How I built a chatbot with Amazon Lex

featuring custom slots!

Test Draft version
Last build submitted: 12 hours ago

Inspect

01/01/2017

Intent CheckBalance is fulfilled

What's the balance in my savings account?

For verification purposes, what is your date of birth?

02/03/2000

Intent CheckBalance is fulfilled

✓ Ready for complete testing

🎤 Type a message
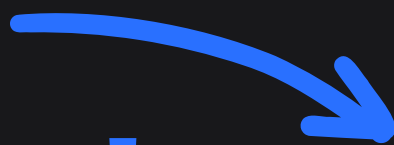
Kanika Mathur
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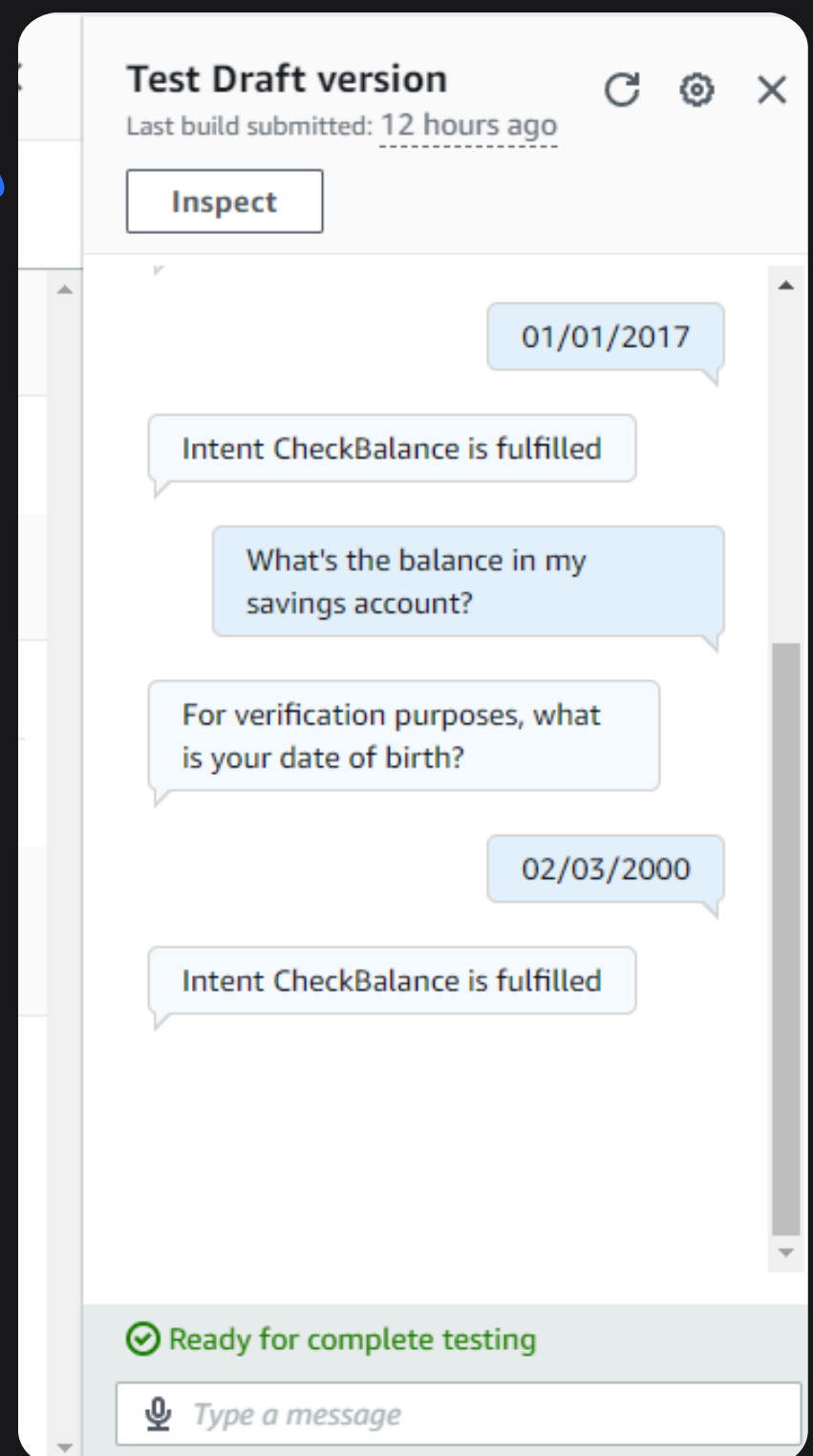
What is Amazon Lex?

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 chatbot that will now not only have natural conversational speech recognition, but is also set up for checking your account balance.
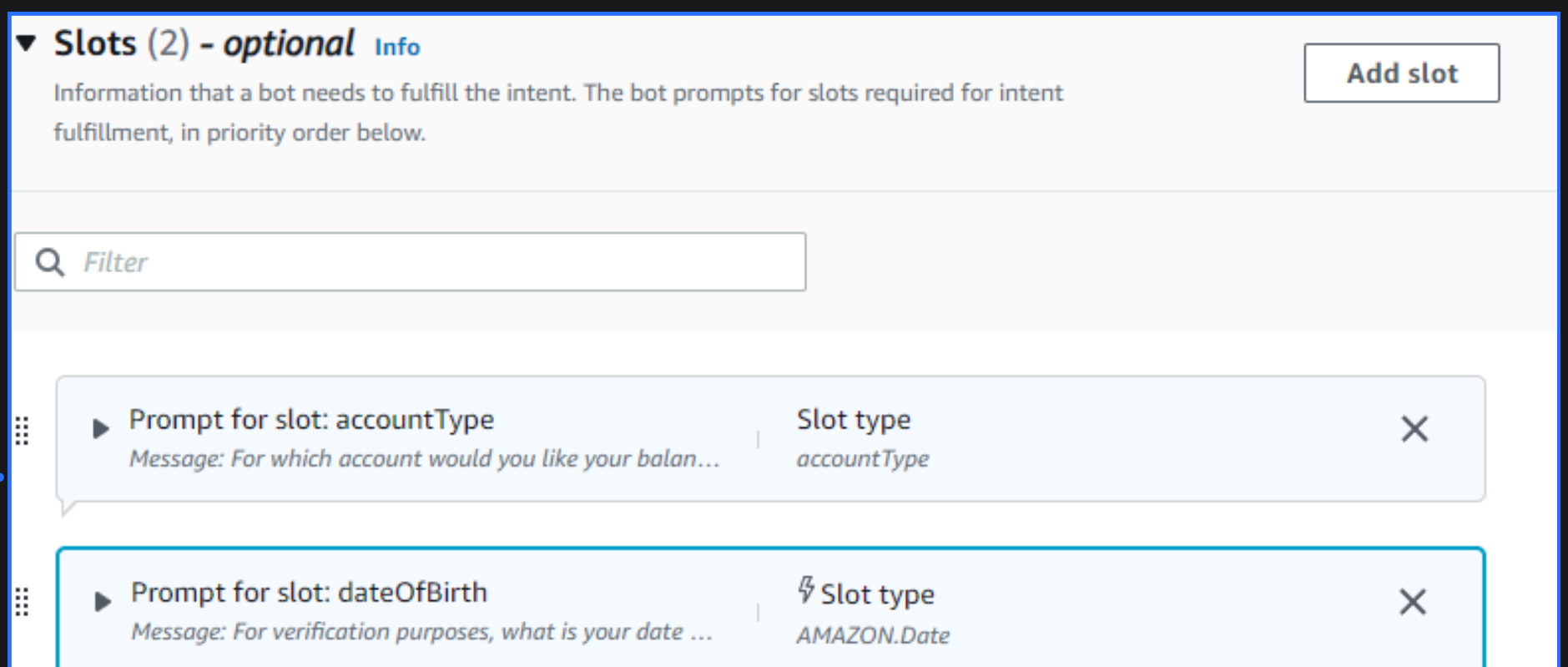
Kanika Mathur

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Create custom slots

- **Slots** are like placeholders/'blanks' of information that my chatbot will seek to fill in order to fulfil an intent.

- In this project, I created a **custom slot type** to represent the different account types that a banking customer could have. A custom slot type was required as the default slot types did not accommodate for account types (e.g. Checking, Credit, Savings).

- I then associated the custom slot with a new intent, CheckBalance, which is a new intent I created that will help my bank's customers check its users account balances.

My custom slots →

▼ Slots (2) - *optional* **Info**

Information that a bot needs to fulfill the intent. The bot prompts for slots required for intent fulfillment, in priority order below.

Add slot

🔍 Filter

▶ **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 ...
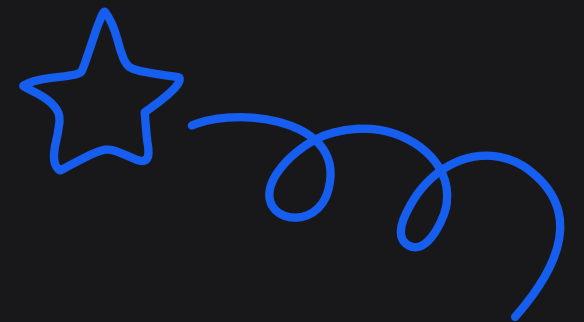
⚡ Slot type
AMAZON.Date

✕

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Simplifying the user experience

- I included slot values in some of the utterances (i.e. user inputs) for this intent too. For example, I included the utterance **What's the balance in my {accountType} account?**
  - This is an example of an utterance that expects the slot accountType.

- By adding custom slots in the utterance, the user experience is enhanced - the bot will automatically register which account type the user is trying to check, and will not ask for it again. This saves the user's time and makes the conversation much more efficient.

Slot values getting recognised in a conversation

Intent	
CheckBalance	

Slots	Elicitation
accountType	Savings
dateOfBirth	2000-02-03

Active contexts	Number of turns or seconds

01/01/2017

Intent CheckBalance is fulfilled

What's the balance in my savings account?

For verification purposes, what is your date of birth?

02/03/2000

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My Key Learnings

01

What are slots?
Slots are pieces of information that a chatbot needs to complete a user's request.

02

What are slot types? What are custom slot types?
Slot types act as categories for the information your bot needs to fulfill an intent, such as dates, numbers, locations, or custom types like "account type" or "product names."

03

Why did you use a custom slot type in this project today?
I used custom slot types for accountType and DateOfBirth to make sure the chatbot can understand different types of bank accounts and verify users' birth dates accurately. This helps the bot provide more relevant and personalized responses.

04

How did you parse your custom slot in your utterance?
I parsed my custom slot in the utterance by including the slot name in curly braces. For example, I used phrases like "I want to check my {accountType} balance"

05

Yes, I learned that defining clear and precise slot types is crucial for capturing the right user information. I also discovered that providing a variety of sample utterances for each slot improves the bot's ability to recognize and handle different ways users might phrase their inputs. This enhances the chatbot's accuracy and overall performance.

Final thoughts...

- This project took me around 30 minutes to complete.

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

- One thing I didn't expect was, how important it was to link the intent to the slots and that using slots was the key to creating inquiries about a user.

- In the next phase of this project, we're enhancing BankerBot's memory with context carryover, allowing it to remember key details like the user's birthday during a session for a smoother experience. I'll also set up a new flow for transferring money between accounts!

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🔖 Save for later

♥ Let's connect!

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Thanks NextWork for the
free project guide!

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