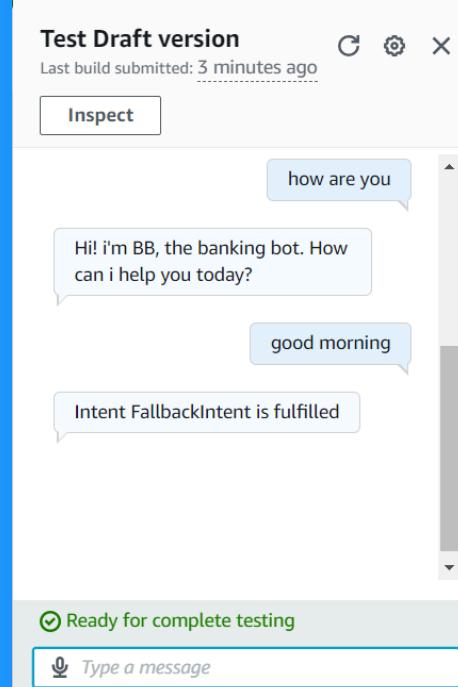




Build a Chatbot with Amazon Lex



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is an AWS service that creates chatbots and virtual assistants using voice/text. It automates tasks, scales easily, integrates with AWS, and enhances user experiences with natural language.

How I used Amazon Lex in this project

The chatbot could then be deployed on multiple channels, like a website, allowing users to interact through their preferred medium. Throughout the development process, I would focus on refining the bot's ability to understand user intent

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

I didn't expect handling variations in user input to be so challenging when creating the chatbot using Amazon Lex. Training it to understand diverse phrasing required more time refining intents, highlighting the need for ongoing improvement

This project took me...

The Amazon Lex chatbot project setup took about 15 minutes, including intents and a basic Lambda integration. Further refinement and testing would need more time to enhance accuracy and natural interactions.

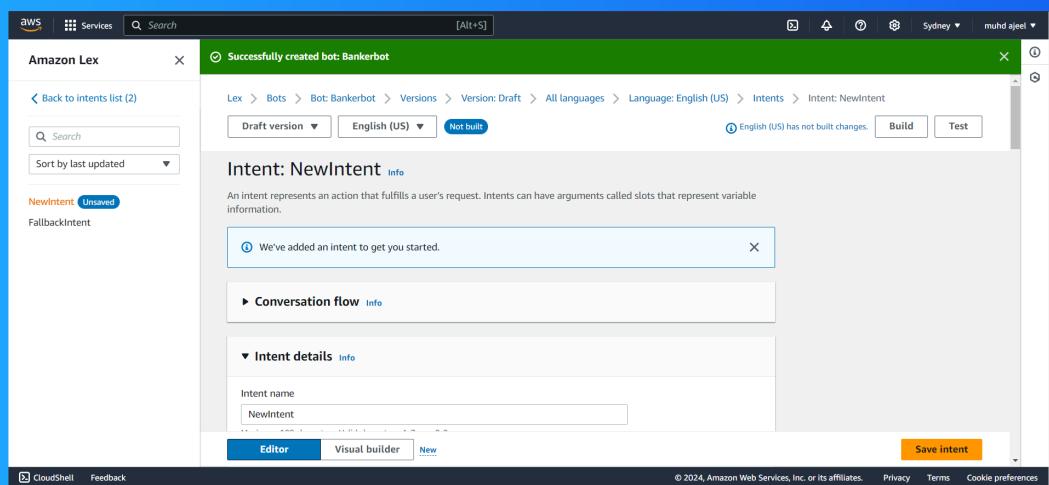


Setting up a Lex chatbot

I created my chatbot from scratch with Amazon Lex. Setting it up took me about 15 minutes, which included defining intents, adding utterances, and configuring responses for a smooth user experience.

While creating my chatbot, I also created a role with basic permissions because it allows the bot to access necessary AWS resources, ensuring it can function correctly and integrate with services like Lambda and DynamoDB.

In terms of the intent classification confidence score, I kept the default value of 0.40. This means the chatbot is fairly certain that a user input matches a specific intent, allowing for accurate responses.



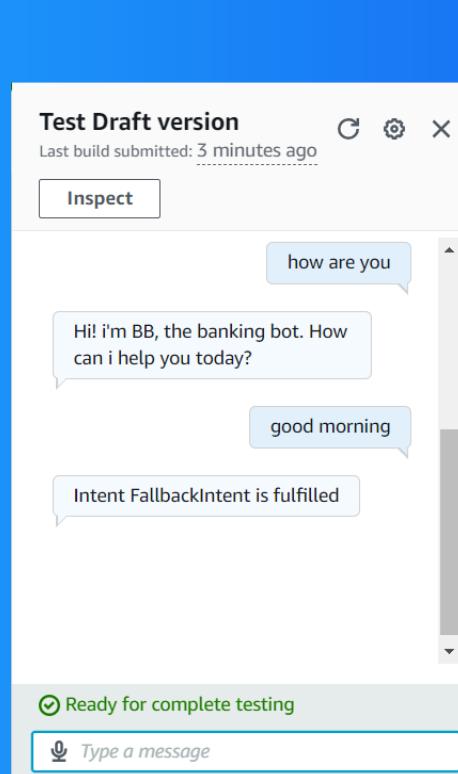
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Intents

Intents are predefined goals or actions that a user aims to achieve when interacting with a chatbot. They represent the user's purpose, such as booking a flight or asking for help, and can have multiple variations for accurate understanding.

I created my first intent, `WelcomeIntent`, to greet users when they start interacting with the chatbot. It sets a friendly tone for the conversation and provides initial guidance or options for users.



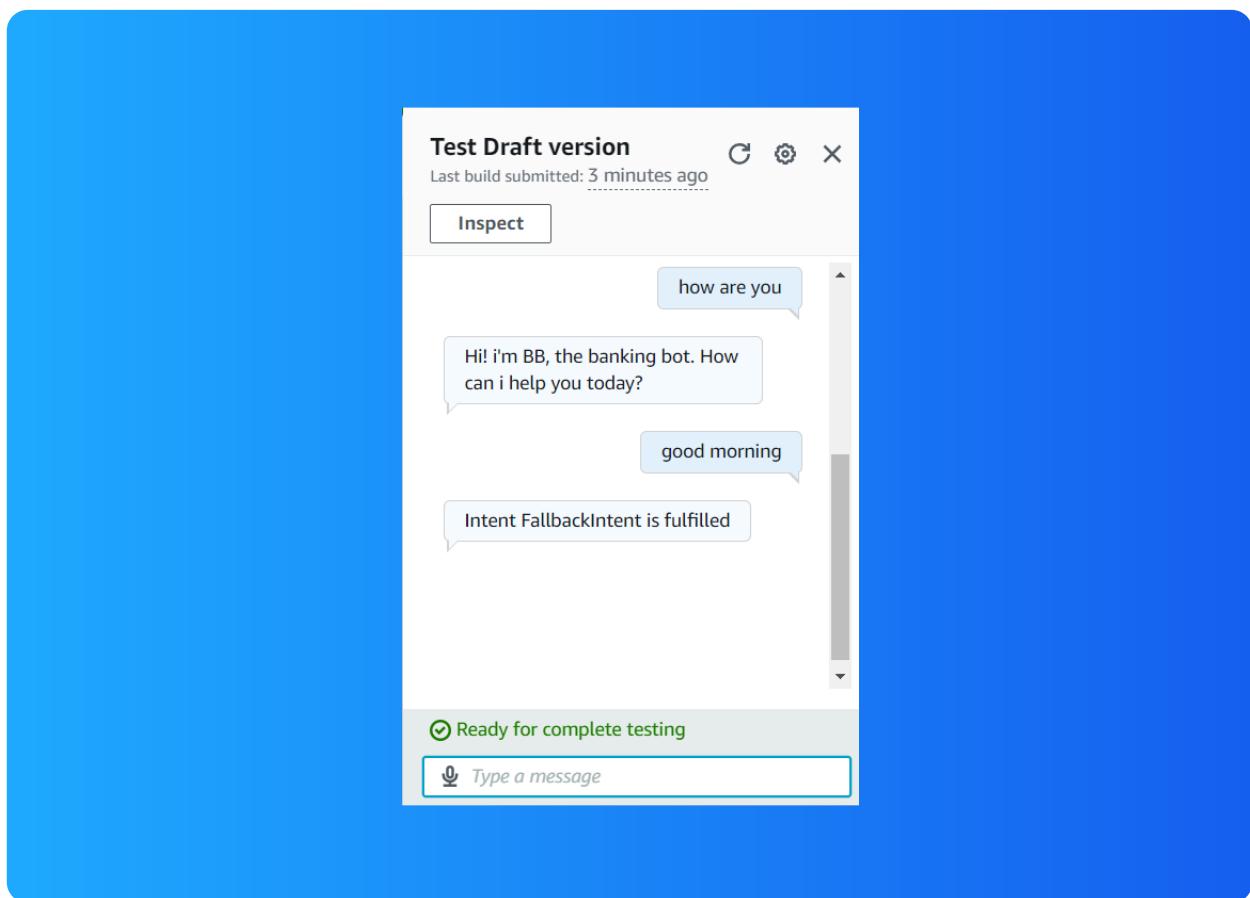
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FallbackIntent

I launched and tested my chatbot, which could respond successfully if I entered greetings like "Hello," "Hi there," or "Good morning." Each of these phrases triggered the WelcomeIntent effectively, engaging users.

My chatbot returned the error message 'Intent FallbackIntent is fulfilled' when I entered an unclear or ambiguous request. This error message occurred because the input didn't match any defined intents, triggering the fallback response.





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Configuring FallbackIntent

FallbackIntent is a default intent in every chatbot triggered when the user's input doesn't match any defined intents. This occurs with unrecognized, vague, or out-of-scope queries, ensuring users receive guidance even when the bot struggle

I wanted to configure FallbackIntent because it helps the chatbot handle inputs that don't match any defined intents. It provides clear feedback to users, guiding them to rephrase their questions and improving the overall interaction experience.

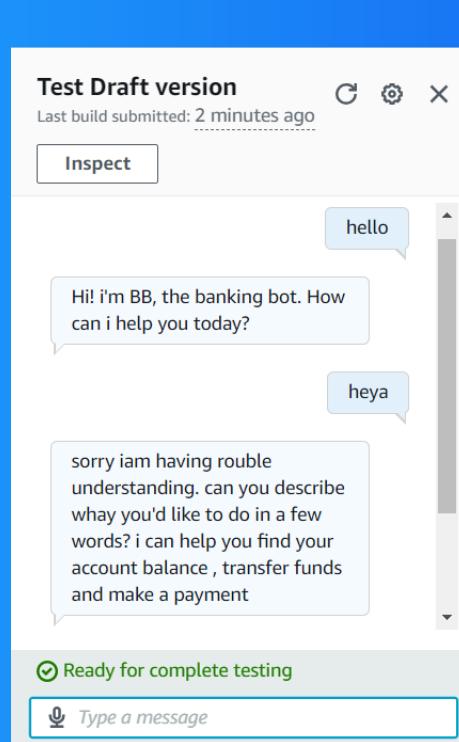
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Variations

To configure FallbackIntent, I accessed the Amazon Lex console and selected my bot. I added FallbackIntent, defined sample utterances for unrecognized inputs, and set responses to guide users, ensuring the bot could handle misunderstandings gracefully.

I also added variations! What this means for an end user is that they can express their requests in different ways, allowing the chatbot to understand diverse phrasing and provide accurate responses.





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