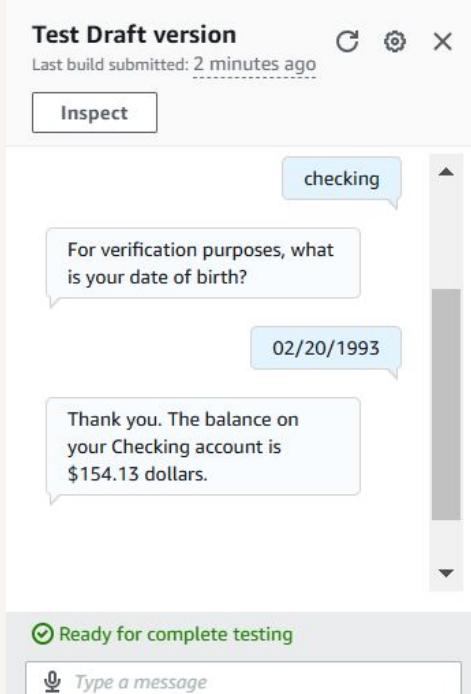




# Connect Amazon Lex with Lambda



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# Introducing Today's Project!

## What is Amazon Lex?

Easily add AI that understands intent, maintains context, and automates simple tasks across many languages

## How I used Amazon Lex in this project

I have used Amazon Lex to create a customized Banker bots with customized slot types

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

I didn't know that Amazon Lambda can be used to generate random numbers

## This project took me...

It took me around 60 minutes along with documentation.



# 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 project to generate a random number when user asks for account balance.

The screenshot shows the AWS Lambda Code source editor interface. The top navigation bar includes tabs for Code, Test, Monitor, Configuration, Aliases, and Versions. The Code tab is selected. The main area displays the code for `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']
```

The left sidebar shows the project structure under `BANKINGBOTENGLISH`, with `lambda_function.py` selected. A message in the bottom left corner says, "You have undeployed changes." A "Deploy (Ctrl+Shift+U)" button is at the bottom left. On the right side, there's a preview pane showing the Lambda function's execution results.

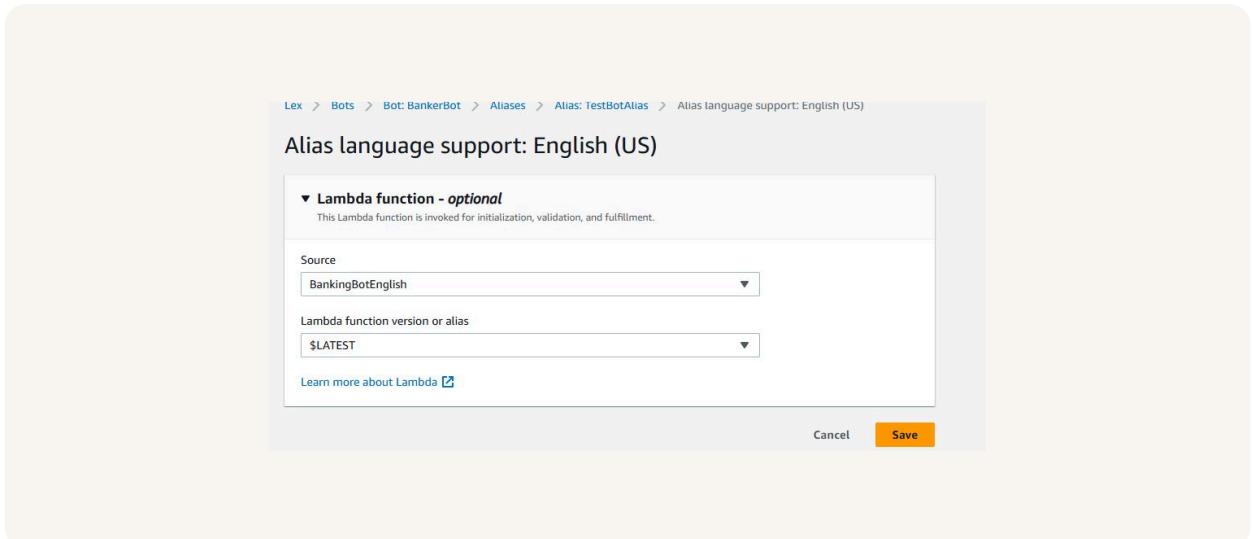


# Chatbot Alias

An alias is like a pointer for a specific version of your bot. So when connecting Lex with other AWS services or your custom applications, those external resources will connect to an alias, which will point to the specific version of your bot

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

To connect Lambda with my BankerBot, I visited my bot's TestBotAlias and clicked 'English(US)' under Language and then, Selected Source as BankingBotEnglish





# Code Hooks

Code hooks help you 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're used to handle more complex actions that the basic chatbot setup can't do on its own, like checking data from a database or making dec

I could find code hooks at Expand the On successful fulfilment bubble. Choose Advanced options. Under the Fulfilment Lambda code hook panel, check the checkbox next to Use a Lambda function for fulfilment.

The screenshot shows two panels side-by-side. The left panel is titled 'Fulfillment' and contains sections for 'On successful fulfillment' and 'In case of failure'. The right panel is titled 'Fulfillment Lambda code hook' and contains sections for 'Use a Lambda function for fulfillment' (which is checked), 'Fulfillment updates' (which is active), and 'Tell the user fulfillment started' and 'Periodically update the user about fulfillment progress'.

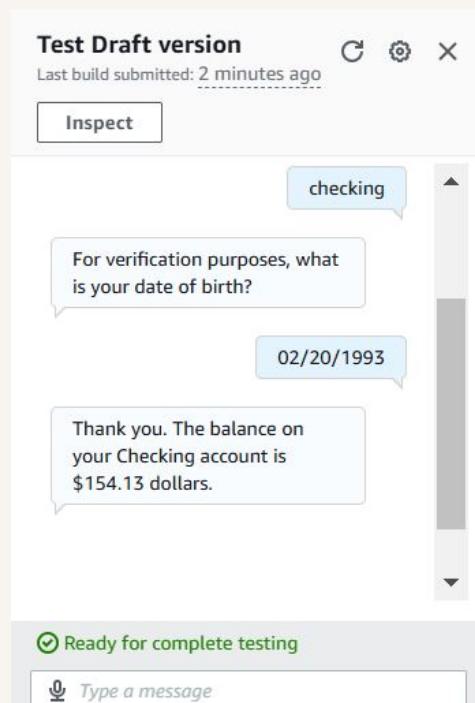


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# The final result!

I've set up my chatbot to trigger Lambda and return a random dollar figure when user asks to check balance





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