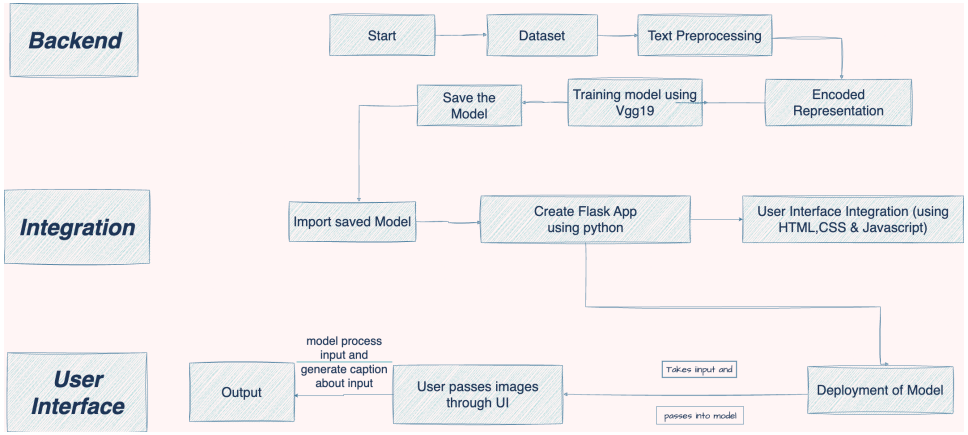
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	30 October 2023
Team ID	592095
Project Name	Image Caption Generation
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table2



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Network administrators have a single solution for provisioning, monitoring, and optimizing devices due to the Web User Interface (WebUI).	HTML, CSS, JavaScript
2.	Application Logic-1	The WebUI displays the prediction when the user clicks the submit button.	Python
3.	Application Logic-2	Logic in the application for a procedure	IBM Watson Assistant
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	Record capacity prerequisites	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	The application's use of an external API and its purpose	Nutrition Data API, etc.
8.	External API-2	The application's use of an external API and its purpose	Medical API, etc.
9.	Machine Learning Model	Purpose of Machine Learning Model	Predicts Output using Random Forest, Logistic regression algorithms.
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source systems utilized	Flask
2.	Security Implementations	List all the security/access controls executed, utilization of firewalls and so forth.	Encryptions, IAM Controls ,etc.
3.	Scalable Architecture	Legitimize the versatility of design (3 - level, Microservices)	Technology used
4.	Availability	Legitimize the accessibility of use (for example utilization of burden balancers, circulated servers and so on.)	Technology used
5.	Performance	Plan thought for the presentation of the application (number of solicitations per sec, utilization of Store, utilization of Cdn's) and so on.	Technology used

References: https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture https://aws.amazon.com/architecture

https://medium.com/the-internalstartup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d