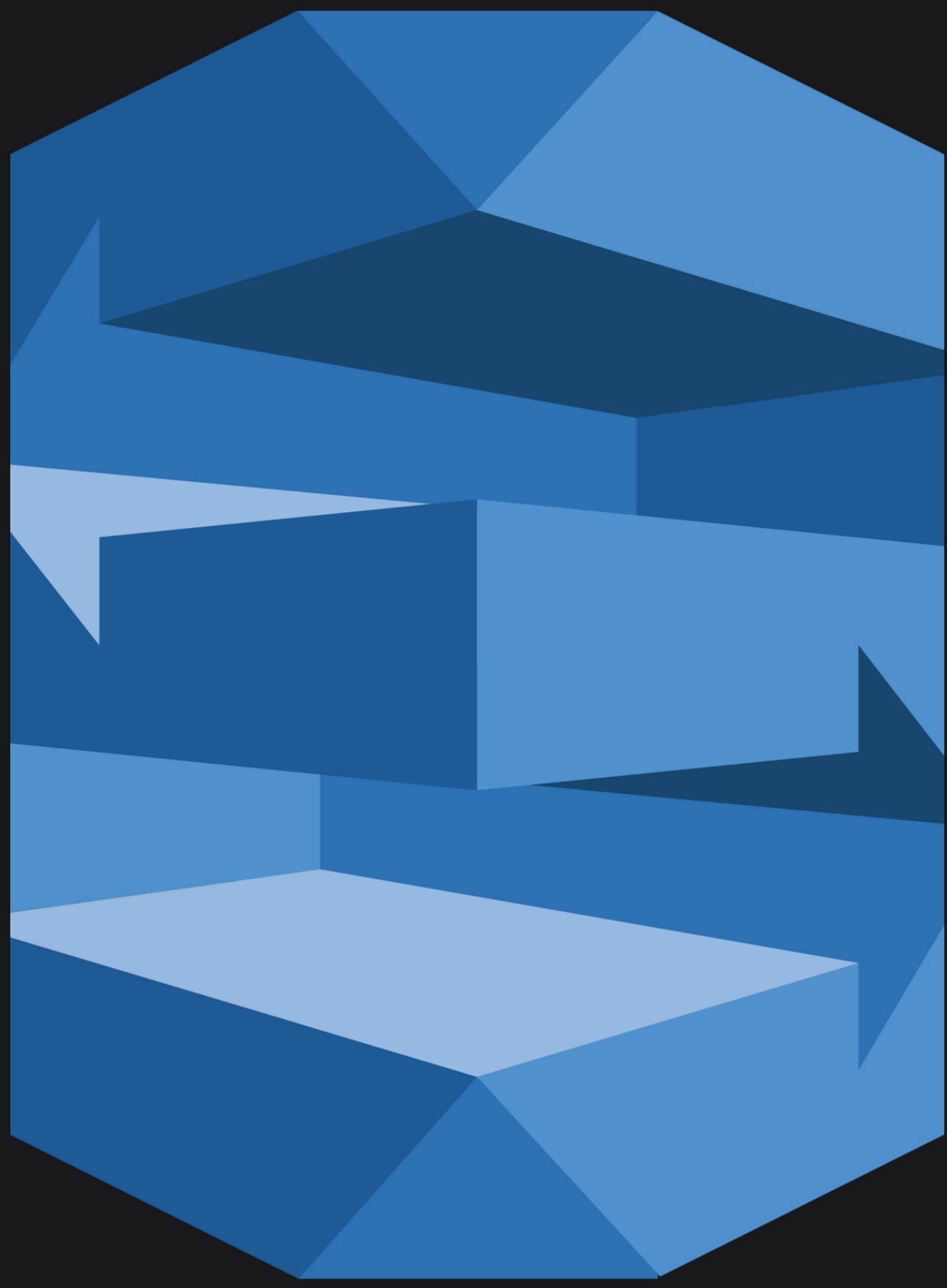
How I built a chatbot with Amazon Lex



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What is Amazon Lex?

What it does:

- It builds conversational interfaces for applications using voice and text.

Why it's useful:

- To build a voice language understanding system, the Amazon Lex provides automatic speech recognition and natural language understanding capabilities.

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

- In this project I'm using Amazon Lex to create BankerBot, a bot that address the banking queries and hand and initiate the requests of your customers .It mainly focuses on helping customer check their balance and make transfers.

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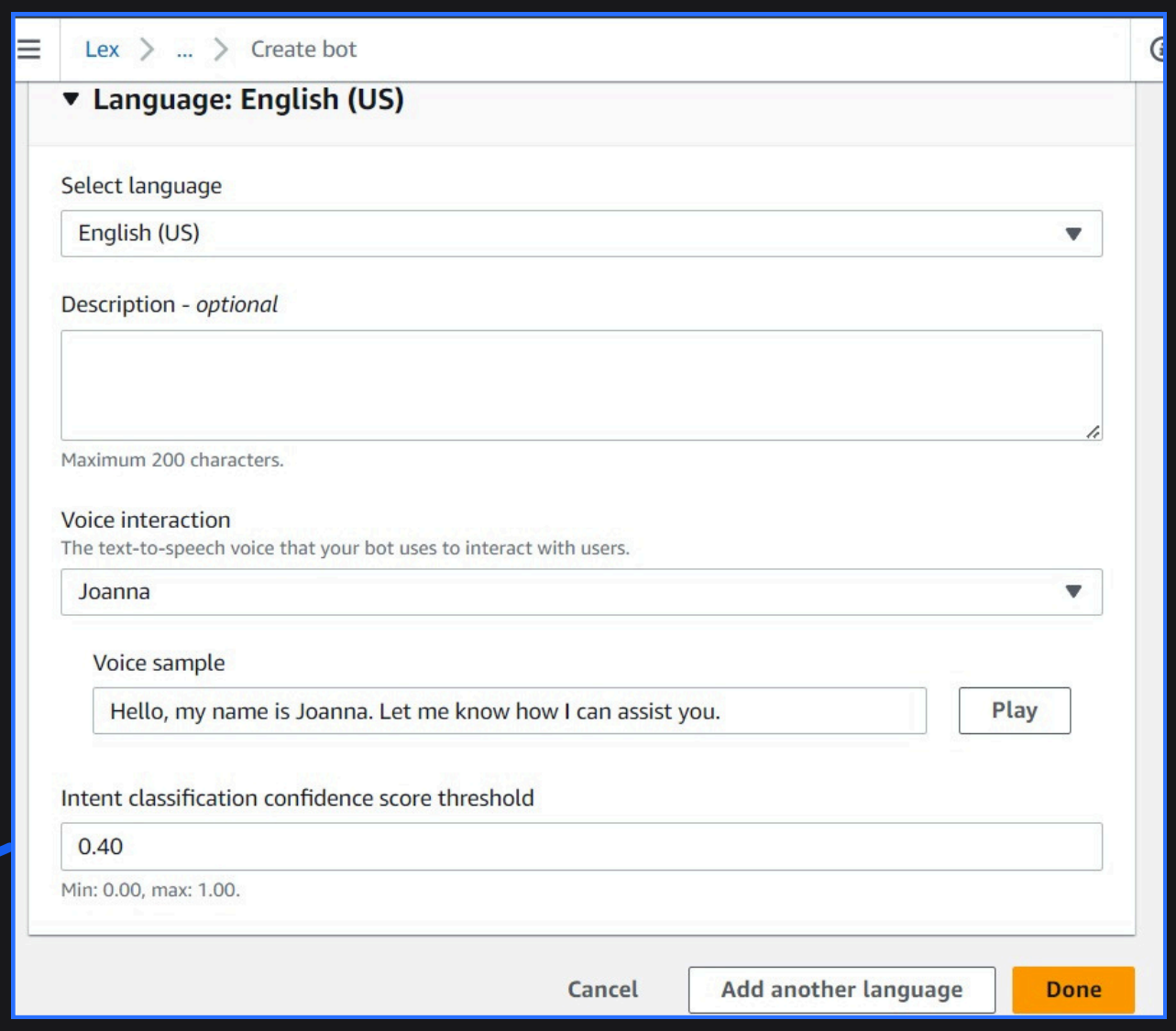
Set up a Lex chatbot

- 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 threshold is like a minimum score for your chatbot to confidently understand what the user is trying to say. Setting this to 0.4 means that your chatbot needs to be at least 40% confident that it understands what the user is asking to be able to give a response. So if a user's input is ambiguous and your chatbot's confidence score is below 0.4, it'll throw an error message.

Setting up my Lex chatbot...



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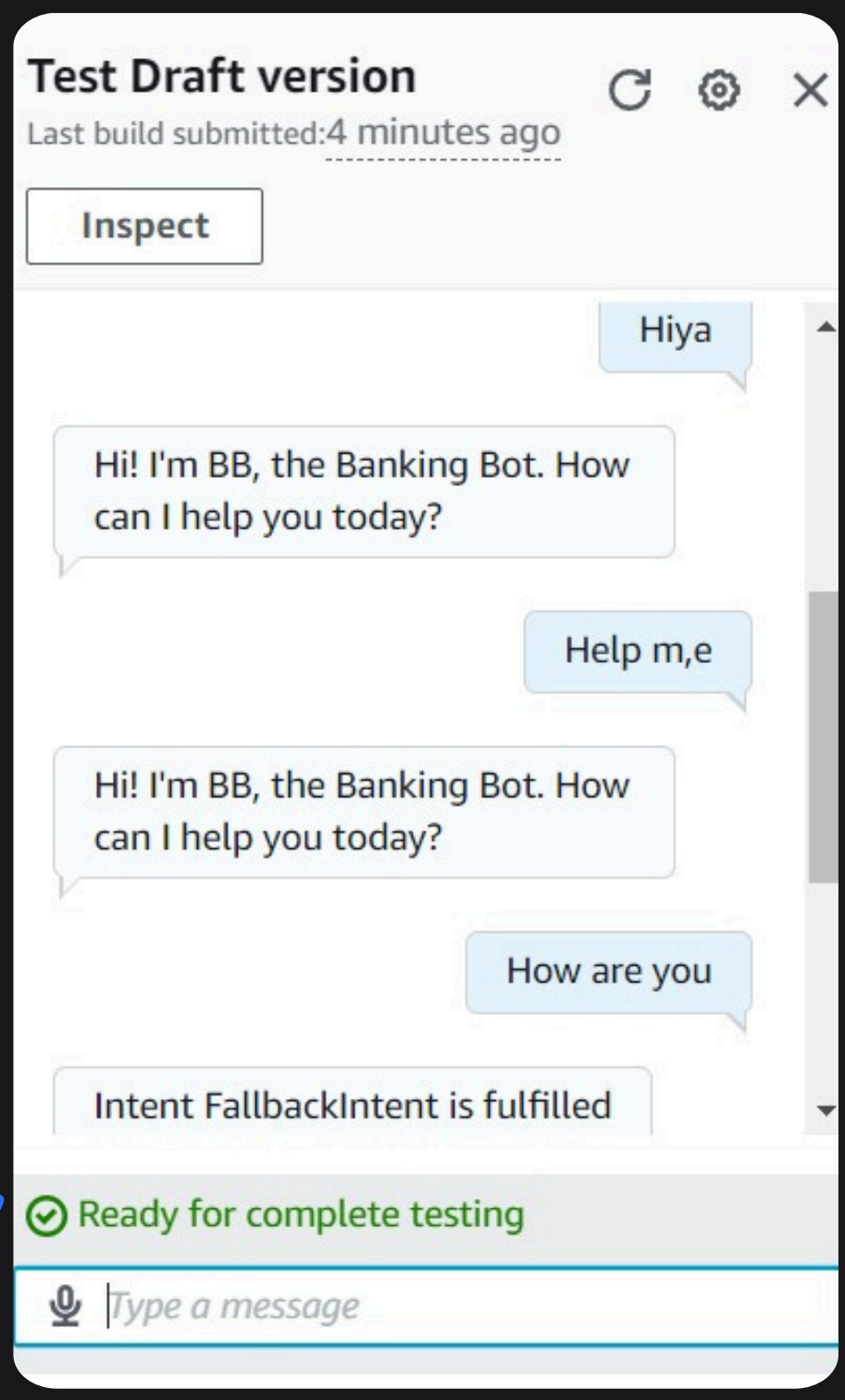
Create an intent in Lex

- Intents are action that the user wants to perform.
- My first intent, Hiya was successfully recognised
- I launched and tested the chatbot, which could still respond if I enter “Help m,e”
- However, the chatbot returned the error message “Intent FallbackIntent is fulfilled” when I entered “How are you”
- This error message occurred because Amazon Lex doesn't quite recognise this utterance



My first test of the chatbot

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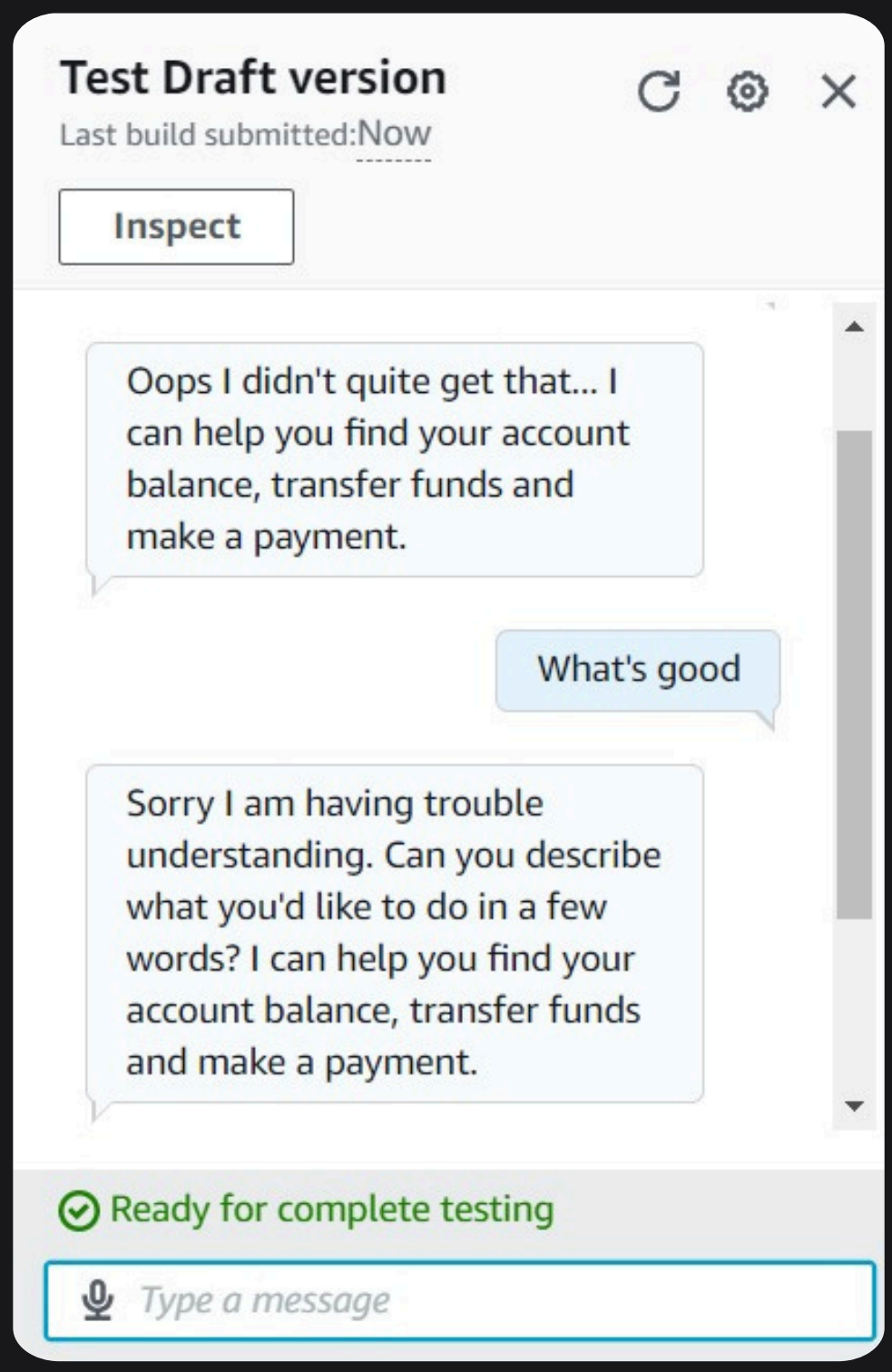
Manage FallbackIntent

- FallbackIntent is a default intent in every chatbot that gets triggered when the chatbot has a confidence score below 40% for all the intents that are defined.

- I wanted to configure FallbackIntent because the default FallbackIntent message ("Intent FallbackIntent is fulfilled") can be a little confusing .

- To configure FallbackIntent, I had to create variation such as “Hmm could you try rephrasing that? I can help you find your account balance, transfer funds and make a payment.”

- I also added variations! What this means for an end user is that chatbot will gives a dynamic range of responses, making them sound more conversational!



Perfect! The error message is now much clearer, and there are variations too

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My Key Learnings

01 Amazon Lex is a tool from Amazon that helps you build chatbots that can understand what people are saying through text or even speech.

02 In Amazon Lex, intents are basically the different things a user wants to achieve through conversation with your chatbot. Think of them as goals the user has in mind.

03 Lex leverages AI and Machine Learning (ML) in two main ways to power your chatbot:

- Natural Language Understanding (NLU)
- Automatic Speech Recognition (ASR)

04 In Amazon Lex, FallbackIntent acts as a safety net for your chatbot conversations. It kicks in when the user's input doesn't match any of the other defined intents in your chatbot.

05 Building a BankerBot on Lex would teach me about user needs in banking and how to design secure, informative chat conversations.

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