Project Design
Phase-I Solution
Architecture

Date	27 October 2023
Team ID	Team-613637
Project Name	Own project - Intelligence Health Prediction System
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

Identify the Problem: we aim to address the problem of medical care which is a primary need that is often out of reach in many rural areas as well and provide an instant health care expert to people who are busy in this ever challenging busy world. Whether it's improving diagnostics, enhancing patient care, streamlining administrative tasks, this system will make it easy.

Research and Requirements Gathering: Engaging with medical professionals, stakeholders, and potential users to gather requirements. Understand how the workflows, regulations, security, and usability needs unique to the healthcare domain.

Design Phase: Creating comprehensive design that includes architecture, user interface/experience, data flow, and integration points. For instance, the user will provide symptoms and current facing problems to the website (system) to detect the problem and provide over the counter treatment to the user.

Development: building
Testing: Rigorous testing is crucial in healthcare software. Conduct unit tests, integration tests, and user acceptance tests to ensure functionality, accuracy, and reliability.

Regulatory Compliance: Depending on the region, healthcare software might need regulatory approval (FDA, CE mark, etc.). Ensure compliance with all relevant laws and standards.

Deployment: Implement the software in a controlled manner, considering scalability and user training.

Maintenance and Updates: Healthcare software needs continuous support, including bug fixes, updates, and adaptation to evolving medical practices or regulations.

Now, in terms of the specific features and aspects of the software, it varies based on the medical challenge you're addressing:

Electronic Health Records (EHR/EMR): If the aim is to improve patient data management, the software might focus on secure data storage, interoperability, and easy retrieval.

Diagnostic Tools: For diagnostic software, emphasis lies on accuracy, AI-powered analysis, and user-friendly interfaces for medical professionals.

Telemedicine Solutions: To facilitate remote consultations, the software should have secure communication channels, video conferencing, and integration with EHR systems.

Healthcare Analytics: Solutions aiming at analyzing large medical datasets for patterns and insights would focus on robust data processing, machine learning algorithms, and visualization tools.

Example - Solution Architecture Diagram:

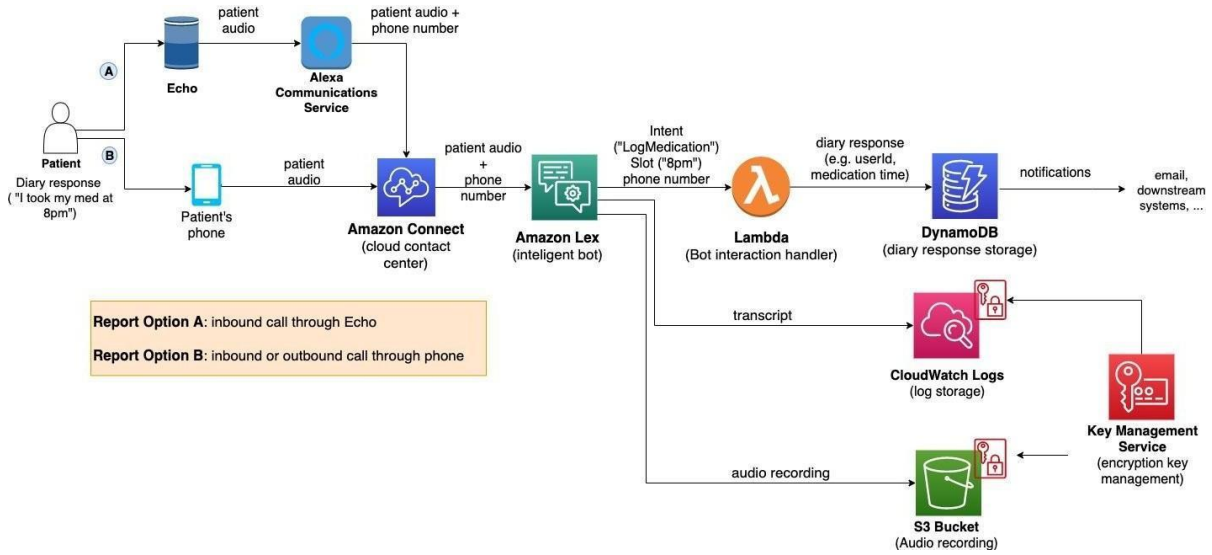

Figure 1: Architecture and data flow of the patient problem sample application

Reference: https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-research-powered-by-ai-on-aws-part-1-architecture-and-design-considerations/