

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

Date	21 October 2023
Team ID	NM2023TMID07560
Project Name	Project - GlobeTrek Insights: Navigating Global Country Data With IBM Cognos
Maximum Marks	4 Marks

Technical Architecture:

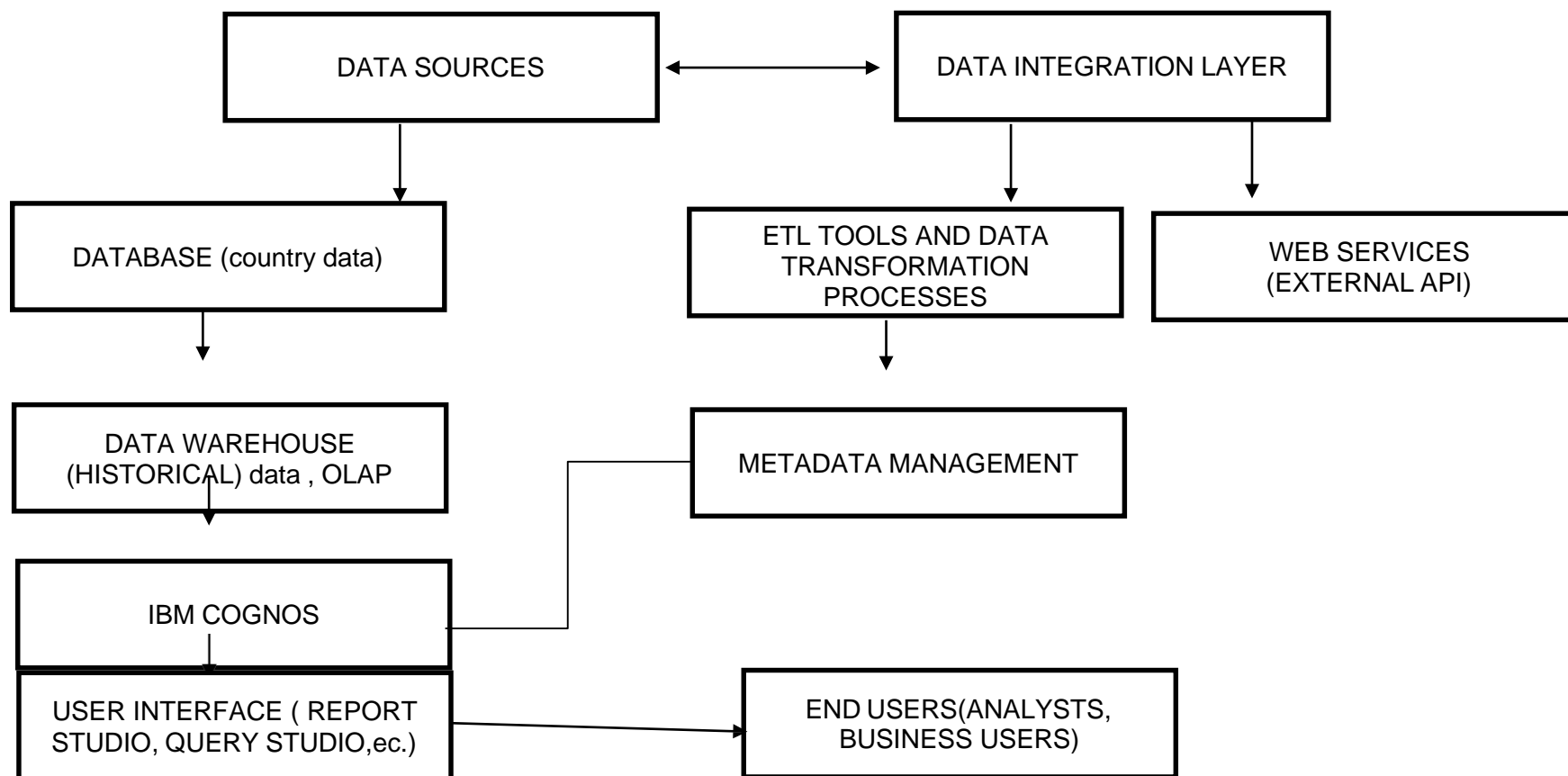


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Graphical access for interaction	DBMS, CSS, Java / Angular Js / React Js etc.
2.	Application Logic-1	Report generation and data transformation	Javascript, , Business Rules Engine
3.	Application Logic-2	Customer business rules and logic	Data validation rules, Business Rules Engine
4.	Application Logic-3	Data validation and integrity	SQL, Relational Databases
5.	Database	Data Storage and retrieval	AWS RDS, Azure SQL, etc.
6.	Cloud Database	Cloud based data storage	Amazon S3, Azure Blob Storage etc.
7.	File Storage	Storing Unstructured data	REST, SOAP API, etc.
8.	External API-1	Data retrieval from external sources	REST, SOAP API, etc.
9.	External API-2	Data integration with external sources	Aadhar API, etc.
10.	Machine Learning Model	Advanced data analysis and predictions	Python, Tensor flowetc.
11.	Infrastructure (Server / Cloud)	Computing resources for Cognos	Virtualization ,cloud services etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Utilizes community-developed software components.	Apache Hadoop, Python.
2.	Security Implementations	Measures to protect data and resources.	SSL/TLS, OAuth.
3.	Scalable Architecture	Easily expands to handle growth.	Kubernetes, Load Balancers

S.No	Characteristics	Description	Technology
4.	Availability	Ensures system uptime and access.	Failover Clustering, Load Balancers.
5.	Performance	Efficient and responsive data processing.	In-Memory Databases, Query Optimization.