



Build a Chatbot with Custom Slots



Gabriel Taveira Mazer

The screenshot shows a blue-themed user interface for configuring a chatbot's slots. At the top, there's a section titled "Slots (2) - optional" with a "Info" link. It explains that the bot prompts for slots required for intent fulfillment in priority order. A "Filter" input field is available for searching. Two slots are listed:

- Prompt for slot: accountType**
Message: For which account would you like your balan...
Slot type: accountType
X
- Prompt for slot: dateOfBirth**
Message: For verification purposes, what is your date ...
Slot type: AMAZON.Date
X



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a service for building conversational interfaces using voice and text. It enables chatbots to understand and respond to natural language, making it useful for automating interactions like customer service and other user queries.

How I used Amazon Lex in this project

I used Amazon Lex to create a chatbot that helps users check their account balance. I set up intents, added slots for account type and date of birth, and configured the bot to interact with users naturally and securely.

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

One thing I didn't expect was how easily I could customize user input handling, like using slots and custom slot types to personalize interactions and improve the chatbot's accuracy.

This project took me...

This project took me about one hour to complete, including setting up the CheckBalance intent, configuring slots, and testing the chatbot's functionality.



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Slots

Slots are variables that capture specific information from users during their interaction with the chatbot. They help the chatbot gather details like account types or other necessary inputs to fulfill a user's request.

In this project, I created a custom slot type to allow users to specify account types, such as checking, savings, or credit accounts, making the chatbot more adaptable to different financial requests.

This slot type has restricted slot values, which means users can only select from predefined options, like 'Visa' or 'Mastercard.' This helps ensure valid responses and improves the chatbot's accuracy.

Slot type values
Modify the list of values used to train the machine learning model to recognize values for a slot.

Search slot type values

Checking	Tab or ; or enter return for new value	X
Savings	Tab or ; or enter return for new value	X
Credit	Tab or ; or enter return for new value	X
american express X amex X		
mastercard X visa X credit card X		

Value Tab or ; or enter return for new value Add value

Maximum 140 characters. Valid characters: A-Z, a-z, 0-9, @, #, \$

Use slot values as custom vocabulary [Info](#)

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Connecting slots with intents

I associated my custom slot with CheckBalance, which prompts the user to provide their account type and date of birth for verification. It helps the chatbot check the balance of a specified account after collecting this information.

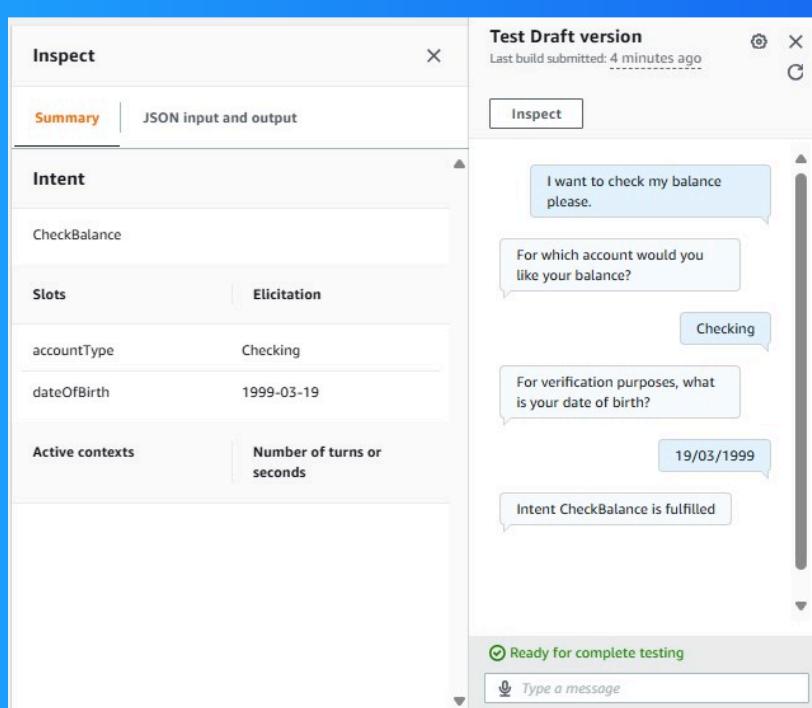
The screenshot shows a configuration interface for a bot's intent. At the top, there is a section titled "Slots (2) - optional" with an "Info" link and a "Add slot" button. A descriptive text explains that the bot needs to fulfill the intent by prompting for required slots in priority order. Below this, there is a search bar labeled "Filter". Two slots are listed:

- Prompt for slot: accountType**
Message: For which account would you like your balan...
Slot type: accountType
- Prompt for slot: dateOfBirth**
Message: For verification purposes, what is your date ...
Slot type: AMAZON.Date

Slot values in utterances

I included slot values in some of the utterances (i.e., user inputs) by using placeholders for accountType. For example, 'What's the balance in my {accountType} account?' allows the bot to capture and use the user's account type dynamically.

By adding custom slots in utterances, the chatbot can collect specific information, like the account type, directly from the user input. This makes the conversation more natural and ensures the bot can accurately fulfill the user's request.





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