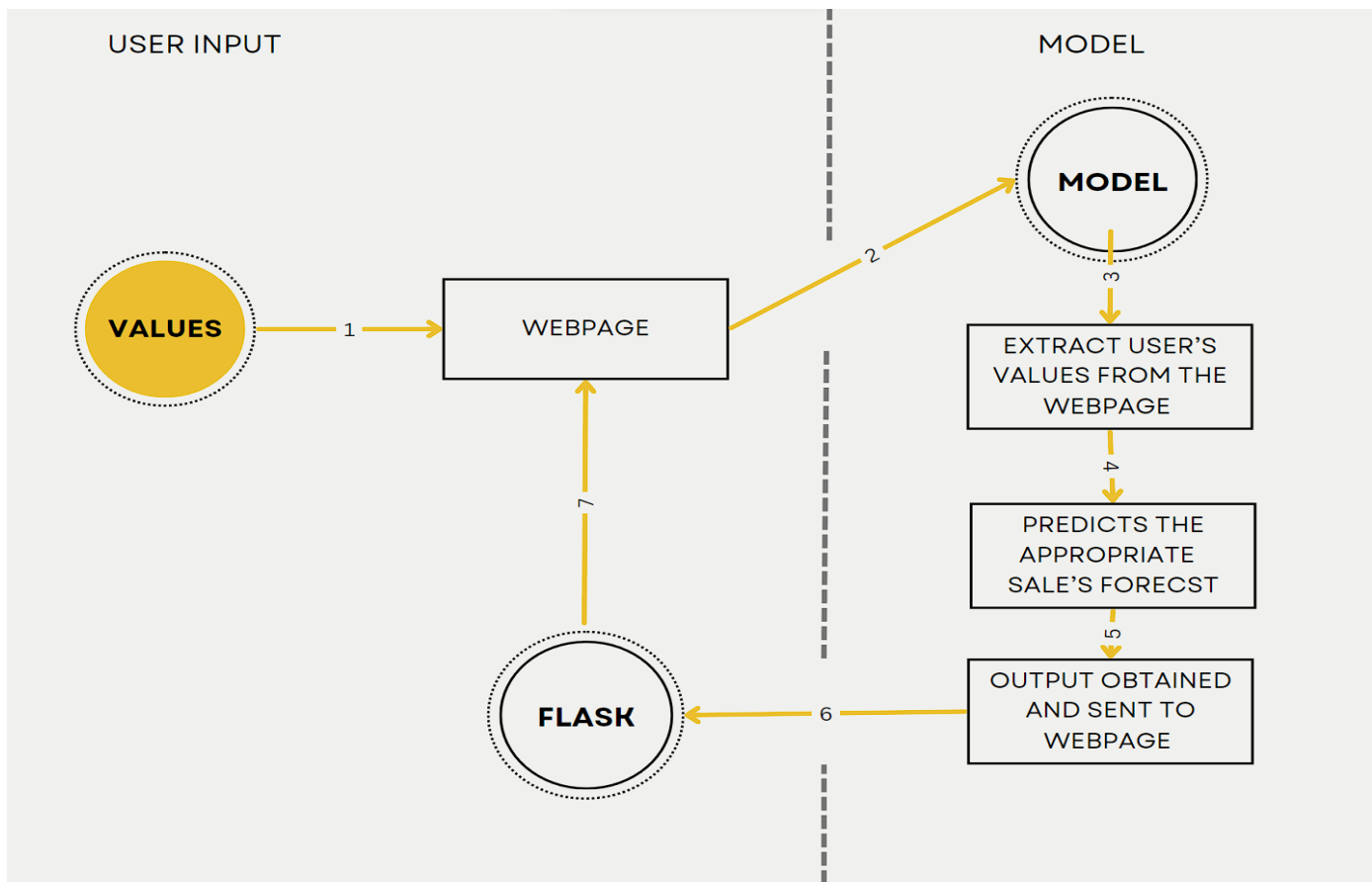


## Project Planning Phase - I

### Technology Stack (Architecture & Stack)

Date	3 November 2023
Team ID	PNT2023TMID591623
Project Name	Project - Walmart Sales Forecasting
Maximum Marks	4 Marks

#### Technical Architecture:



1. User provides input to the webpage.
2. The webpage is linked with the trained model.
3. These inputs are extracted and fed into the trained model.
4. Model predicts the appropriate forecast.
5. Now the outputs are obtained and sent to the webpage again.

6. Here Flask used to connect the trained model and the webpage.
7. Final obtained result is displayed in the webpage.

### Components and Technologies:

S.No	Component	Description	Technology
1.	User Interface	Users interact with the application by inputting data, customizing settings, and viewing forecasts.	HTML, CSS, JavaScript / /React Js
2.	Application Logic-1	Handles data preprocessing, executes models, and generates sales forecasts in the web interface.	Python
3.	Application Logic-2	Manages user input, custom scenarios, and real-time alerts in the sales forecasting web interface.	Flask
4.	Application Logic-3	Facilitates model performance monitoring and reporting on the sales forecasting web interface.	-
5.	Database	Nil	Nil.
6.	Cloud Database	Nil	Nil.
7.	File Storage	Storing the model's required files	Local Filesystem
8.	External API-1	Nil	Nil.
9.	External API-2	Nil	Nil.
10.	Machine Learning Model	Utilizes historical data to predict sales trends, enhancing decision-making within the web interface.	Walmart Sales Forecasting Model(Python).
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System Local Server Configuration:	Foundry, Kubernetes, etc.

**Application Characteristics:**

S.No	Component	Description	Technology
1	Open-Source Frameworks	The open-source Flask framework supports Walmart's sales forecasting website, enabling customization and extensibility for precise predictions.	Flask
2	Security Implementations	Utilizes authentication, encryption, and access controls to safeguard Walmart's sales forecasting website	bitlocker
3	Scalable Architecture	Adopts Flask to create an adaptable framework for Walmart's expanding sales forecasting system.	Flask
4	Availability	Can be available through a simple domain (because this project is a web page)	Google Domains, Register.com
5	Performance	Caching: When a user visits a website, the elements get stored in temporary hard drive storage called cache. This process loads pages faster. Reduce HTTP requests: Browsers use a cache to reduce the number and size of HTTP requests, making web pages load faster.	Hard drive (Temporary storage for caching data.)