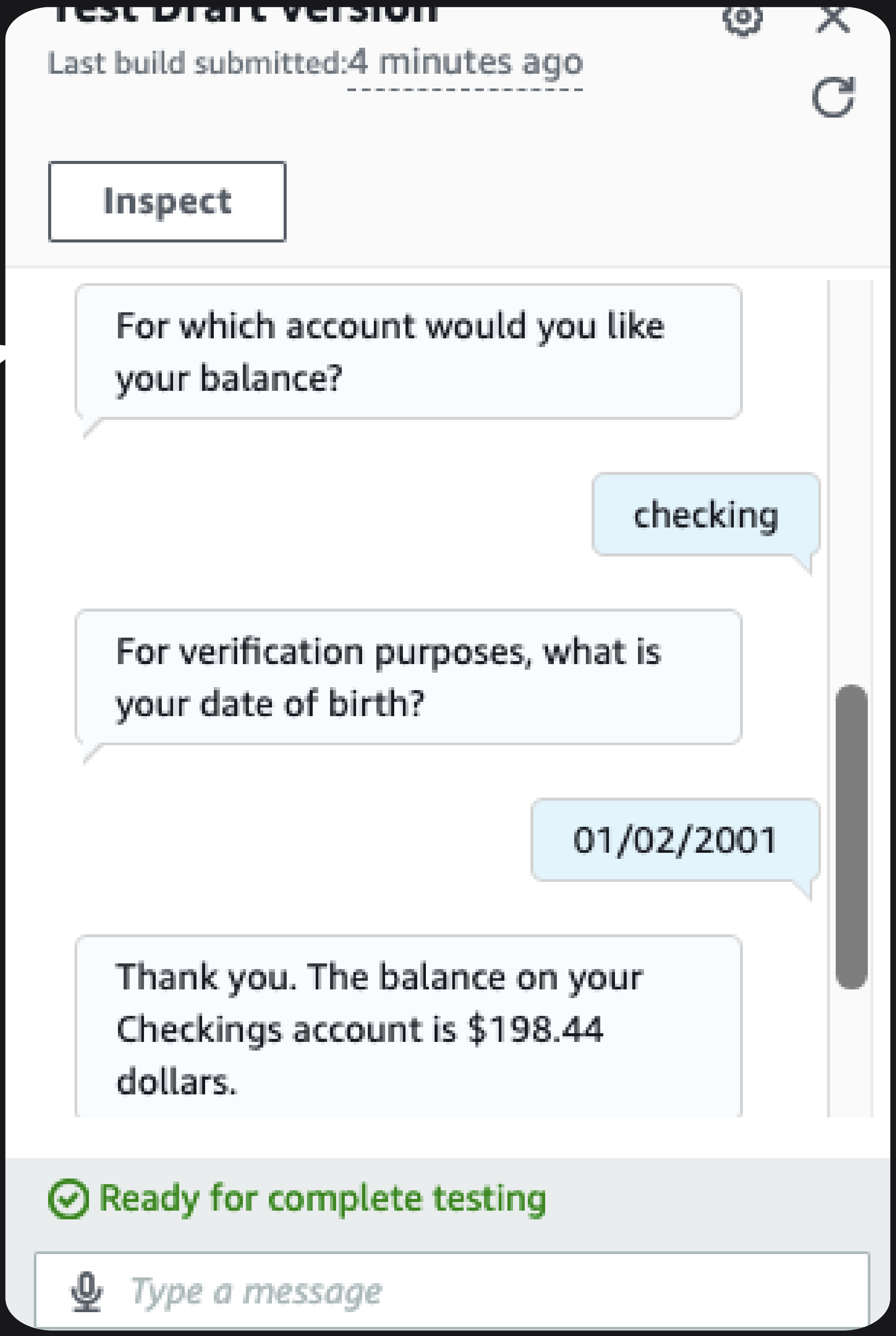
NEXTWORK

How I connected my chatbot with AWS Lambda!


Test Draft version

Last build submitted:4 minutes ago

For which account would you like your balance?

checking

For verification purposes, what is your date of birth?

01/02/2001

Thank you. The balance on your Checkings account is $198.44 dollars.

Ready for complete testing

Abdigani Awil Mohamed

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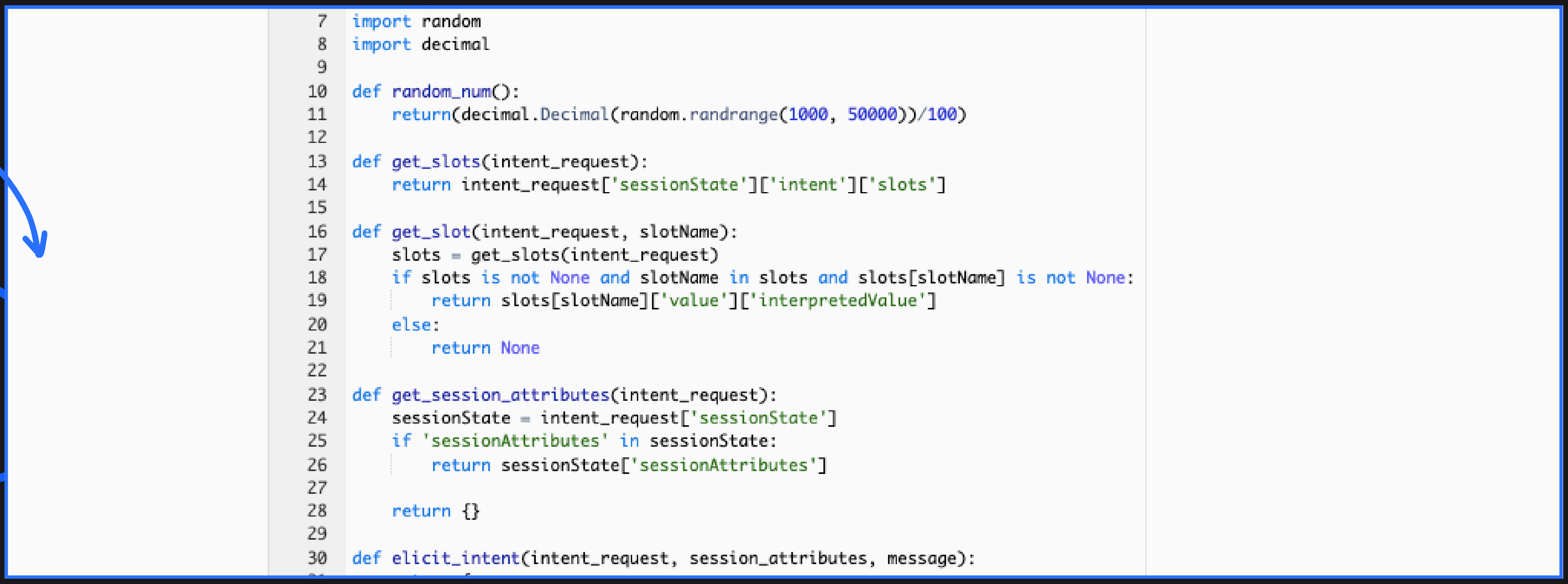
Using AWS Lamba

- **AWS Lambda** is an AWS service that helps you run code without having to manage servers.

- In this project, a Lambda function was created to generate the users' bank balance. In this example, a random figure was generated yet in the real world the Lambda function can be used to extract the user's bank balance from a database. The Amazon Lex Chatbot, on its own, would not be able to generate a bank balance so therefore it requires a connection to AWS lambda.

A peek into the Python code I uploaded into AWS Lambda!



```python
import random
import decimal

def random_num():
    return(decimal.Decimal(random.randrange(1000, 50000))/100)

def get_slots(intent_request):
    return intent_request['sessionState']['intent']['slots']

def get_slot(intent_request, slotName):
    slots = get_slots(intent_request)
    if slots is not None and slotName in slots and slots[slotName] is not None:
        return slots[slotName]['value']['interpretedValue']
    else:
        return None

def get_session_attributes(intent_request):
    sessionState = intent_request['sessionState']
    if 'sessionAttributes' in sessionState:
        return sessionState['sessionAttributes']

    return {}

def elicit_intent(intent_request, session_attributes, message):
```

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Connecting Lambda with Lex

There were two steps to connecting the Lambda function with my chatbot:

Step 1

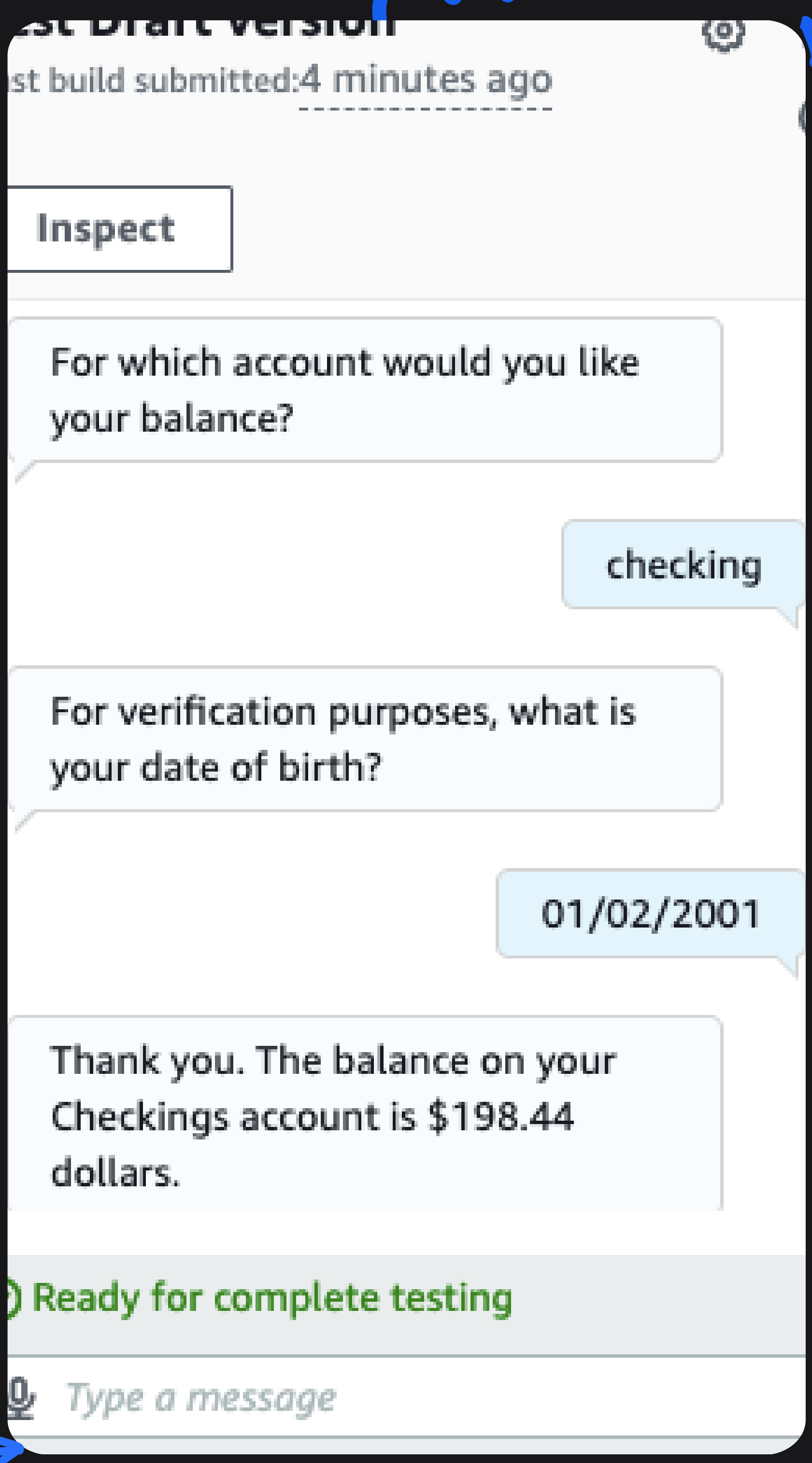
- To connect Lambda with my chatbot alias, I visited the Alias page of my chatbot and connected my TestBotAlias (my chatbot's default Alias, made for development/testing) with the latest version of the AWS Lambda function defined.

Step 2

- Another intent setting to configure is **code hooks**.
- A code hook is a piece of code that can be connected to my chatbot to perform functions/actions that my chatbot cannot do alone/by default.
- In this project, I had to use code hooks because the chatbot is not able to calculate/return a bank balance figure on its own.

After connecting Lambda with my Lex bot, my chatbot could immediately start returning specific bank balance figures. The AWS Lambda function would generate a random number each time.

WOW



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My chatbot now returns a bank balance number thanks to Lambda!

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My Key Learnings

01 AWS Lambda is a service that lets you run code without provisioning or managing servers.

02 You connect Amazon Lex with AWS Lambda when you want to add custom logic or functionality to your chatbot.

03 To connect Amazon Lex with AWS Lambda, I followed 2 steps:

1) I linked my chatbot's TestBotAlias to the latest version of the AWS Lambda function on the Alias page.

2) I configured code hooks, which are pieces of code connected to my chatbot to perform actions like calculating and returning a bank balance figure that the chatbot cannot do alone by default.

04 In this project, the Python script I used helps the chatbot quickly respond to users asking about their account balances. When someone asks about their balance, AWS Lex tells Lambda to run this code. which then picks a random number to profess the account balance. Lambda then sends this number back to Lex which shows it to the user through the chatbot.

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Final thoughts...

This part of the project took me 45 mins and writing the documentation took me 30 minutes.

- Delete EVERYTHING at the end! Let’s keep this project free :)
- One thing I didn’t expect was an alias. I discovered the concept of using aliases as a middleman to connect the chatbot with the Lambda function, which also improves security.
- In the next phase of this project, we're enhancing BankerBot's memory with context carryover! My BankerBot will remember key details like the user's birthday during a session for a smoother experience 🎂

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