

## AWS Lex Chatbot Project – AWS re/Start

### Project Overview

This project demonstrates the creation of an interactive chatbot using **Amazon Lex**. The chatbot performs two main functions:

1. **Information Bot:** Responds to user queries about **AWS S3**.
2. **Quiz Bot:** Provides an interactive knowledge-check quiz with multiple-choice questions and feedback.

The project was completed as part of the **Praesignis AWS re/Start Special Projects** program.

### Learning Outcomes

- ❖ Setup and configure chatbots using **AWS Lex**.
- ❖ Create **intents** and **utterances** for user interaction.
- ❖ Implement **branching logic** for quiz flow.
- ❖ Present a working bot demo to stakeholders.

### Part 1 – Simple Chatbot

**Goal:** Learn the basics of Amazon Lex and create a functional bot.

#### Steps & Screenshots:

1. **AWS Login & Navigate to Lex**
2. **Create Bot:**
  - ❖ Name: S3InfoBot
  - ❖ Language: English (ZA)
  - ❖ Advanced options: None
  - ❖ Click **Create**
3. **Add Intent:**
  - ❖ Intent Name: S3Info
4. **Add Utterance:**
  - ❖ Example: "What is S3?"
5. **Set Response:**
  - ❖ "Amazon S3 is a cloud storage service that lets you store and retrieve any amount of data from anywhere."
6. **Save & Test Bot:**

### Part 2 – Quiz Bot (Challenge)

#### Scenario:

You are creating a knowledge quiz for a fictional client, Cloud Learners Inc., to test users' knowledge of **Amazon S3**.

#### Implementation Steps:

### **1. Create Quiz Intent:**

- ❖ Intent Name: S3Quiz
- ❖ Utterances: "Start quiz", "Quiz me on S3", "I'm ready for the quiz"

### **2. Add First Question:**

- ❖ **Question:** "What does S3 stand for?"
- ❖ **Choices:**
  - A) Simple Storage Service
  - B) Secure Server Storage
  - C) Smart Storage System
- ❖ **Responses:**
  - Correct → "Correct! S3 stands for Simple Storage Service. Would you like the next question?"
  - Incorrect → "Incorrect. The correct answer is Simple Storage Service. Would you like to try the next question?"

### **3. Add Second Question:**

- ❖ **Question:** "What is Amazon S3 mainly used for?"
- ❖ **Choices:**
  - A) Cloud storage
  - B) Web hosting
  - C) Cloud computing

### **4. Branching Logic & Testing:**

- ❖ Conditional responses handle correct and incorrect answers.
- ❖ Tested all utterances to ensure smooth user interaction.

### **Demo**

The chatbot responds dynamically to user inputs and guides users through the quiz flow, providing instant feedback.

### **Example Interaction:**

- User: "Start quiz"
- Bot: "What does S3 stand for?"
- User: "A"
- Bot: "Correct! S3 stands for Simple Storage Service. Would you like the next question?"

### **Key Skills Developed**

- AWS Lex Chatbot development
  - Problem-solving with conditional logic
  - Knowledge of AWS S3 and AWS services
  - Communication and presentation skills
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### Future Improvements

- Add more questions covering additional AWS services.
- Integrate **AWS Lambda** for dynamic content.
- Track user sessions to remember quiz progress.