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Build a Chatbot with Custom Slots



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a service for building chatbots using voice and text. It's useful for creating conversational interfaces, automating tasks, and integrating with AWS services, making it ideal for customer support and interactive applications.

How I used Amazon Lex in this project

I used Amazon Lex in today's project to create a chatbot for checking account balances, set up intents like CheckBalance, defined custom slot types, and configured responses to make the chatbot interact naturally with users.

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

One thing I didn't expect in this project was the level of detail needed to configure slot values and utterances accurately, which is crucial for capturing user input correctly and ensuring smooth interactions.

This project took me...

This project took me 45 mins to complete, including setting up the chatbot in Amazon Lex, defining intents and slots, configuring responses, and testing the chatbot to ensure it functioned as expected.



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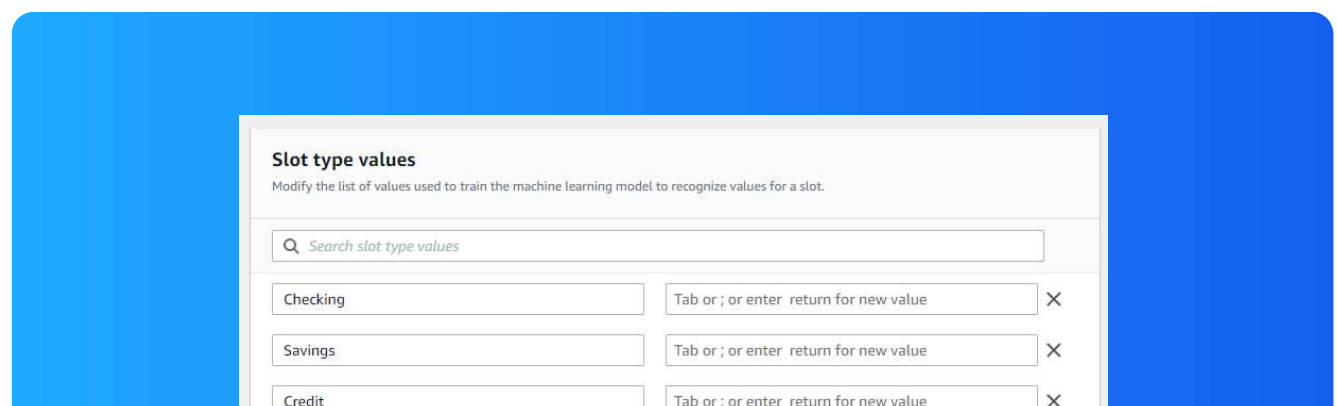
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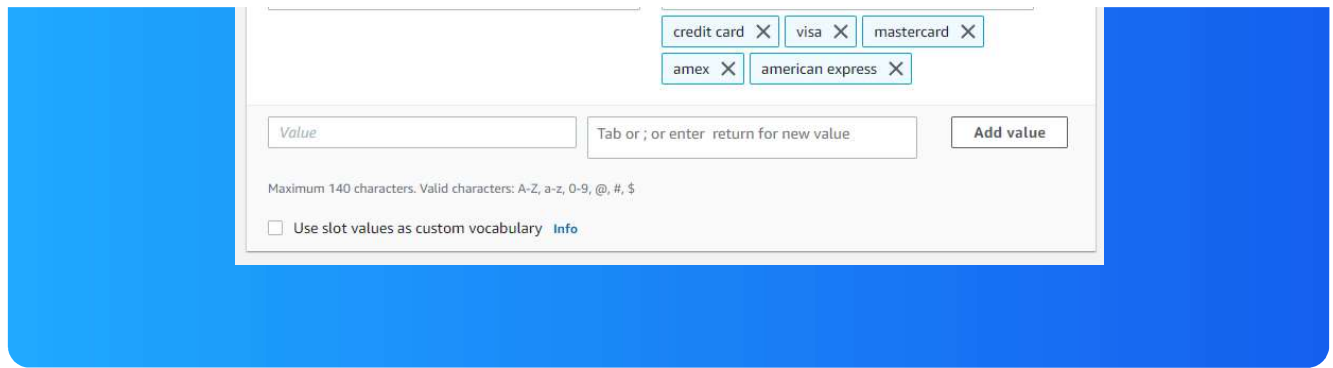
Slots

Slots are variables in Amazon Lex that capture and store user input required to fulfill an intent. They gather specific information, like dates or names, during a conversation to complete a transaction or answer a query.

In this project, I created a custom slot type to handle the `accountType` field, allowing the chatbot to recognize and differentiate between three types of accounts: Checking, Savings, and Credit, ensuring accurate user interactions.

This slot type has restricted slot values, which means the chatbot will only accept predefined options (Checking, Savings, Credit) for the slot, preventing users from entering any other values and ensuring input consistency.



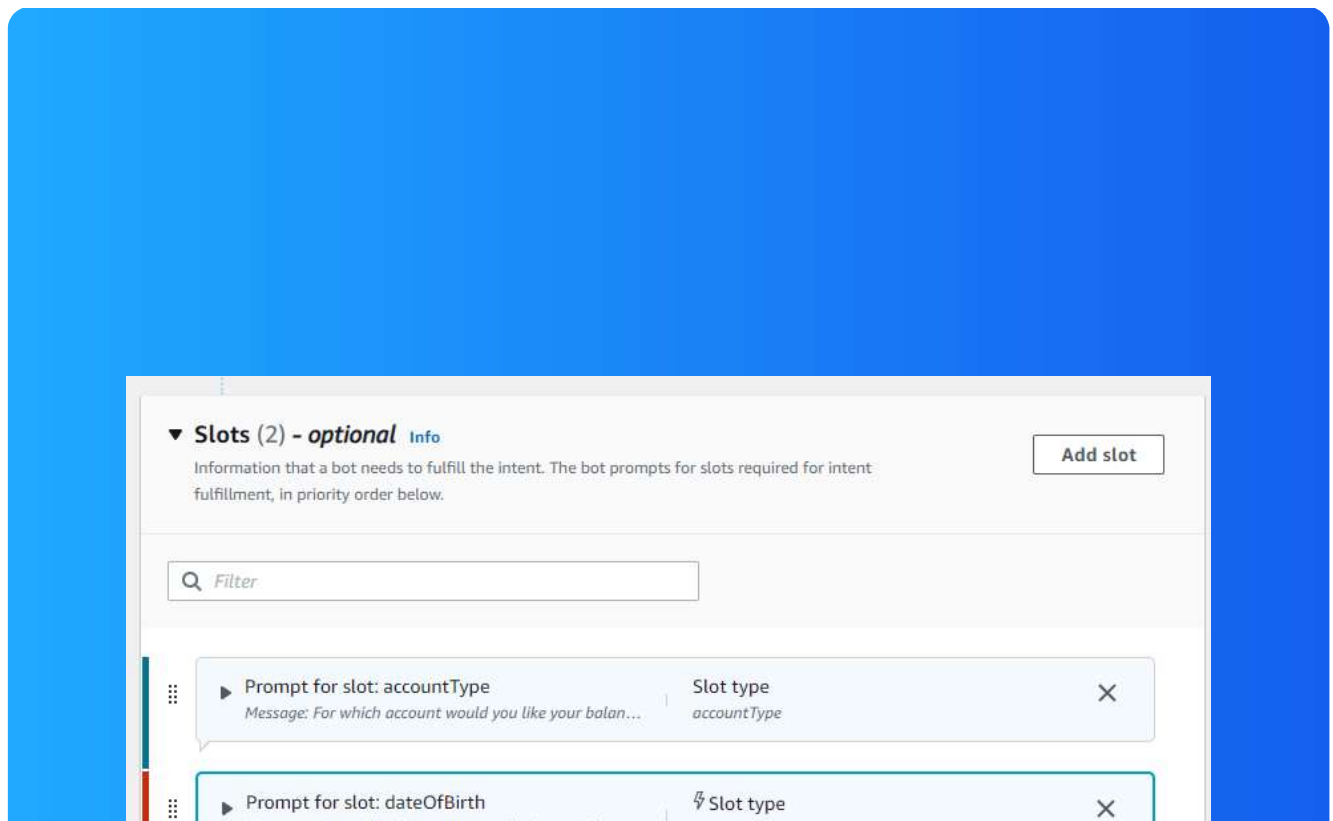


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Connecting slots with intents

I associated my custom slot with CheckBalance, which allows the chatbot to prompt users to specify the account type (Checking, Savings, or Credit) when they want to check their balance, ensuring accurate and relevant responses.





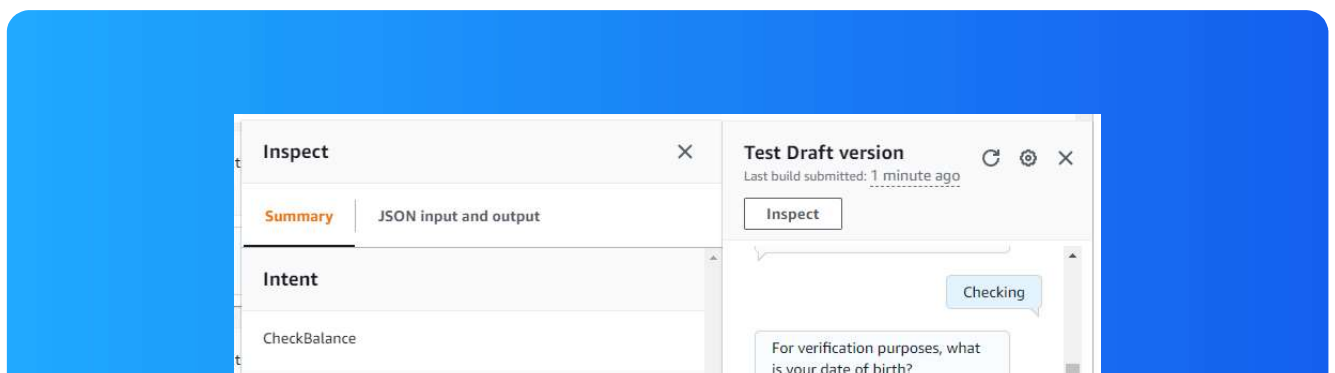
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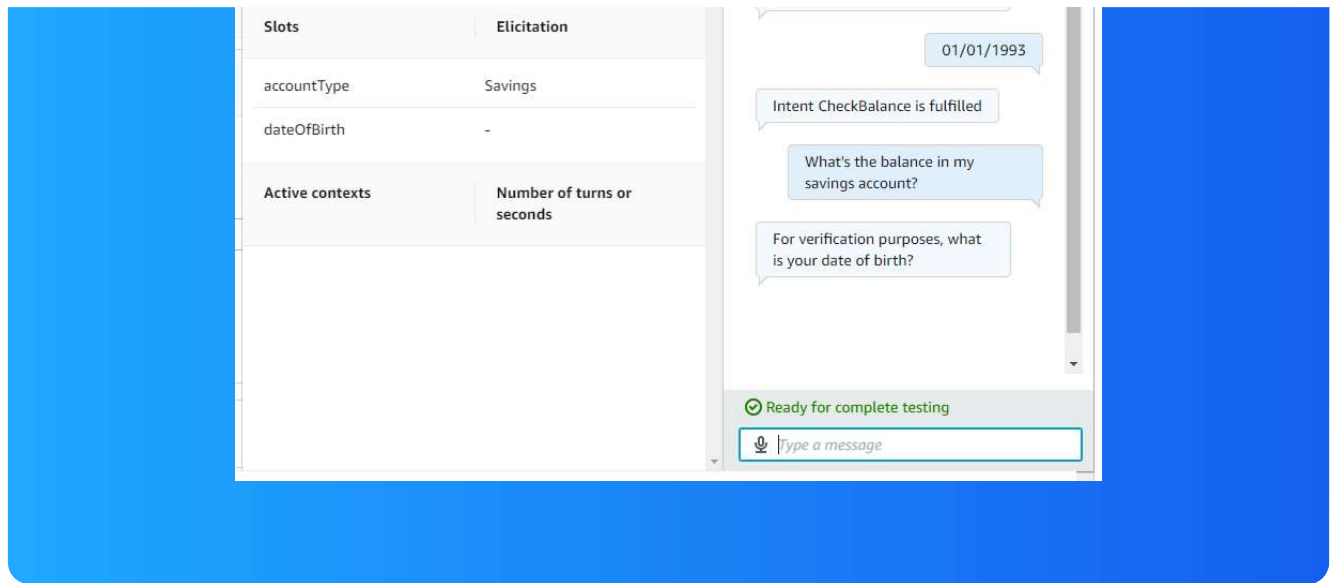
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Slot values in utterances

I included slot values in some of the utterances (i.e. user inputs) by using placeholders that represent the slot, such as `{accountType}`. For example, "What's the balance in my {accountType} account?" helps the chatbot to capture the required input

By adding custom slots in utterances, I ensured the chatbot could dynamically recognize and capture specific user inputs, like account types, making interactions more flexible and context-aware for personalized responses.





The screenshot displays the NextWork chatbot interface. On the left, a configuration panel is visible with two tabs: 'Slots' and 'Elicitation'. The 'Slots' tab is active, showing a table with the following data:

Slots	Elicitation
accountType	Savings
dateOfBirth	-

Below the table, there are sections for 'Active contexts' and 'Number of turns or seconds'. To the right of the configuration panel is a chat window. It shows a sequence of messages: a user input '01/01/1993', a system response 'Intent CheckBalance is fulfilled', a user question 'What's the balance in my savings account?', and a system response 'For verification purposes, what is your date of birth?'. At the bottom of the chat window, there is a green status bar that says 'Ready for complete testing' and a text input field with a microphone icon and the placeholder text 'Type a message'.



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