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

Date	31 Jan 2026
Team ID	LTVIP2026TMIDS61540
Project Name	Heart Disease Analysis
Maximum Marks	4 Marks

Table-1: Components & Technologies

S.No	Component	Description	Technology
1	User Interface	Interactive heart disease dashboards and stories viewed by doctors, policymakers, and patients	Tableau Desktop, Tableau Public
2	Application Logic-1	Data preparation, cleaning, filtering, and transformation before visualization	Tableau Prep, SQL, Python (if applicable)
3	Application Logic-2	Health risk analysis logic (Age, BMI, Smoking, Diabetes, Stroke correlations) using calculated fields and expressions	Tableau Calculations, Parameters, LOD Expressions
4	Database	Store heart disease dataset including demographics, medical history, and lifestyle factors	MySQL, CSV, Excel
5	Cloud Database (Optional)	Cloud-based storage for scalability and remote access	AWS RDS (MySQL), Google Cloud SQL

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open & Public Visualization Platform	Use of Tableau Public for publishing interactive heart disease dashboards and stories. Optional use of Python for preprocessing and data handling.	Tableau Public, Python
2	Security Implementations	Ensure sensitive health data is anonymized before publishing. Secure database authentication and restricted access for internal dashboards.	MySQL Authentication, Tableau Server Security (if applicable), Cloud Security
3	Scalable Architecture	Ability to scale database and dashboard performance when handling larger healthcare datasets.	AWS RDS (MySQL), Google Cloud SQL (Optional)
4	Performance Optimization	Efficient SQL queries, optimized filters, and minimized dashboard load time for smooth interaction.	SQL Optimization, Tableau Extracts
5	Responsive Design	Dashboards adapt to different devices (desktop, tablet, mobile) for improved accessibility.	Tableau Device Designer
6	Web Integration Capability	Embedded dashboards within a Flask-based web application for browser access.	Flask, HTML, Tableau Embed API