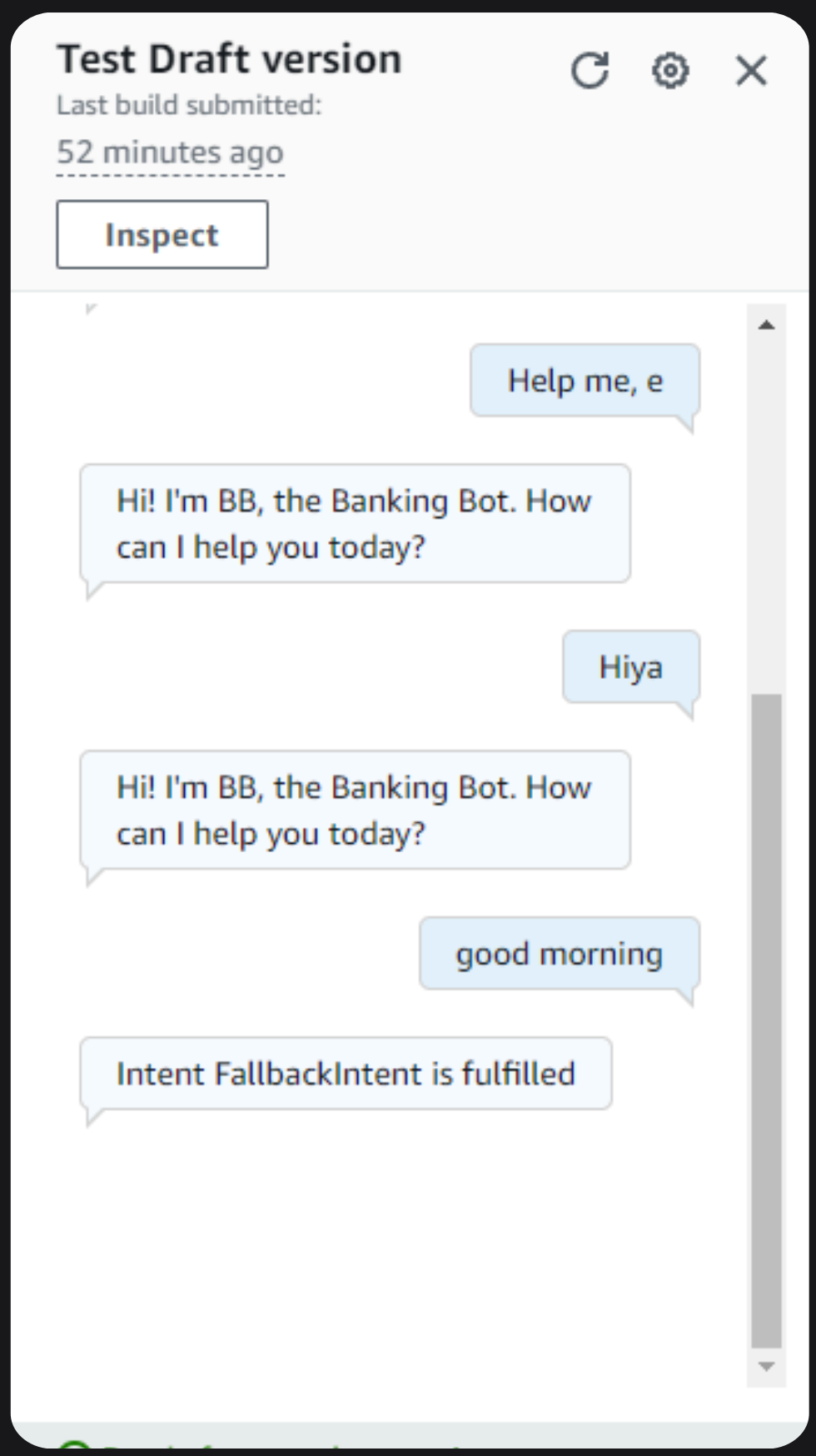
NEXTWORK

How I built a chatbot with Amazon Lex



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What is Amazon Lex?

What it does:

- **Helps you build voice and text chatbots in minutes.**

Why it's useful:

- It uses AI/ ML capabilities to classify user intents and understand intents that are beyond what I've programmed.

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

- In this project I'm using Amazon Lex to create BankerBot, a chat bot that can greet the user and can also return error messages if it does't quite understand the user's intent.

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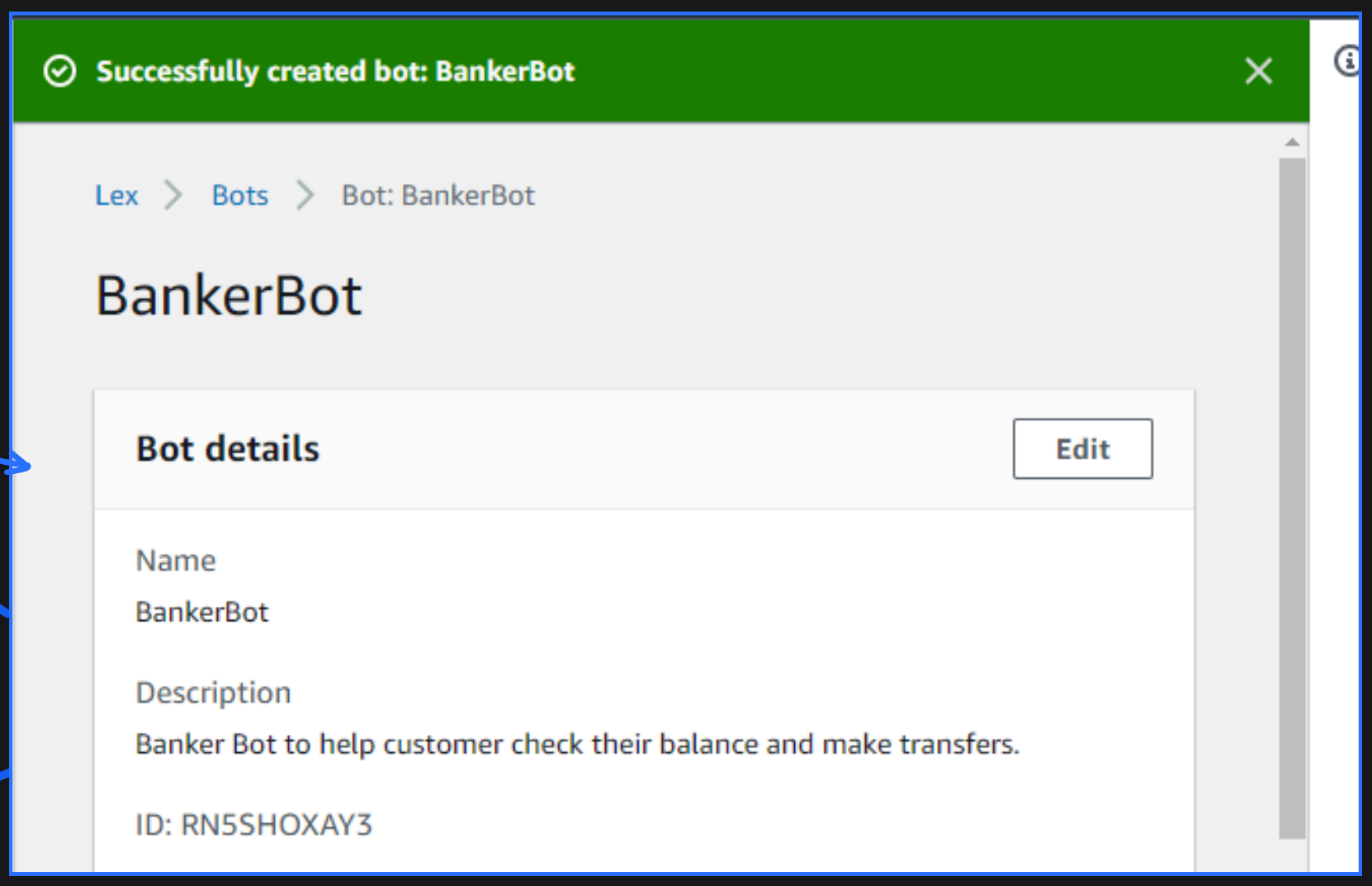
Set up a Lex chatbot

- 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. What this means for my chatbot is it should at least be 40% confident about the intent/ goal of the chatbot user to respond. In more technical terms there should at least be 40% match between the user's input and intent I program for my banker bot to respond accordingly.

Setting up my Lex chatbot...



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Create an intent in Lex

- Intents represent user's goals/ purposes for using the chat bot. In Amazon Lex a chat bot is defined by the intents it supports.

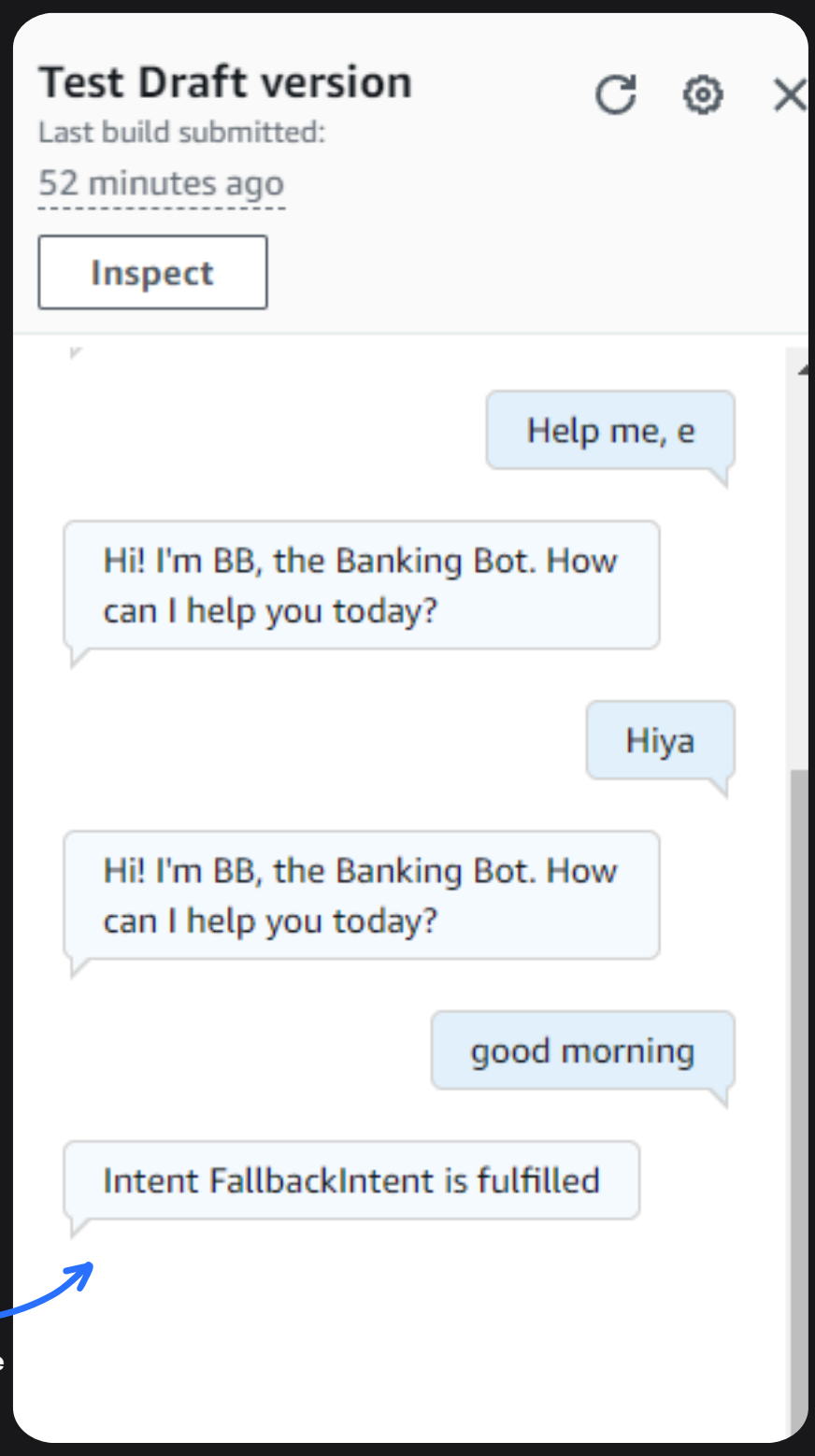
- My first intent, WelcomeIntent, was created to greet the user when they say Hello.

- To set up this intent, I created sample utterances(eg. "Hi", "Hello", "I need help") and a closing response i.e how a chat bot will respond.

- I launched and tested the chatbot, which could still respond if I enter similar utterances (eg: Hiya).

- However, the chatbot returned the error message "Intent FallbackIntent is fulfilled" when I entered "Good Morning".

- This error message occured because my chat bot could not understand the intent of the phrase "Good Morning".



My first test of the chatbot

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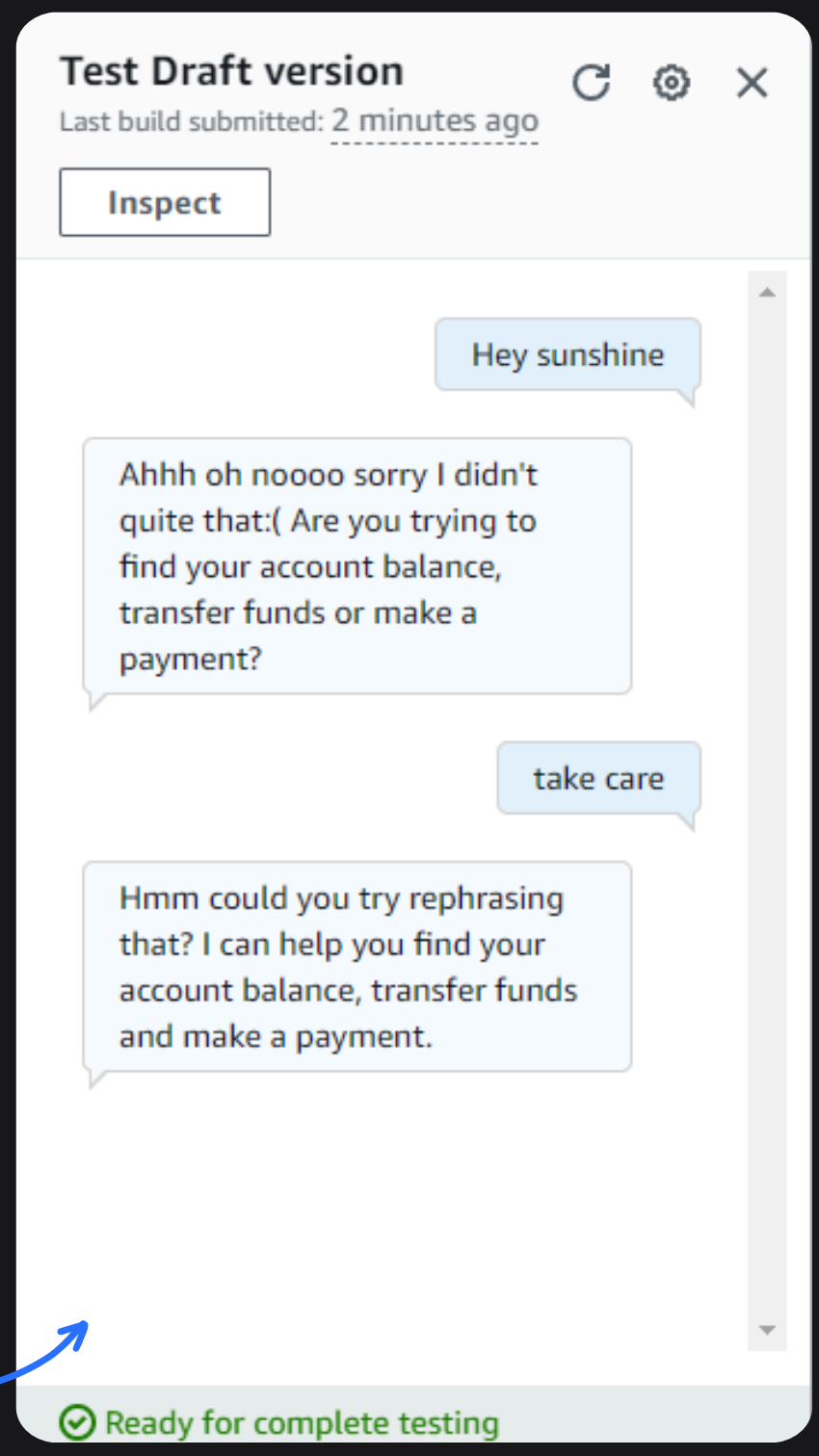
Manage FallbackIntent

- FallbackIntent is a default intent in every chatbot that gets triggered when the chat bot does not recognize the user's goal/ purpose.

- I wanted to configure FallbackIntent because the default closing response to the user is not easily understandable.

- To configure FallbackIntent, I had to create my own closing response in the intent's setup page. "Sorry I am having trouble understanding. Can you describe what you'd like to do in a few words? 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 they get to see different forms of my chatbot's closing response.



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 that helps you create chatbots and virtual assistants that can understand and respond to voice and text commands, making it easier to interact with applications naturally.

02

Intents are the goals or purposes behind user inputs, representing what the user wants to achieve, such as booking a flight or getting weather information. Each intent is associated with specific actions the chatbot or assistant should take to fulfill the user's request.

03

AI/ML is used in Amazon Lex to understand what users are saying or typing, so the chatbot can accurately figure out what they want and respond appropriately. This makes interactions feel more natural and efficient.

04

FallbackIntent is used in Amazon Lex to handle situations where the chatbot cannot understand the user's input. It provides a generic response to guide the user back on track or ask them to rephrase their request.

05

One thing I liked the most about working on BankerBot chatbot was its voice recognition and text-to-speech functionality. It was impressive to see how accurately it could understand spoken commands and provide natural-sounding responses, making the interaction feel more seamless and engaging.

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Final thoughts...

- This project took me around 60 minutes to complete.

- Delete EVERYTHING at the end! Let's keep this project free :)

- One thing I didn't expect was how intuitive and straightforward the setup process was, even for someone new to chatbot development.

- **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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Thanks NextWork for the free project guide!

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