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

Date	31 January 3035
Team ID	LTVIP2025TMID49000
Project Name	iRevolution: A Data-driven Exploration of Apple's iPhone Impact in India using Tableau
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

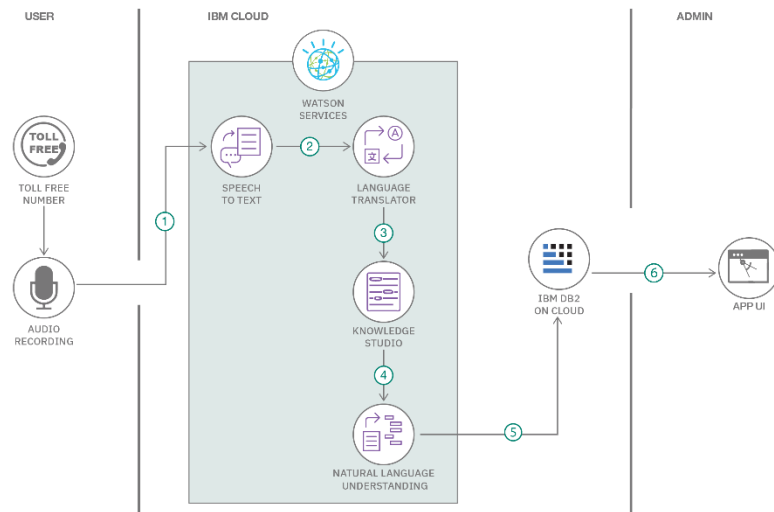**Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/**

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Tableau Dashboards (Interactive filters and tooltips)	Tableau Desktop
2	Application Logic-1	Data Cleaning, Transformation	Python (Pandas, NumPy)
3	Application Logic-2	Feature Engineering and Enrichment	Python
4	Database	Structured CSV files as datasets	CSV, Excel
5	Cloud Database	Backup or cloud access to datasets	Google Drive, GitHub
6	File Storage	Local storage of raw and processed data	Local Filesystem
7	External API-1	Optional: Government/Industry data source	Open Government API (if used)

| 8 | Machine Learning Model | Not applicable at current stage | - |
| 9 | Infrastructure | Local system deployment with optional cloud backup | Local (Windows/Linux), Google Drive |

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Python libraries used for data processing	Pandas, NumPy
2	Security Implementations	Files managed securely; no third-party sensitive data processed	Local file permissions, GitHub access
3	Scalable Architecture	Scalable to include other datasets or extend to Android/Samsung/OnePlus analysis	Modular script design
4	Availability	Data backed up on cloud for 24x7 availability	Google Drive, GitHub
5	Performance	Optimized datasets and cache layers in Tableau for fast load times	Tableau extract engine, CSV formatting

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-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d