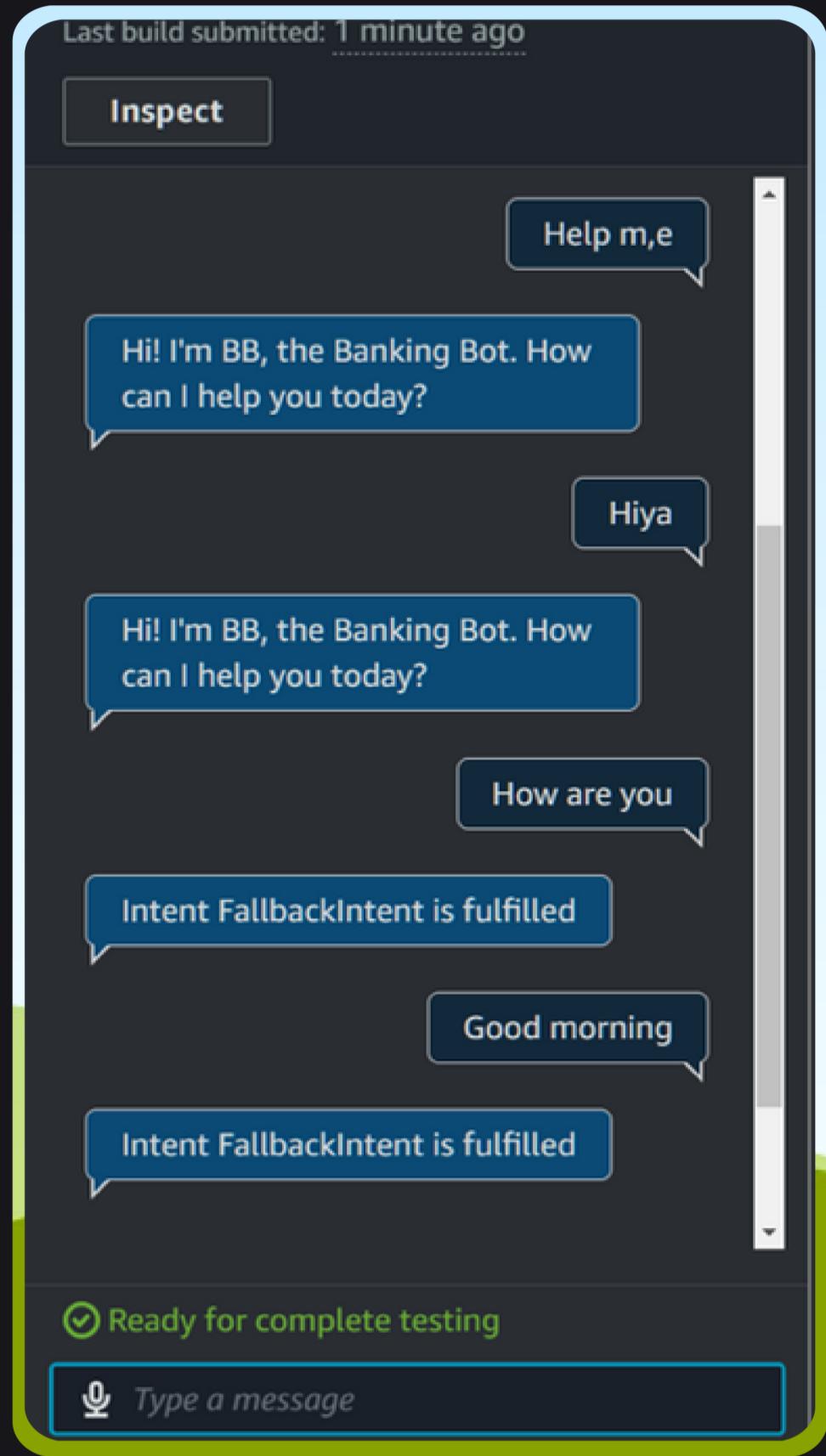


How I built a chatbot with Amazon Lex



Elena kroupkin

@pocpat





What is Amazon Lex?

What it does:

- Amazon Lex is a service that lets you build conversational interfaces for your applications using text and voice.

Why it's useful:

- Lex is useful because it allows you to create chatbots that can understand and respond to natural language, improving user experience and automating tasks.

How I'm using it in today's project:

- In this project I'm using Amazon Lex to create BankerBot, a chatbot that can recognize greetings provided through text or speech. If BankerBot doesn't recognize a greeting, it will politely ask the user to rephrase their message.



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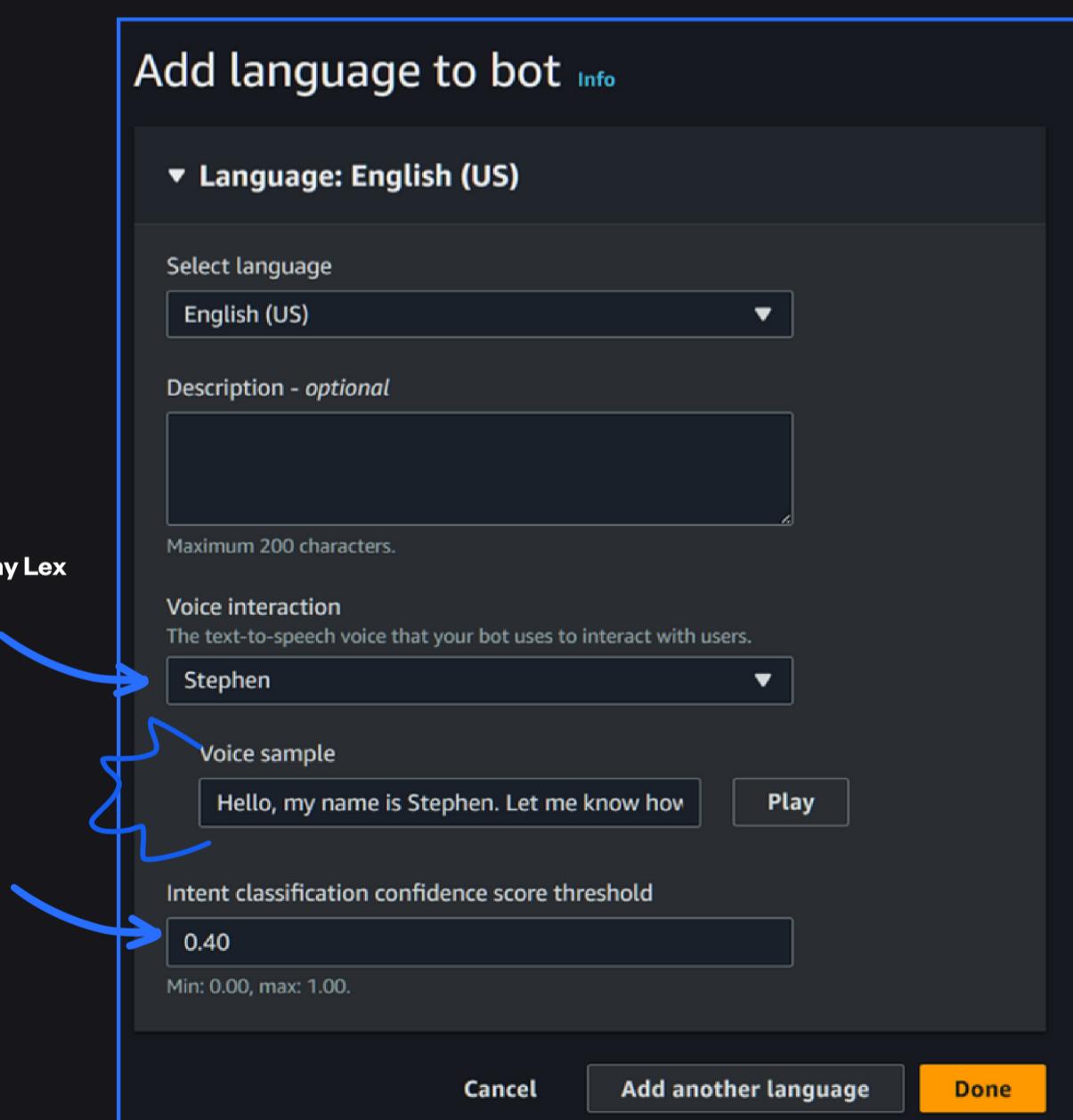
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Set up a Lex chatbot

- I created BankerBot from scratch and used most default settings on Lex.
- In terms of the **intent classification confidence score**, I kept the default value of **0.40**. This means BankerBot needs to be pretty sure, at least 40% sure, of what you're saying before it can answer. So, if your message is a bit puzzling and BankerBot isn't confident it understands, it won't be able to give you a response.

Setting up my Lex chatbot...



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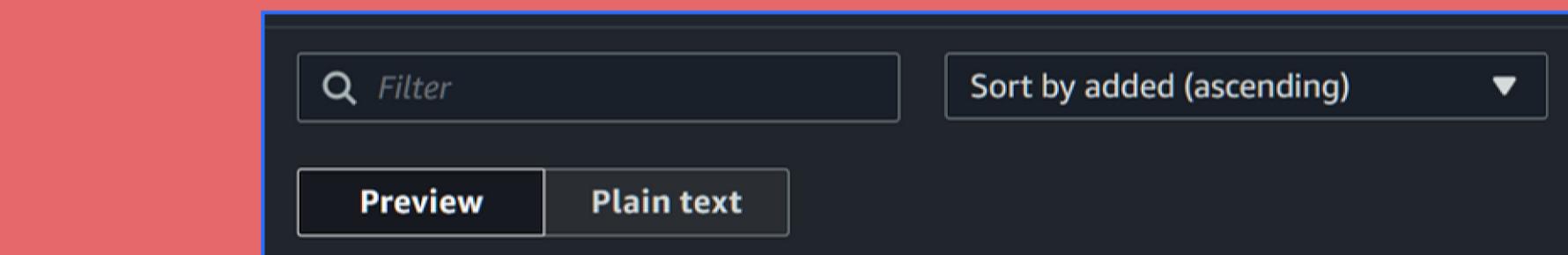
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ERROR! 00

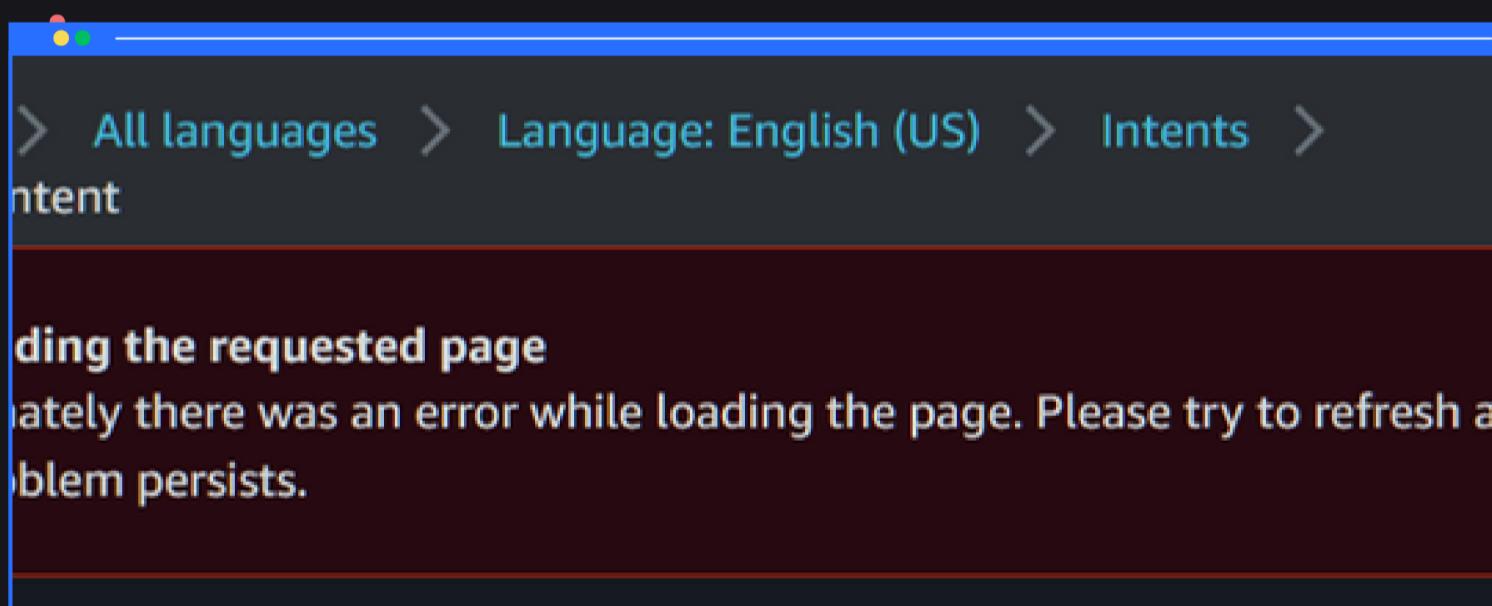
OMG!

An error I ran into was...

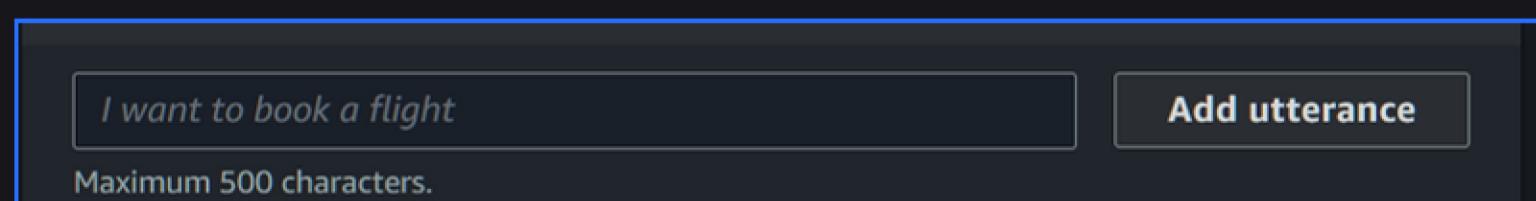
I encountered a situation where I entered information into the wrong field.



Screenshot of
error here



However, the correct field was easy to locate:



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Create an intent in Lex

- Intents are categories of user requests your chatbot can understand.
- Your first intent, WelcomeIntent, was created to handle greetings from the user.
- To set up this intent, I defined sample greetings (e.g., "Hi", "Hello") and how the chatbot should respond.
- I launched and tested the chatbot, which could still respond if I enter greetings outside WelcomeIntent (e.g., "What's up?"), and the chatbot could still respond with a generic response.
- However, the chatbot returned the error message "Intent FallbackIntent is fulfilled" when I entered greetings outside WelcomeIntent
- This error message occurred because the input didn't match any defined greetings in WelcomeIntent or other intents.



My first test of the chatbot

Last build submitted: 1 minute ago

Inspect

Help m,e

Hi! I'm BB, the Banking Bot. How can I help you today?

Hiya

How are you

Intent FallbackIntent is fulfilled

Good morning

Intent FallbackIntent is fulfilled

Ready for complete testing

Type a message



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ERROR! 00 OMG!

An error I ran into was...

- I ran into this error because

✓ I solved this error by:

**Voice recognition wasn't
working. I said**

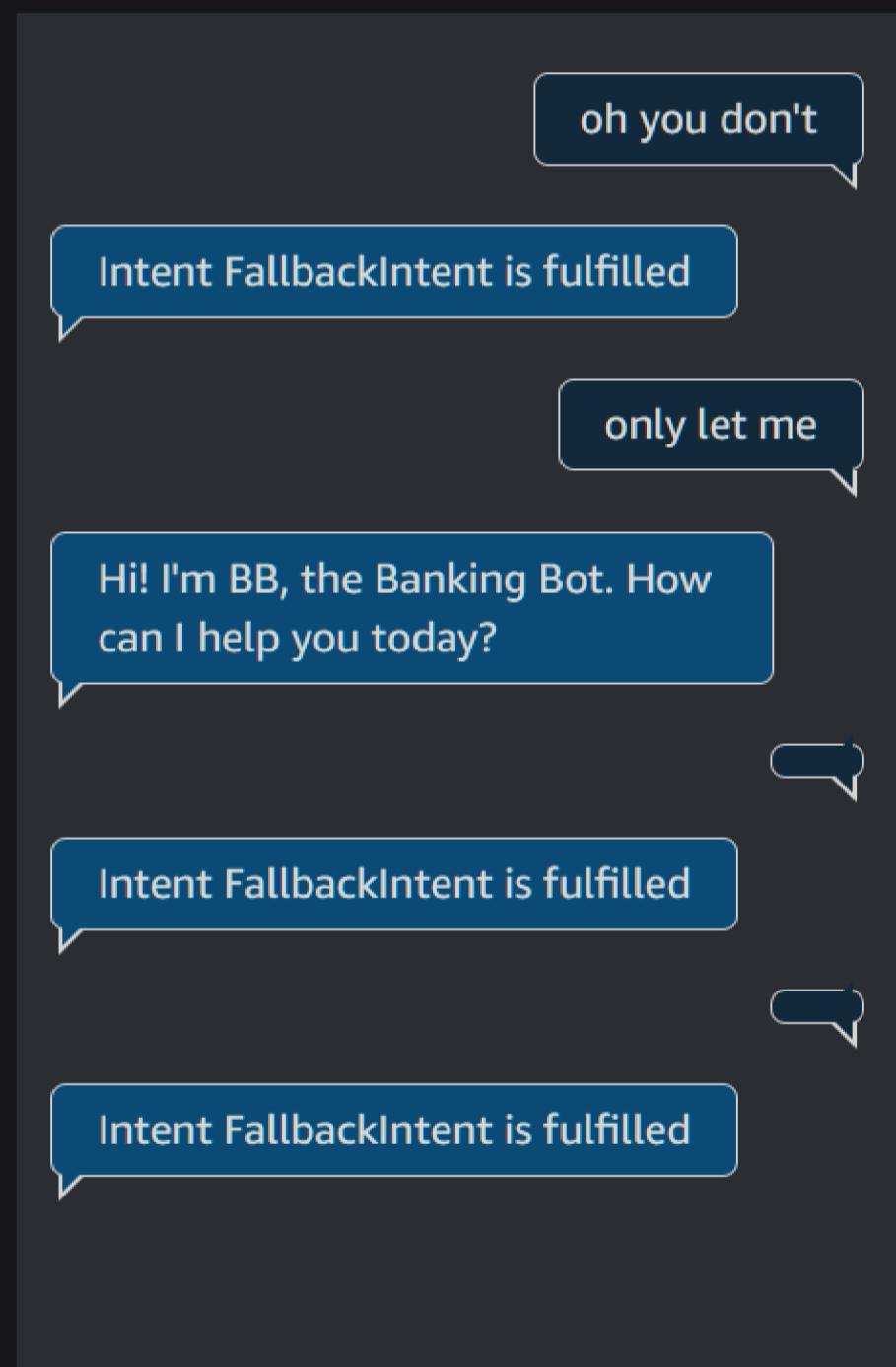
'Good morning' and 'Hi,'

**but the chatbot didn't
respond**



To fix it I:

- Refreshed the page
- Opened the test from the utterance page



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Manage FallbackIntent



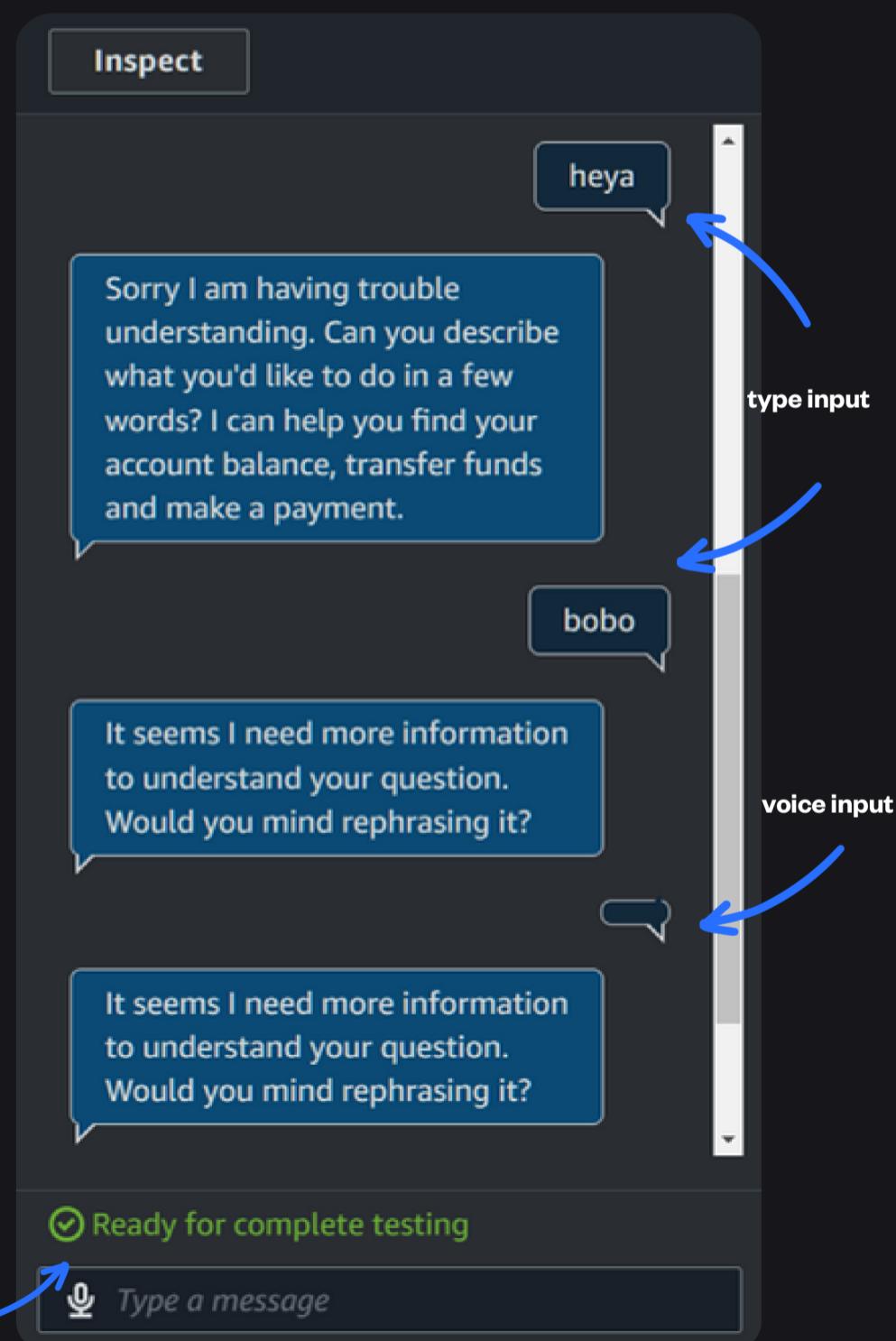
FallbackIntent is a default intent in every chatbot that gets triggered when the user's input doesn't match any other defined intents.

I wanted to configure FallbackIntent because I wanted to control the chatbot's behavior when it doesn't understand the user.

To configure FallbackIntent, I had to:

- Access the FallbackIntent
- Define a response

I also added variations! What this means for an end user is that I've increased the chances of the chatbot understanding by including different phrasings of the same message in the FallbackIntent.



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My Key Learnings

01

Amazon Lex in a nutshell: Lex is a tool from Amazon that lets you build chatbots that understand and respond to natural language, like text and voice.

02

Intents are: Categories of things users might ask your chatbot, like greetings or questions about your product.

03

AI/ML is used in Amazon Lex to: Understand the meaning behind what users say and choose the best response.

04

FallbackIntent is used for: When the chatbot doesn't understand what the user says, it uses this intent to give a generic response or ask the user to rephrase.

05

Building a chatbot in Azure before helped me pick up Amazon Lex quickly. This shows that these tools share some common ground, making it easier to learn new ones! I found Lex to be easy and fun to use.



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Final thoughts...

- This project took me about 30 minutes to complete, and writing the documentation took another 30 minutes.
- Delete EVERYTHING at the end! Let's keep this project free :)
- One thing I didn't expect was how easy it was to get voice recognition working right from the start.
- **What's next?** In the next phase of this project, I'll be adding a new flow that lets users check their account balances and verify their identity with their birthday. I'll be creating a custom slot type to handle the different bank account types. Excited to bring this feature to life and make our BankerBot smarter and more interactive! 



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