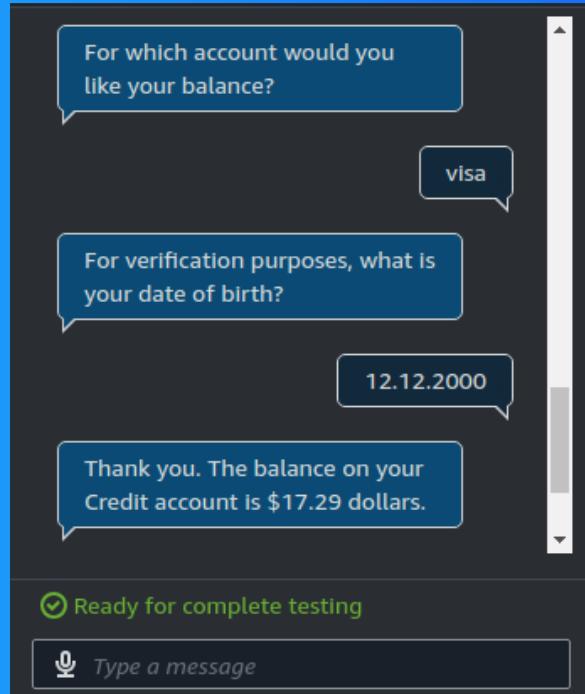




Connect a Chatbot with Lambda



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a service for building conversational interfaces using voice and text. It's useful for creating chatbots, virtual assistants, and automated customer support with natural language understanding and seamless AWS integration.

How I used Amazon Lex in this project

I set up my chatbot using Amazon Lex and connected it with AWS Lambda.

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

I didn't expect that I could use quite a number of different programming languages in AWS Lambda.

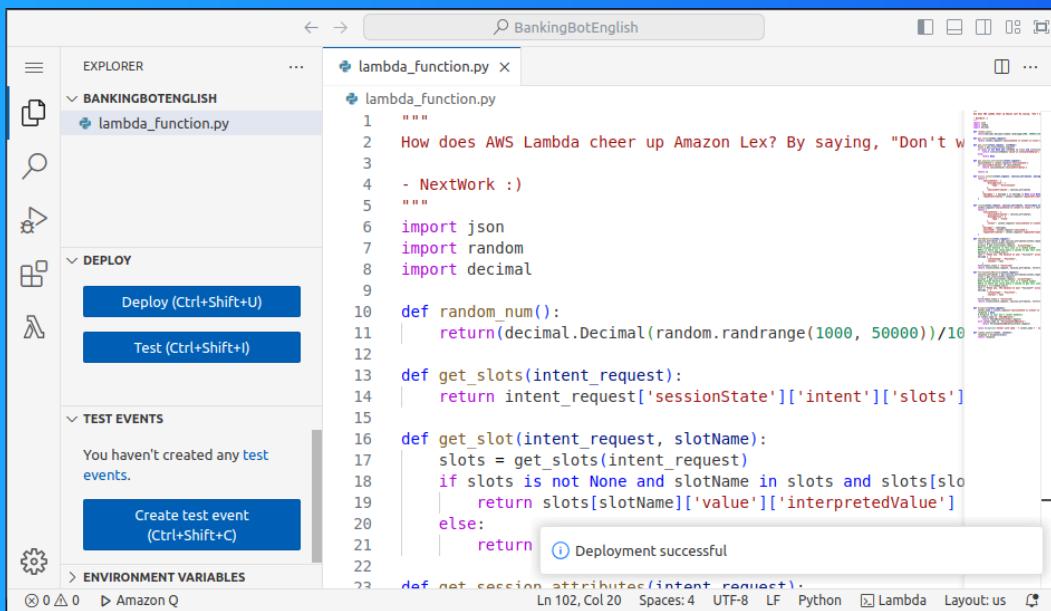
This project took me...

It took me about 30 minutes.

AWS Lambda Functions

AWS Lambda is a service that lets you run code in the cloud without needing to manage any computers/servers - Lambda will manage them for you.

In this project, I created a Lambda function to generate a random number on the fly (whenever a user asks for their balance).



```
lambda_function.py
1 """
2 How does AWS Lambda cheer up Amazon Lex? By saying, "Don't worry, it's
3 - NextWork :)"
4 """
5 import json
6 import random
7 import decimal
8
9 def random_num():
10     return decimal.Decimal(random.randrange(1000, 50000))/10
11
12 def get_slots(intent_request):
13     return intent_request['sessionState']['intent']['slots']
14
15 def get_slot(intent_request, slotName):
16     slots = get_slots(intent_request)
17     if slots is not None and slotName in slots and slots[slotName]:
18         return slots[slotName]['value']['interpretedValue']
19     else:
20         return None
21
22 def not_recognized_attributes(intent_request):
23     pass
```

The screenshot shows the AWS Lambda function editor interface. On the left is the Explorer sidebar with a project named 'BANKINGBOTENGLISH' containing a file 'lambda_function.py'. Below the sidebar are buttons for 'Deploy' and 'Test'. Under 'TEST EVENTS', there is a message: 'You haven't created any test events.' and a button to 'Create test event'. At the bottom of the sidebar are sections for 'ENVIRONMENT VARIABLES' and status indicators. The main area is a code editor showing the provided Python code. A tooltip 'Deployment successful' appears over the status bar at the bottom right. The status bar also displays file information: 'Ln 102, Col 20 Spaces:4 UTF-8 LF Python Lambda Layout: us'.

Chatbot Alias

An alias is a pointer for a specific version of a bot.

TestBotAlias is a default version of a bot that's made for testing or development.

To connect Lambda with my BankerBot, I visited my bot's TestBotAlias and I selected my Lambda function 'BankingBotEnglish' for the 'Source' field and '\$LATEST' for the 'Lambda function version or alias' field.

Alias language support: English (US)

▼ **Lambda function - optional**
This Lambda function is invoked for initialization, validation, and fulfillment.

Source

BankingBotEnglish

Lambda function version or alias

\$LATEST

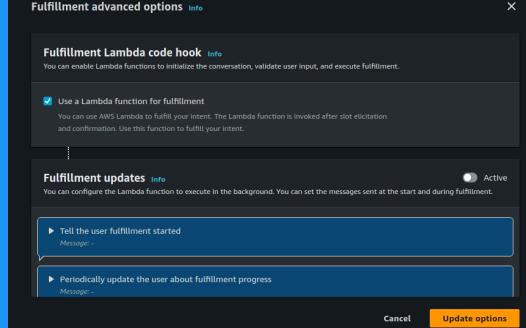
[Learn more about Lambda](#)

Code Hooks

A code hook is used to connect your chatbot to custom Lambda functions for doing specific tasks during a conversation.

Even though I already connected my Lambda function with my chatbot's alias, I had to use code hooks because they allow me to dynamically validate user input, fetch external data, and implement custom logic to enhance the chatbot's responses.

I could find code hooks in the advanced 'Fulfilment' options.



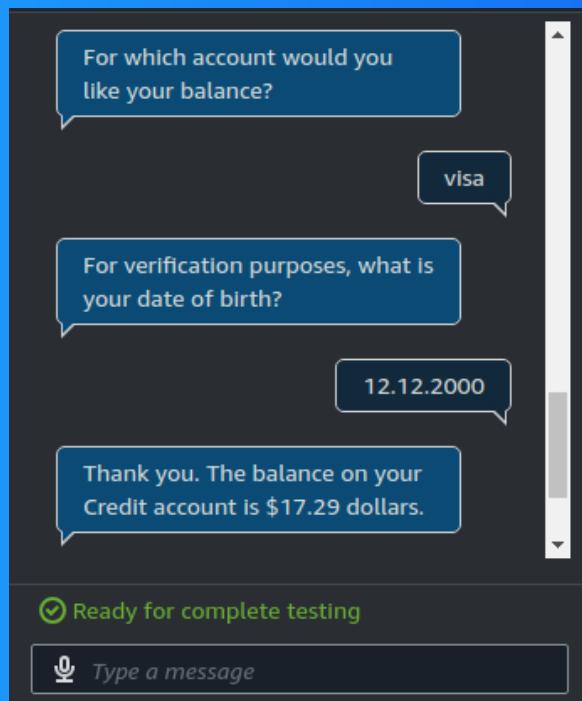
TS

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The final result!

I've set up my chatbot to trigger Lambda and return a random dollar figure when the bot has all the information it needs. In my case it's bank account type and date of birth.





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