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

Date	03 October 2022
Team ID	Leveraging Data Analysis For Optimal Marketing Campaign Success
Project Name	NM2023TMID05008
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/
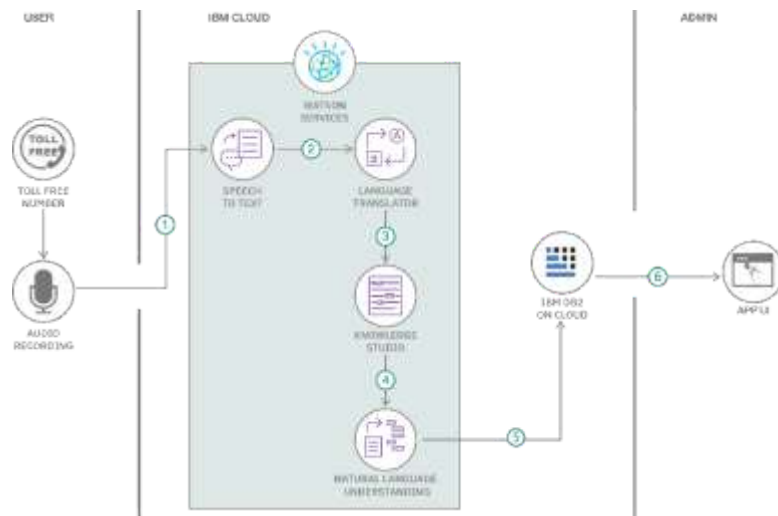
Guidelines:

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

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	Data Source	IBM Db2	Relational Database
2	Data Analysis and Visualization	IBM Cognos Analytics	Business Intelligence (BI) Tool
3	Data Integration	IBM Db2 Connect	Data Integration Software
4	Data Security	RBAC, Data Encryption	Security Mechanisms
5	Reporting and Dashboarding	IBM Cognos Dashboards	Reporting and Dashboarding Tool
6	Data Quality Assurance	Data Cleaning and Transformation Tools	ETL Tools (e.g., Informatica)
7	Project Management	Project Management Software (e.g., Jira, Trello)	Project Management Tools
8	Data Storage	IBM Db2	Relational Database
9	Compliance and Data Privacy	GDPR Compliance Tools and Policies	Compliance Software
10	Marketing Campaign Management	Marketing Automation Tools (e.g., HubSpot, Marketo)	Marketing Software
11	Customer Feedback Collection	Feedback Forms, Surveys	Data Collection Tools
12	Customer Support	CRM Software (e.g., Salesforce, Zendesk)	Customer Relationship Management (CRM) Software
13	Collaboration and Communication	Team Collaboration Tools (e.g., Slack, Microsoft Teams)	Collaboration Tools
14	Budget Management	Financial Software (e.g., QuickBooks, Xero)	Financial Software
15	IT Infrastructure	Server and Network Infrastructure	IT Infrastructure
16	User Training	Training Materials, Workshops	Training Resources
17	Data Backup and Recovery	Data Backup Systems	Backup and Recovery Solutions
18	Data Monitoring	Data Monitoring Tools	Monitoring Software
19	Analytics Tools	Advanced Analytics Tools (e.g., Python, R)	Analytics Software
20	Marketing Tools	Digital Marketing Software (e.g., Google Ads, Facebook Ads)	Marketing Software

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Scalability	The application should be able to scale with growing data and user demands.	Scalable Architecture
2	Performance	The application must provide fast data analysis and reporting.	Performance Optimization
3	Security	Data security and privacy are critical aspects of the application.	Security Features
4	User-Friendly	The application should be intuitive for users with varying technical backgrounds.	User-Friendly Interface
5	Real-Time Insights	Users should have access to real-time marketing campaign insights.	Real-Time Processing
6	Data Accuracy	The application must ensure data accuracy for informed decision-making.	Data Validation
7	Integration Capabilities	The application should integrate seamlessly with various data sources and tools.	Integration APIs
8	Compliance	Compliance with data privacy regulations like GDPR is essential.	Compliance Features
9	Collaboration	Users should be able to collaborate and share insights within the application.	Collaboration Tools
10	Mobility	The application should be accessible on mobile devices for on-the-go analysis.	Mobile Compatibility