Scalability	Designing architecture for scalability and handling large datasets	Distributed systems, Cloud infrastructure
7.	Scalability	Implementing security measures for data protection and access control	Encryption, Authentication, Authorization

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Utilizing open-source frameworks for social media analysis	Apache Hadoop, Apache Spark, Python
2.	Security Implementations	Implementing security measures to protect data and user privacy	Encryption, access controls, secure protocols
3.	Scalable Architecture	Designing an architecture that can handle growing data volumes and user activity	Distributed computing, cloud infrastructure
4.	Availability	Ensuring the platform is accessible and available to users	Load balancing, fault tolerance mechanisms
5.	Performance	Optimizing the system for efficient and fast data processing	Parallel processing, optimized algorithms