

Major Project (AWS) -

Create a Chat bot using Amazon Lex Tool.

Intent of the chat bot: Book Hotel

- 1) All the information must be conveyed to the user after booking room and must be informed to the user the price of the hotel room and day of stay.
- 2) Using this chat bot user must aware of types of Available rooms (Classic, Duplex etc)- Choose your own Category as well.
- 3) All events must be in flow for fulfilment of the intent.

1. Login to AWS and select Lex service, set the bot name -

The screenshot shows the 'Create a blank bot' wizard in the Amazon Lex console. It features three tabs: 'Create a blank bot' (selected), 'Start with an example', and 'Start with transcripts'. The 'Bot configuration' section includes a 'Bot name' field with the value 'HotelBookingBot' and a 'Description - optional' text area containing 'IT HelpDesk bot for employees in the North America office.' The 'IAM permissions' section at the bottom indicates that IAM permissions are used to access other services on behalf of the bot.

☒ **Create a blank bot**
Create a basic bot with no preconfigured languages, intents and slot types.

☐ **Start with an example**
An example bot has preconfigured languages, intents and slot types. You can change these settings.

☐ **Start with transcripts**
Automatically generate intents from conversation transcripts that you upload. Only English (US) language is available when starting with a transcript.

Bot configuration

Bot name

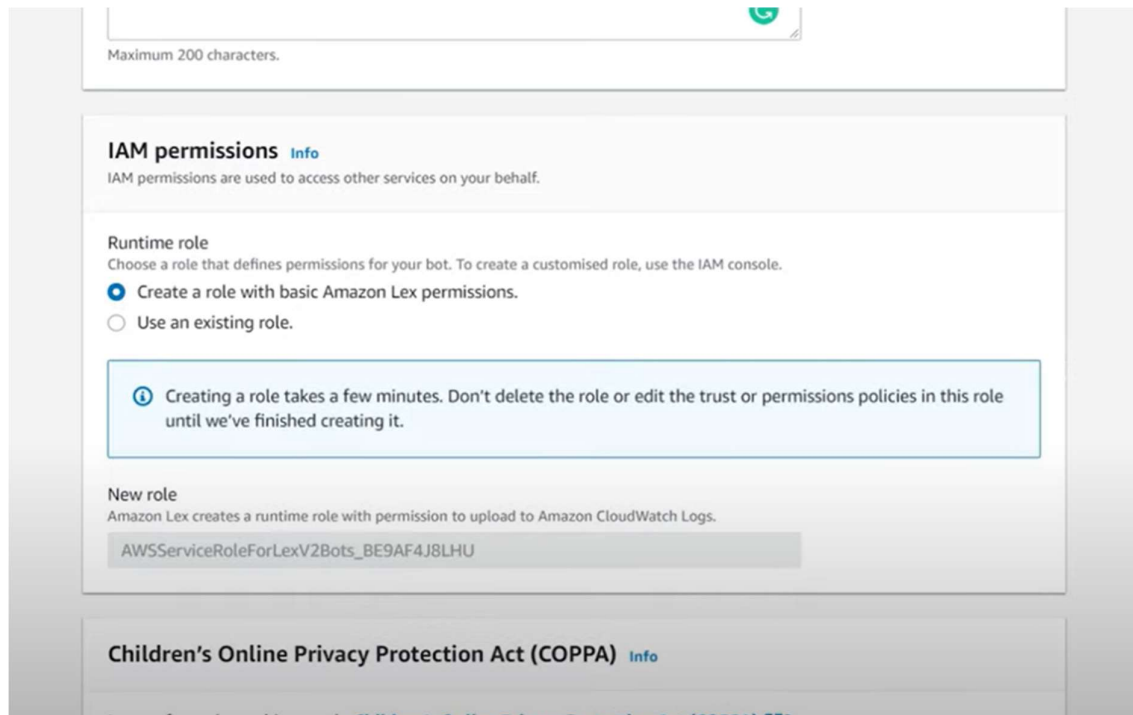
Maximum 100 characters. Valid characters: A-Z, a-z, 0-9, -, _

Description - *optional*
This description appears on bot list page. It can help you identify the purpose of your bot.

Maximum 200 characters.

IAM permissions [info](#)
IAM permissions are used to access other services on your behalf.

2. Select permissions -



Maximum 200 characters.

IAM permissions [Info](#)

IAM permissions are used to access other services on your behalf.

Runtime role
Choose a role that defines permissions for your bot. To create a customised role, use the IAM console.

☒ Create a role with basic Amazon Lex permissions.

☐ Use an existing role.

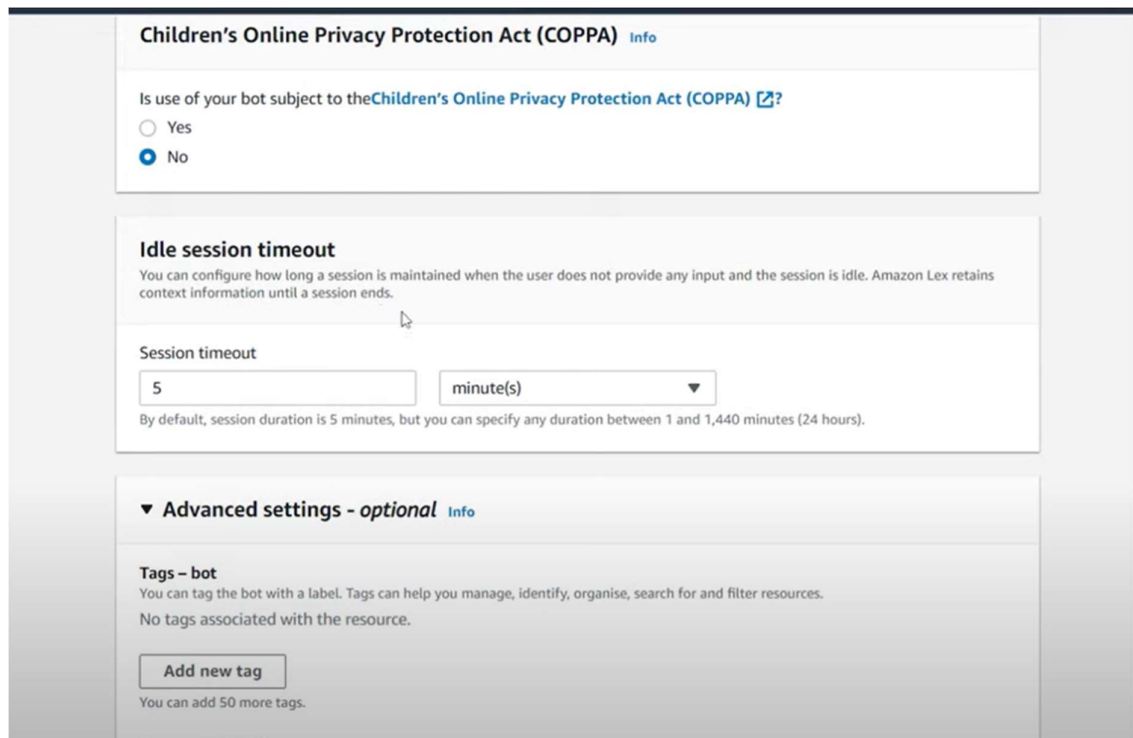
① Creating a role takes a few minutes. Don't delete the role or edit the trust or permissions policies in this role until we've finished creating it.

New role
Amazon Lex creates a runtime role with permission to upload to Amazon CloudWatch Logs.

AWSServiceRoleForLexV2Bots_BE9AF4J8LHU

Children's Online Privacy Protection Act (COPPA) [Info](#)

3. children's privacy settings -



Children's Online Privacy Protection Act (COPPA) [Info](#)

Is use of your bot subject to the [Children's Online Privacy Protection Act \(COPPA\)](#) [?](#)

☐ Yes

☒ No

Idle session timeout

You can configure how long a session is maintained when the user does not provide any input and the session is idle. Amazon Lex retains context information until a session ends.

Session timeout

By default, session duration is 5 minutes, but you can specify any duration between 1 and 1,440 minutes (24 hours).

▼ Advanced settings - optional [Info](#)

Tags – bot
You can tag the bot with a label. Tags can help you manage, identify, organise, search for and filter resources.
No tags associated with the resource.

You can add 50 more tags.

3. Add language settings -

Create bot

igs

Add language to bot [Info](#)

▼ **Language: English (US)**

Select language

English (US) ▼

Description - *optional*

Maximum 200 characters.

Voice interaction

The text-to-speech voice that your bot uses to interact with users.

None. This is only a text-based application ▼

Intent classification confidence score threshold

0.40

Min: 0.00, max: 1.00.

Cancel Add another language Done

4. Choose the intent (action) which bot has to perform -

▼ **Intent details** [Info](#)

Intent name

Maximum 100 characters. Valid characters: A-Z, a-z, 0-9, -, _

Description - *optional*

Maximum 200 characters.

ID: UPQFZSQMIX

► **Contexts - *optional***

Sample utterances (2) [Info](#)

Representative phrases that your users can use to speak or type to invoke this intent. Add new for utterances based on the example.

5. Type the sample utterances which user can ask -

Sample utterances (2) [Info](#)

Representative phrases that you expect a user to speak or type to invoke this intent. Amazon Lex extrapolates based on the sample utterances to interpret any user input that may vary from the samples. The priority order of the sample utterances is not used to determine intent classification output.

Book a hotel

I want a make hotel reservations

6. Slots which bot will ask additionally -

▼ Slots (2) - optional [Info](#)

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

☒ **Required for this intent**
The bot will prompt for this slot during the conversation if a value is not provided by the user.

Name Slot type

Prompts

You can use the advanced options setting to configure rich messages such as a customisable payload, card groups and SSML.

▶ Prompt for slot: Mumbai
Message: - Slot type AMAZON.City

7. Generalize the variables with appropriate datatype -

The screenshot shows the Amazon Lex console interface for managing an intent. At the top, there is a search bar labeled 'Filter' and a dropdown menu for 'Sort by added (ascending)'. Below these are two tabs: 'Preview' (selected) and 'Plain Text'. The main area displays a list of utterances for the intent 'NightsBook a hotel'. The first utterance is 'NightsI want a make hotel reservations'. The second utterance is 'Book a {Nights} night stay in {Location}', where '{Nights}' is highlighted in blue and '{Location}' is highlighted in red, indicating slot generalization. At the bottom, there is a text input field with the placeholder 'I want to book a flight' and a character count 'Maximum 250 characters.', followed by an 'Add utterance' button. Below the utterance list, there is a section for 'Slots (2) - optional' with an 'Add slot' button.

8. Add another slot for date -

The screenshot shows the 'Add slot' dialog box in the Amazon Lex console. The dialog has a title bar with a close button (X). Below the title, it says 'A slot is used to capture information from the user to fulfil the intent.' There is a checkbox labeled 'Required for this intent' which is checked. Below this checkbox, it says 'The bot will prompt for this slot during the conversation if a value is not provided by the user.' The dialog has two input fields: 'Name' with the value 'CheckinDate' and 'Slot type' with a dropdown menu showing 'AMAZON.Date'. Below these fields is a 'Prompts' section with a text input field containing the prompt 'What day do you want to check in?'. At the bottom right of the dialog are two buttons: 'Cancel' and 'Add'.

9. Define a new type of slot for room type -

Slot value resolution
Amazon Lex resolves the slot values in an utterance to only the values you provide, or it expands the resolution to related or similar values.

☒ **Expand values (default)**
Values used as training data.

☐ **Restrict to slot values**
Use only values provided.

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

Search slot type values

queen X

king X

deluxe

Add value

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

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

10. Add required prompt for it -

Add slot
A slot is used to capture information from the user to fulfil the intent.

☒ **Required for this intent**
The bot will prompt for this slot during the conversation if a value is not provided by the user.

Name: RoomType Slot type: RoomType

Prompts: What type of room would you like, queen, king, or deluxe?

Cancel **Add**

11. Choose the intent to edit -

Lex > Bots > Bot: HotelBooki... > Versions > Version: DRAFT > All languages > Language: English (US) > Intents > Int

Intent: BookHotel [Info](#)

An intent represents an action that fulfils a user's request. Intents can have arguments called slots that represent variable information.

► **Conversation flow** [Info](#)

▼ **Intent details** [Info](#)

Intent name

BookHotel

Maximum 100 characters. Valid characters: A-Z, a-z, 0-9, -, _

Description - optional

Helps users find their lost devices

Maximum 200 characters.

Draft version ▼ English (US) Successfully built ✓ Intent saved Build Test

12. Test the deployed bot -

Successfully built language English (US) in bot: HotelBookingBot

I want to book a flight.
Maximum 250 characters.

▼ **Slots (4) - optional** [Info](#)

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

Filter

▼ Prompt for slot: RoomType
Message: What type of room would you like, queen, ki... Slot type: RoomType

☒ Required for this intent
The bot will prompt for this slot during the conversation if a value is not provided by the user

Name: RoomType Slot type: RoomType

Prompts

Test Draft version
Last build submitted: Now

Inspect

book hotel

How many nights will you be staying?

3

What city will you be staying in?

Ready for complete testing

Type a message

Draft version ▼ English (US) Successfully built ✓ Intent saved Build Test

COPPA

You must specify whether your use of Amazon Lex is related to a website, program, or other application that is directed or targeted, in whole or in part, to children under age 13 and subject to the Children's Online Privacy Protection Act (COPPA).

For information about the requirements of COPPA, refer to the resources provided by the [United States Federal Trade Commission](#)

[Learn more](#)

[Complying with COPPA](#)

[What is Amazon Lex?](#)

13. Test other questions -

Successfully built language English (US) in bot: HotelBookingBot

Prompt for slot: RoomType
Message: What type of room would you like, queen, king, or deluxe?
Slot type: RoomType

☒ Required for this intent
The bot will prompt for this slot during the conversation if a value is not provided by the user.

Name: RoomType Slot type: RoomType

Prompts: What type of room would you like, queen, king, or deluxe?

You can use the advanced options setting to configure rich messages such as a customisable payload.

[Advanced options](#)

Confirmation prompts and decline responses [Info](#)
Prompts help to clarify whether the user wants to fulfil the intent or cancel it.

► Prompts to confirm the intent
Message: -

Responses sent when the user declines the intent
Message: -

Test Draft version
Last build submitted: 1 minute ago

[Inspect](#)

Mumbai

What day do you want to check in?

25-07-2022

What type of room would you like, queen, king, or deluxe?

Ready for complete testing

Type a message

Draft version English (US) Successfully built Intent saved Build Test Settings

COPPA
You must specify the age of the user when you create an Amazon Lex bot. If you do not specify an age, the bot is assumed to be targeted at children under 13 years of age. For information on the requirements for children's online privacy, see the Children's Online Privacy Protection Act (COPPA).
[Learn more](#)
[Complying with COPPA](#)
[What is Amazon Lex](#)

14. Booking successfully -

Successfully built language English (US) in bot: HotelBookingBot

Prompt for slot: RoomType
Message: What type of room would you like, queen, king, or deluxe?
Slot type: RoomType

☒ Required for this intent
The bot will prompt for this slot during the conversation if a value is not provided by the user.

Name: RoomType Slot type: RoomType

Prompts: What type of room would you like, queen, king, or deluxe?

You can use the advanced options setting to configure rich messages such as a customisable payload.

[Advanced options](#)

Confirmation prompts and decline responses [Info](#)
Prompts help to clarify whether the user wants to fulfil the intent or cancel it.

► Prompts to confirm the intent
Message: -

Responses sent when the user declines the intent
Message: -

Test Draft version
Last build submitted: 1 minute ago

[Inspect](#)

25-07-2022

What type of room would you like, queen, king, or deluxe?

king

Intent BookHotel is fulfilled

Ready for complete testing

Type a message

Draft version English (US) Successfully built Intent saved Build Test Settings

COPPA
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[Complying with COPPA](#)
[What is Amazon Lex](#)

15. Check the conversational flow -

[illegible]

16. Insert the confirmation prompt -

Confirmation prompts and decline responses [Info](#)

Prompts help to clarify whether the user wants to fulfil the intent or cancel it.

▼ Prompts to confirm the intent

Message: *Okay, I have you down for a {Nights} night s...*

Responses sent when the user declines the intent

Message: *Okay, I have canceled your reservation in pro...*

Confirmation prompt

What will the bot say to prompt the user to confirm this intent.

Okay, I have you down for a {Nights} night stay in {Location} starting {CheckInDate}. Shall I book the reservation?

Decline response

What will the bot say if the user says NO to the confirmation prompt.

Okay, I have canceled your reservation in progress.

Advanced options

Configure confirmation prompts and decline responses.

17. Check again -

Successfully built language English (US) in bot: HotelBookingBot

Test Draft version
Last build submitted: Now

Inspect

book hotel

What city will you be staying in?

Pune

How many nights will you be staying?

5

Okay, I have you down for a 5 (Nights) night stay in (Location) starting (CheckInDate).

Ready for complete testing

Type a message

Draft version English (US) Successfully built Intent saved Build Test

18. Testing complete -

Successfully built language English (US) in bot: HotelBookingBot

Test Draft version
Last build submitted: 1 minute ago

Inspect

2022-07-25

What type of room would you like, queen, king, or deluxe?

abc

Okay, I have you down for a 5 night stay in Pune starting 2022-07-25. Shall I book the reservation?

Ready for complete testing

Type a message

Prompt for slot: Location
Message: What city will you be staying in?
Slot type: AMAZON.City

☒ Required for this intent
The bot will prompt for this slot during the conversation if a value is not provided by the user.

Name: Location
Slot type: AMAZON.City

Prompts: What city will you be staying in?

Advanced options

19. Intent testing complete -

The screenshot shows the Amazon Lex console interface for the 'HotelBookingBot'. A green banner at the top indicates 'Successfully built language English (US) in bot: HotelBookingBot'. The main area displays the 'Test Draft version' dialog, which is open. The dialog shows a conversation flow: a user input 'like, queen, king, or deluxe?', followed by a system response 'Okay, I have you down for a 5 night stay in Pune starting 2022-07-25. Shall I book the reservation?', and then a user input 'yes'. The final system response is 'Intent BookHotel is fulfilled'. The dialog also shows a 'Ready for complete testing' status and a 'Type a message' input field. On the left, the 'Prompt for slot: Location' is visible, with a message 'What city will you be staying in?' and a slot type of 'AMAZON.City'. The right sidebar contains a 'COPPA' section with text about Amazon Lex requirements and a 'Learn more' link.

20. Choose closing response -

The screenshot shows the Amazon Lex console interface for the 'HotelBookingBot'. A blue banner at the top indicates 'Building language English (US) in bot: HotelBookingBot. If your language contains external source slot types, the build might take longer to complete.' The main area displays the 'Closing response' configuration section, which is active. It shows a 'Response sent to the user after the intent is fulfilled' with a message of '-'. Below this, there is a 'Code hooks - optional' section. The right sidebar contains a 'COPPA' section with text about Amazon Lex requirements and a 'Learn more' link.

21. Check if wrong input given -

Successfully built language English (US) in bot: HotelBookingBot

Prompts help to clarify whether the user wants to fulfil the intent or cancel it.

Prompts to confirm the intent
Message: Okay, I have you down for a {Nights} night s...

Responses sent when the intent is confirmed
Message: Okay, I have cancel...

Fulfilment Info
Run a lambda function to fulfil the intent and inform users of the status when it's complete.

On successful fulfilment
Message: Thank You

In case of failure
Message: -

Closing response Info
You can define the response when closing the intent.

Response sent to the user after the intent is fulfilled
Message: -

Test Draft version
Last build submitted: Now

Inspect

2022-07-25

What type of room would you like, queen, king, or deluxe?

abc

What type of room would you like, queen, king, or deluxe?

Ready for complete testing

Type a message

Draft version English (US) Successfully built Intent saved Build Test

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[Learn more about COPPA](#)

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[What is Amazon Lex?](#)

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