**Project Design Phase**

**Solution Architecture**

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| **Date** | **15 February 2025** |
| **Team ID** |  |
| **Project Name** |  |
| **Maximum Marks** | **4 Marks** |

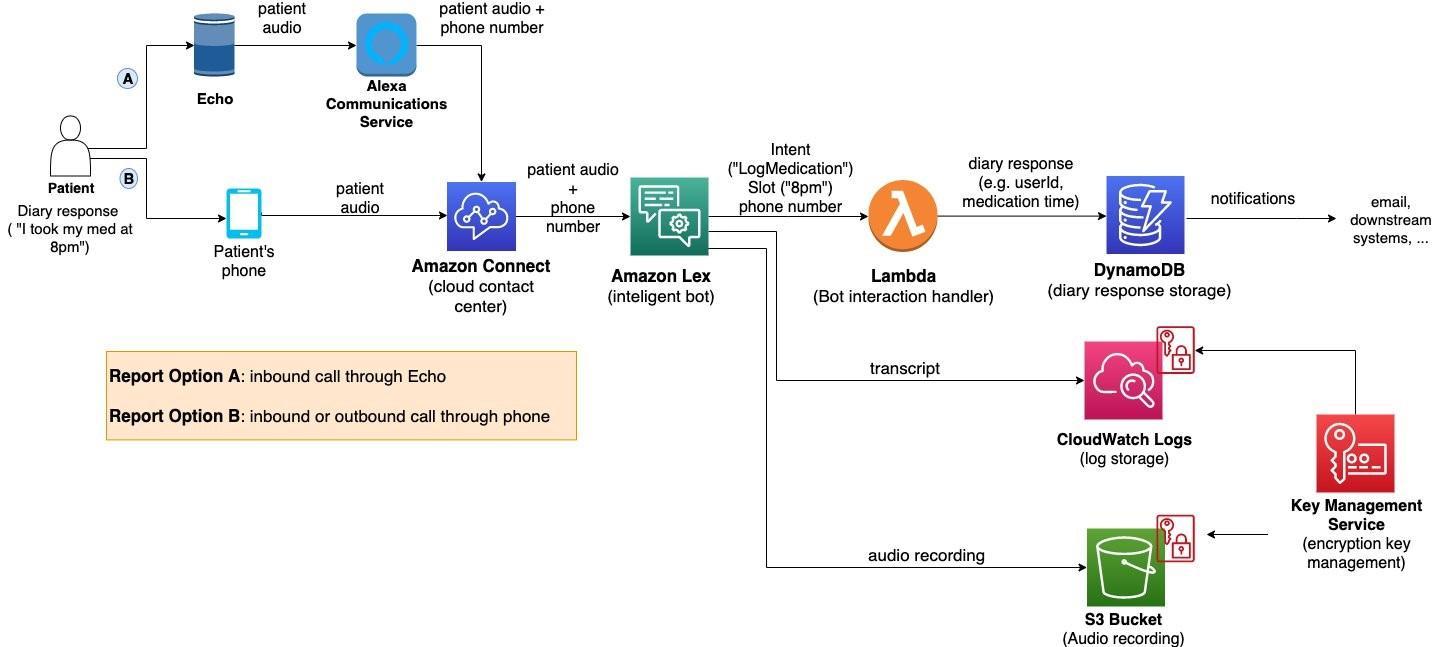
**Solution Architecture:**

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

The solution architecture plays a vital role in aligning cutting-edge machine learning technologies with real-world healthcare challenges. The architecture ensures that medical data is processed securely, efficiently, and meaningfully to support early diagnosis and clinical decision-making.

Its specific goals in this project are to:

* Identify and implement the best machine learning solution to accurately predict liver cirrhosis based on patient data and lab reports.
* Present a clear structure and behavior of the entire system (from data input to risk prediction and report generation) to stakeholders including healthcare professionals, developers, and project sponsors.
* Define critical system features, prediction modules, data handling flows, and development milestones, ensuring a smooth progression from prototyping to deployment.
* Provide detailed technical specifications and guidelines that govern how the solution is built, integrated, secured, and delivered in a clinical setting or telemedicine environment.

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