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

Date	13 March 2025
Team ID	PNT2025TMID02756
Project Name	Power BI Inflation Analysis: Journeying Through Global Economic Terrain
Maximum Marks	4 Marks

Technical Architecture:

This document outlines the technology stack used for the Power BI Inflation Analysis project. The system is built on Power BI Desktop and follows a structured data workflow from raw dataset ingestion to visualization and reporting. The entire process is conducted offline, without cloud deployment.

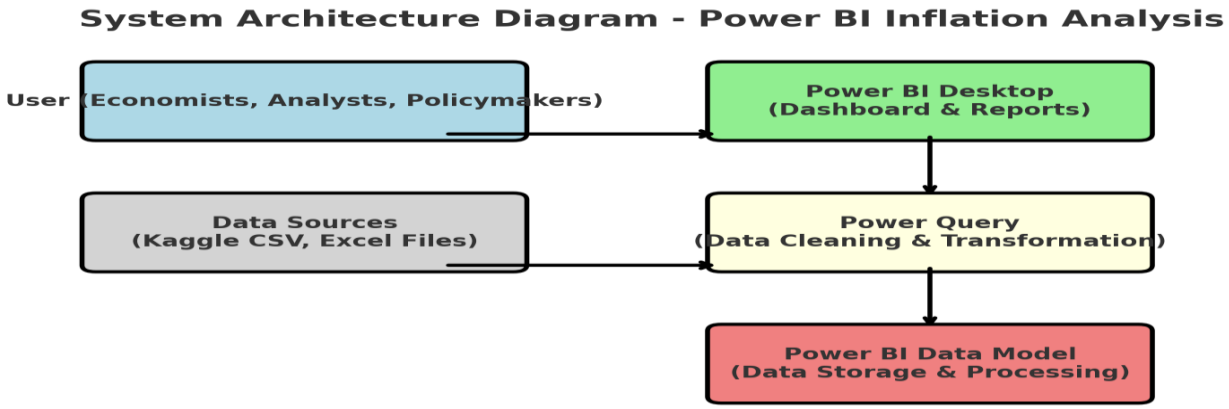

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Power BI Desktop	Allows users to interact with dashboards and reports.
2.	Data Import	CSV/Excel Files (Kaggle Dataset)	Provides raw inflation data for analysis.
3.	Data Processing	Power Query (M Language)	Cleans, transforms, and prepares data.
4.	Data Storage	Power BI Data Model	Stores structured data for visualization.
5.	Visualization	Power BI Charts & Reports	Generates insights through graphs and tables.
6.	Interactivity	Power BI Slicers & Filters	Enables users to explore data dynamically.
7.	Export & Sharing	Power BI PDF, PPT	Allows sharing of reports in standard formats.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Power BI uses open-source connectors for data import.	Power Query, DAX
2.	Security Implementations	Local access control and dataset encryption.	Role-Based Access Control (RBAC)
3.	Scalable Architecture	Handles large datasets with optimized queries.	Power BI Data Model
4.	Availability	Works offline with Power BI Desktop, ensuring constant access.	Local Deployment
5.	Performance	Optimized using DAX calculations and indexing.	Power BI Engine