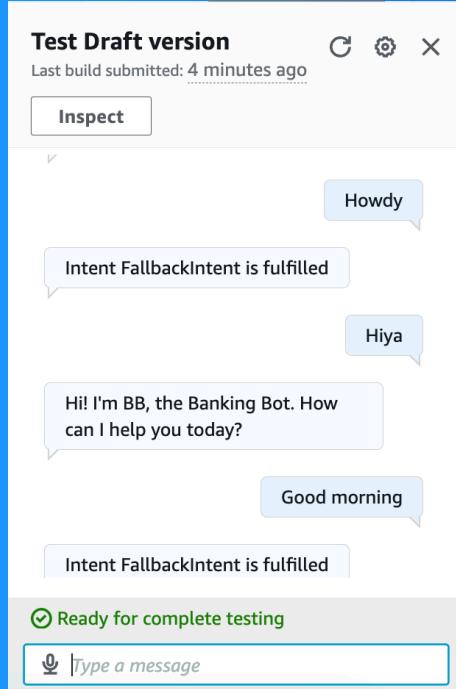




# Build a Chatbot with Amazon Lex



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# Introducing Today's Project!

## What is Amazon Lex?

Amazon Lex is a service for building conversational interfaces. It's useful because it provides tools that make it easier to build, test, and deploy chatbots without needing deep expertise in machine learning.

## How I used Amazon Lex in this project

In today's project, I used Amazon Lex to respond to a simple greeting and configured it to give a natural response to vague enquiries.

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

I didn't expect to build a basic chatbot so easily. Amazon Lex made it extremely simple and easy to build and test a chatbot.

## This project took me...

This project only took about 30 minutes to complete.



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# Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me about 30 seconds.

While creating my chatbot, I also created a role with basic permissions because the basic permissions are designed to be sufficient for most standard chatbot use cases.

In terms of the intent classification confidence score, I kept the default value of 0.40. This means the chatbot will be at least 40% confident it understands the user's input before responding.

The screenshot shows the 'Add language to bot' configuration page in the AWS Lambda console. The top navigation bar includes 'Lex', 'Bots', and 'Create bot'. The left sidebar shows 'Step 1: Configure bot settings' and 'Step 2: Add languages', with 'Add languages' currently selected. The main form is titled 'Add language to bot' and contains the following fields:

- Language:** English (US)
- Select language:** English (US)
- Description - optional:** (Empty text area)
- Voice interaction:** Danielle
- Voice sample:** Hello, my name is Danielle. Let me know how I can assist you. (A text input field with a 'Play' button next to it)
- Intent classification confidence score threshold:** 0.40



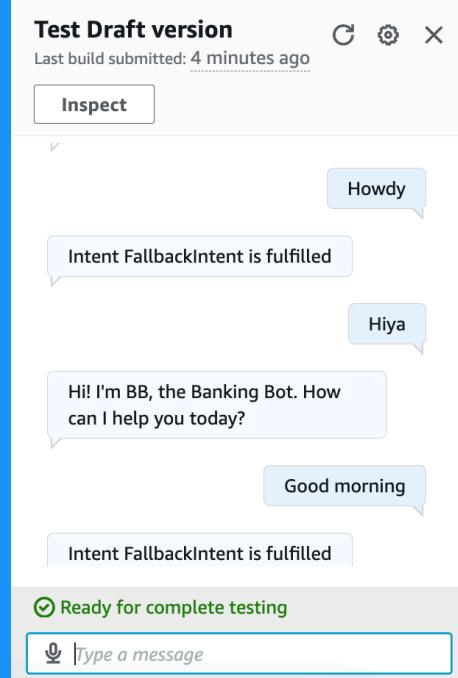
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# Intents

Intents are what the user is trying to achieve with their conversation with the chatbot. For example, an intent could be types of greetings, or types of questions.

I created my first intent, WelcomIntent, to greet the user if/when the user greets the bot.





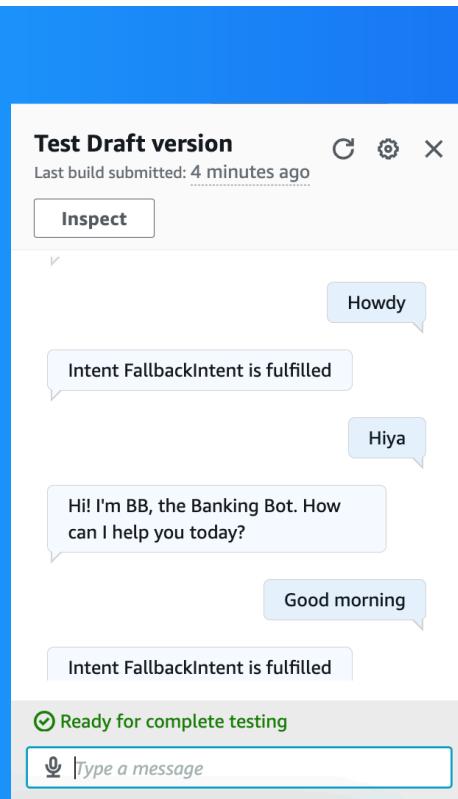
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# FallbackIntent

I launched and tested my chatbot, which could respond successfully if I enter "Hi", "Hello" and even "Hiya" (which I did not add to the known utterances).

My chatbot returned the error message 'Intent FallbackIntent is fulfilled' when I entered vague greetings like "How are you?" or "Good morning". This error message occurred because I did not specify utterances similar to these greetings.





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# Configuring FallbackIntent

FallbackIntent is a default intent in every chatbot that gets triggered when the confidence score of a user's input is below the given throwshold.

I wanted to configure FallbackIntent because the default message did not sound natural.

A circular profile picture of a young man with short dark hair, wearing a light-colored shirt. He is standing in front of a building with a sign that reads "100+ Markets".

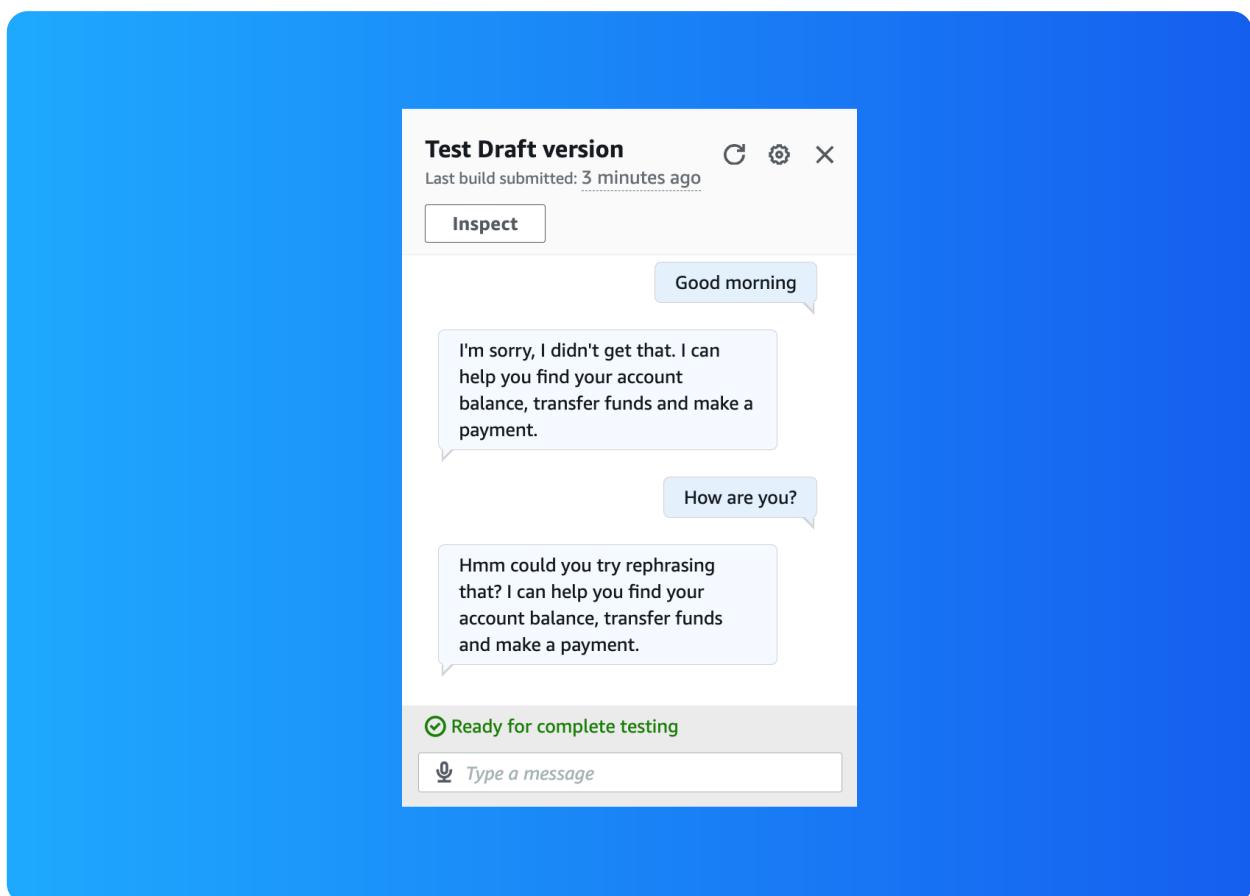
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# Variations

To configure FallbackIntent, I went to the intents tab, selected FallbackIntent, scrolled down to the closing messages section and added messages.

I also added variations! What this means for an end user is that there will be more variation in responses when they ask the bot something the bot doesn't understand.





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