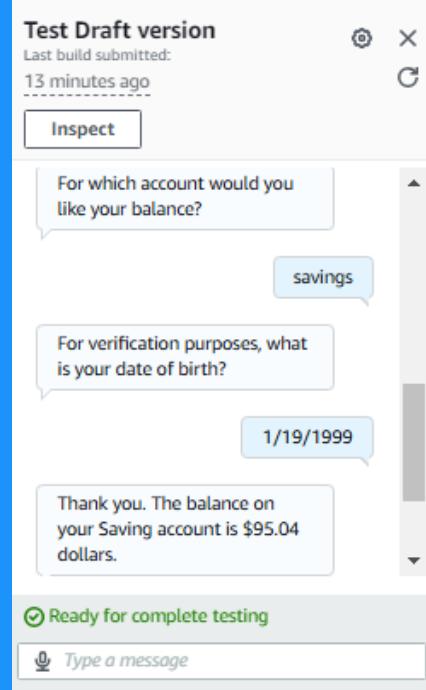




Connect a Chatbot with Lambda

 Gloria





Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a powerful AWS service that lets you build smart chatbots and conversational interfaces with ease. It uses AI to understand user intent, supports voice and text interactions, and simplifies creating intelligent communication tools

How I used Amazon Lex in this project

I used Amazon Lex in today's project to create a chatbot that answers questions about account balances. It collects user details, verifies information, and works with a Lambda function to generate and share a random balance figure during their chat

One thing I didn't expect in this project was...

One thing I didn't expect in this project was how easy it was to set up Amazon Lex to work with Lambda without needing much coding. The integration was straightforward, and the bot handled user input and responses well and professionally

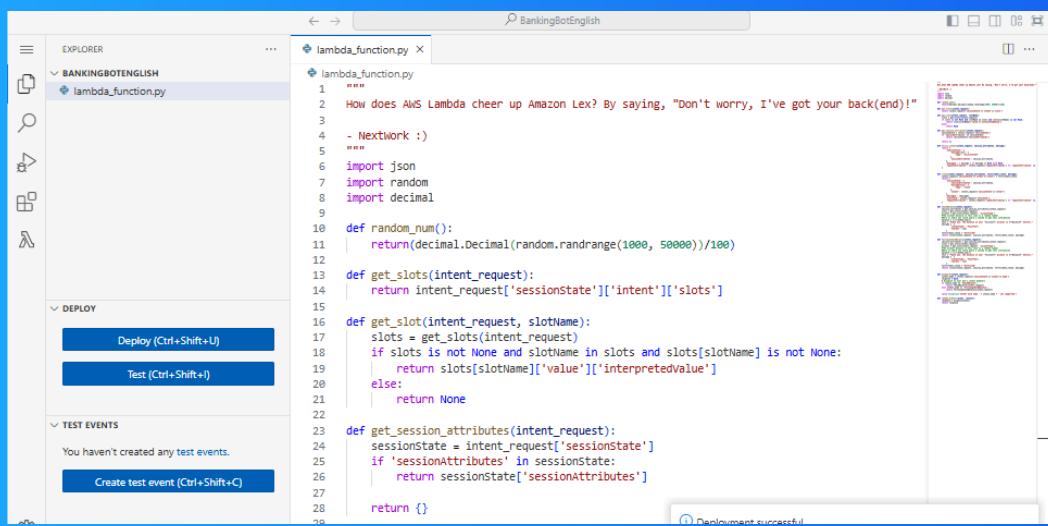
This project took me...

The project took 20 minutes because it was easier to execute the task and the Amazon Lex platform was also easy to interact with and understand

AWS Lambda Functions

AWS Lambda is a serverless compute service that automatically runs your code in response to events and manages the underlying infrastructure for you.

In this project, I created a Lambda function to generate a random account balance when users ask through the chatbot. Lex triggers the Lambda function, which runs the code to simulate the balance and sends it back for Lex to display to the user



The screenshot shows the AWS Lambda function editor interface. On the left, the Explorer sidebar shows a project named 'BANKINGBOTENGLISH' containing a file 'lambda_function.py'. Below the sidebar, there are three main sections: 'DEPLOY' (with 'Deploy (Ctrl+Shift+U)' and 'Test (Ctrl+Shift+I)' buttons), 'TEST EVENTS' (with 'Create test event (Ctrl+Shift+C)' button), and a status message 'You haven't created any test events.' On the right, the main area displays the Python code for the 'lambda_function.py' file:

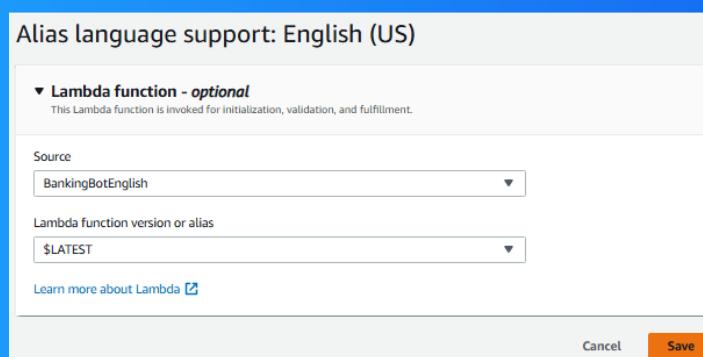
```
lambda_function.py
1 """
2 How does AWS Lambda cheer up Amazon Lex? By saying, "Don't worry, I've got your back(end)!"
3
4 - Nextwork :
5 """
6 import json
7 import random
8 import decimal
9
10 def random_num():
11     return(decimal.Decimal(random.randrange(1000, 50000))/100)
12
13 def get_slots(intent_request):
14     return intent_request['sessionState']['intent']['slots']
15
16 def get_slot(intent_request, slotName):
17     slots = get_slots(intent_request)
18     if slots is not None and slotName in slots and slots[slotName] is not None:
19         return slots[slotName]['value']['interpretedValue']
20     else:
21         return None
22
23 def get_session_attributes(intent_request):
24     sessionState = intent_request['sessionstate']
25     if 'sessionattributes' in sessionState:
26         return sessionState['sessionAttributes']
27
28
29
30 Deployment successful.
```

Chatbot Alias

An alias is a pointer to a specific version of a resource, such as an AWS Lambda function or an Amazon Lex bot. It allows you to manage and deploy updates by directing traffic to a specific version without changing the underlying setup.

TestBotAlias is a specific alias for an Amazon Lex bot that points to a particular version of the bot, often used for testing purposes. It allows developers to test changes without impacting the live version of the bot,

To connect Lambda with my BankerBot, I went to my bot's TestBotAlias and linked it to the Lambda function. This way, whenever the bot needs to do something like calculate a balance, it uses the Lambda function to get the job done.

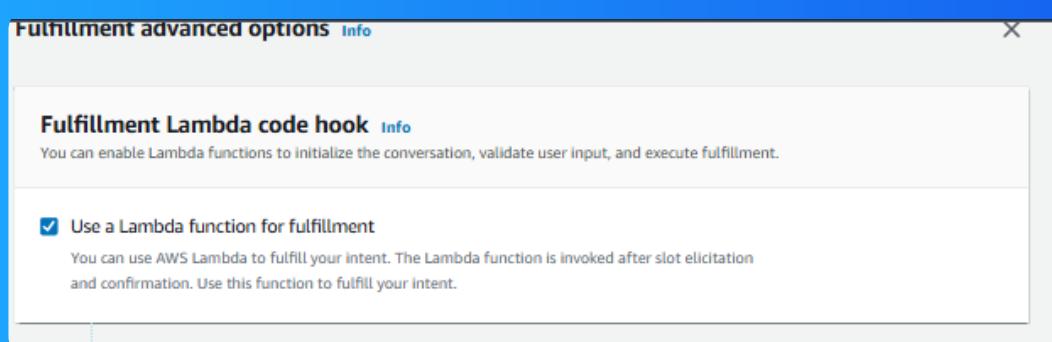


Code Hooks

A code hook is a piece of code, usually run in AWS Lambda, that works with a Lex bot to handle specific tasks. It can check user inputs, fill in missing details, or create responses, making the bot smarter and more interactive.

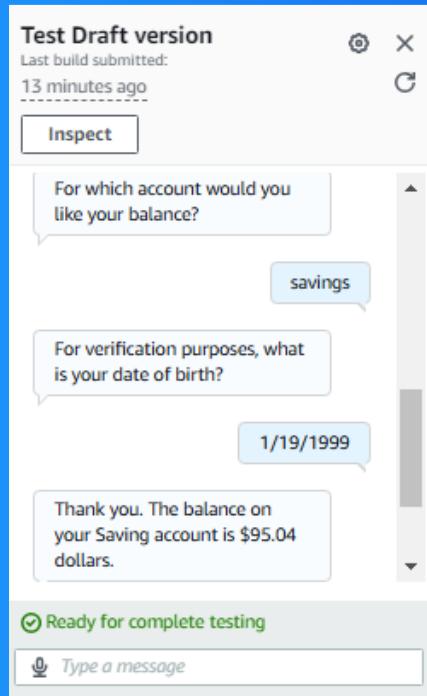
Even though I already connected my Lambda function with my chatbot's alias, I had to use code hooks to make the bot smarter. They help check user inputs, run custom tasks, and create responses on the spot, so the bot can handle conversations better.

I could find code hooks at the fulfillment and validation settings of my chatbot's intents. This is where I connected my Lambda function to run custom tasks, like checking user inputs or generating dynamic responses, during the conversation.



The final result!

I've set up my chatbot to trigger Lambda and return a random dollar figure when a user asks about their account balance, like saying "Check my balance?" Afterward, Lex will verify the user's date of birth before displaying the random dollar figure.





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