

PREDICTIVE ANALYTICS

Dialogflow chatbot

SUBMITTED BY

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Dialogflow Chatbot

Dialogflow is one of the best tool out there for building chatbots. Dialogflow is really easy to use as well. In this blog post, I will highlight some of the best practices that one should follow while building chatbots on Dialogflow.

Start with a Flow chart for Hotel Booking:

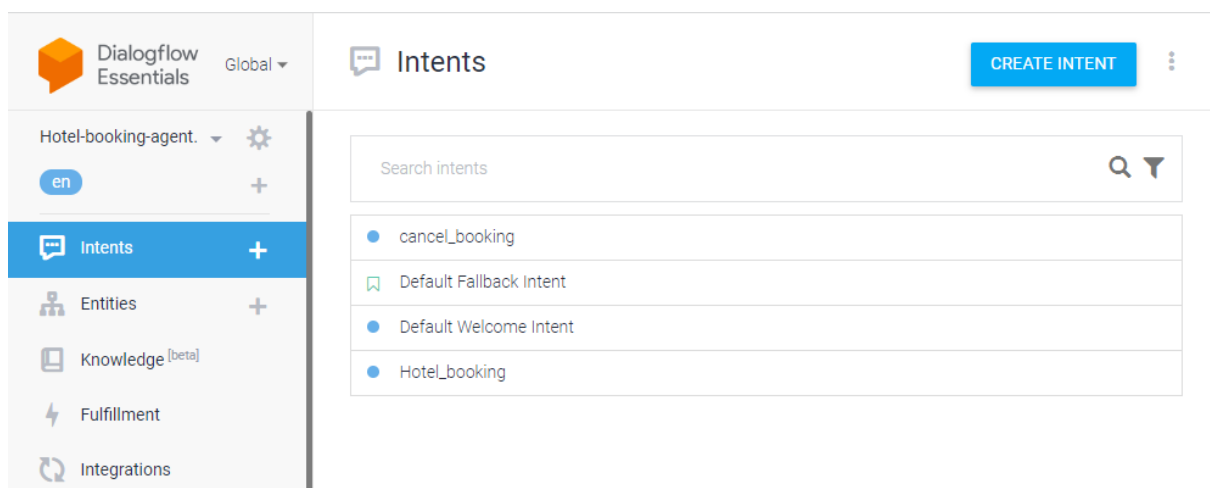
Before going into Dialogflow and start creating Intents and Entities, what you really need to do is visualise the conversation flow that you want your bot to have with the users. The best way to do that is by creating a mind map or a flow chart.

You can start by simply drawing the flow on a pen and paper but there are a few tools out there which can help you in the process.

Naming convention for Dialogflow intents for Hotel Booking:

Right now, there is no way to organise Dialogflow intents into a logical way. There is no option to create a Folder or Sort Intents in some way or another. So the approach we follow is add some numbers or alphabets before our Dialogflow intent name so that intents are sorted by number or alphabets.

Customers who want to book hotel room, this chatbot help them to make it possible through chat.



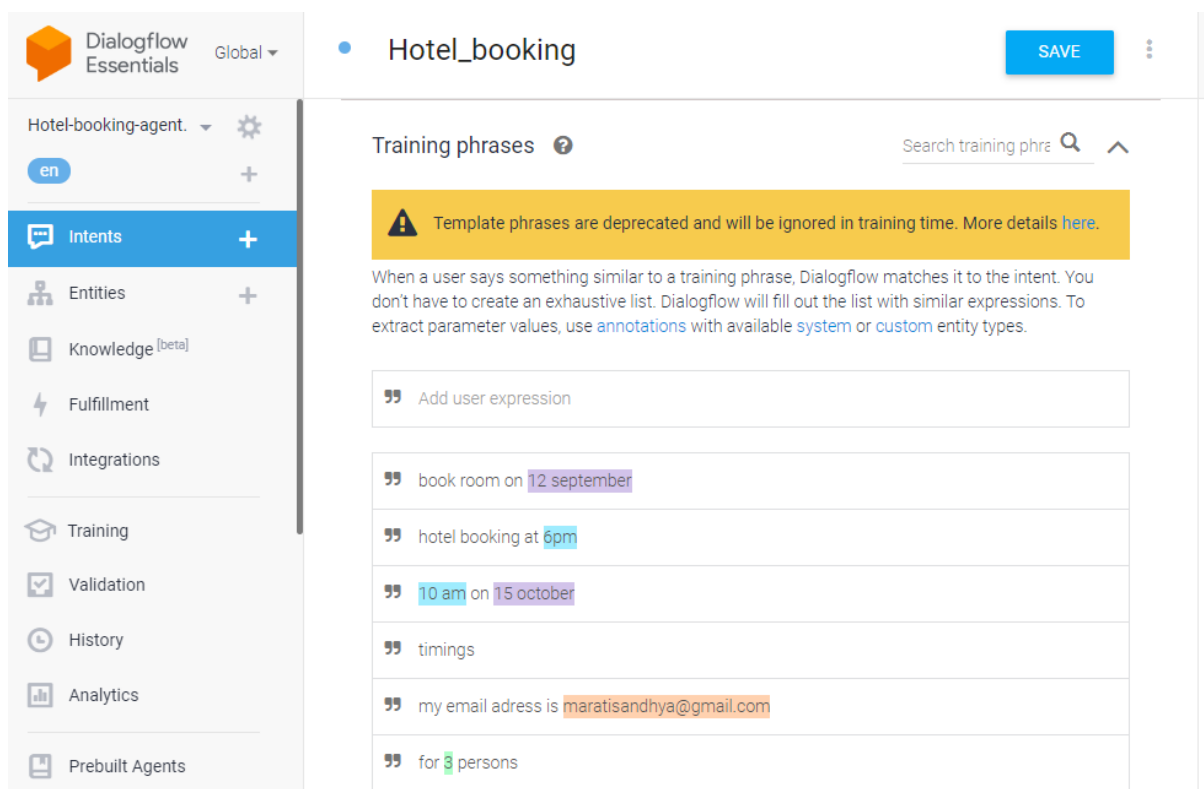
In this way, we can organise the intents when the list grows bigger and also we can keep the related intents together even if their names are not similar.

Use Context and Follow up Intents

1.Hotel_Booking intent:

Create hotel_booking intent to book the hotel room .Always try to use Contexts and Follow up intents as much as you can. Give context to Training phrases, action and parameters, and response to give context aware answers, it feels more natural to the user while talking to your bot.

a)Training phrases:



The screenshot displays the Dialogflow Essentials interface for the 'Hotel_booking' intent. The left sidebar shows the navigation menu with options: Intents, Entities, Knowledge (beta), Fulfillment, Integrations, Training, Validation, History, Analytics, and Prebuilt Agents. The 'Intents' section is currently selected. The main area shows the 'Training phrases' for the 'Hotel_booking' intent. A yellow warning banner at the top states: 'Template phrases are deprecated and will be ignored in training time. More details [here](#).' Below this, a text box explains: 'When a user says something similar to a training phrase, Dialogflow matches it to the intent. You don't have to create an exhaustive list. Dialogflow will fill out the list with similar expressions. To extract parameter values, use [annotations](#) with available [system](#) or [custom](#) entity types.' The training phrases are listed in a table with a search bar at the top right. The phrases are: 'Add user expression', 'book room on 12 september', 'hotel booking at 6pm', '10 am on 15 october', 'timings', 'my email adress is maratisandhya@gmail.com', and 'for 3 persons'.

| Training phrases |
|--|
| Add user expression |
| book room on 12 september |
| hotel booking at 6pm |
| 10 am on 15 october |
| timings |
| my email adress is maratisandhya@gmail.com |
| for 3 persons |

B) Action and Parameter:

The screenshot shows the Dialogflow Essentials interface for the 'Hotel_booking' intent. The left sidebar contains navigation options: Intents, Entities, Knowledge [beta], Fulfillment, Integrations, Training, Validation, History, Analytics, and Prebuilt Agents. The main panel is titled 'Action and parameters' and includes a 'SAVE' button. Below the title is a search bar for 'Enter action name'. A table lists parameters with columns: REQUIRED, PARAMETER NAME, ENTITY, VALUE, IS LIST, and PROMPTS. The table contains seven rows for parameters: person, number, email, time, date, branch, and a placeholder 'Enter nam'. Each row has a checkbox in the 'REQUIRED' column, which is checked for all except the placeholder. The 'ENTITY' column shows system entity references like @sys.person, @sys.number, @sys.email, @sys.time, @sys.date, and @sys.location. The 'VALUE' column shows the corresponding value type (Sperson, Snumber, Semail, Stime, Sdate, Slocation). The 'PROMPTS' column contains example prompts for each parameter. A '+ New parameter' link is at the bottom.

| REQUIRED | PARAMETER NAME | ENTITY | VALUE | IS LIST | PROMPTS |
|-------------------------------------|----------------|---------------|-------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | person | @sys.person | Sperson | <input type="checkbox"/> | what is your name... |
| <input checked="" type="checkbox"/> | number | @sys.number | Snumber | <input type="checkbox"/> | For how many people... |
| <input checked="" type="checkbox"/> | email | @sys.email | Semail | <input type="checkbox"/> | May I know your email... |
| <input checked="" type="checkbox"/> | time | @sys.time | Stime | <input type="checkbox"/> | time for hotel... |
| <input checked="" type="checkbox"/> | date | @sys.date | Sdate | <input type="checkbox"/> | on which date? ... |
| <input checked="" type="checkbox"/> | branch | @sys.location | Slocation | <input type="checkbox"/> | which branch? [...] |
| <input type="checkbox"/> | Enter nam | Enter entity | Enter value | <input type="checkbox"/> | — |

C) Text Response:

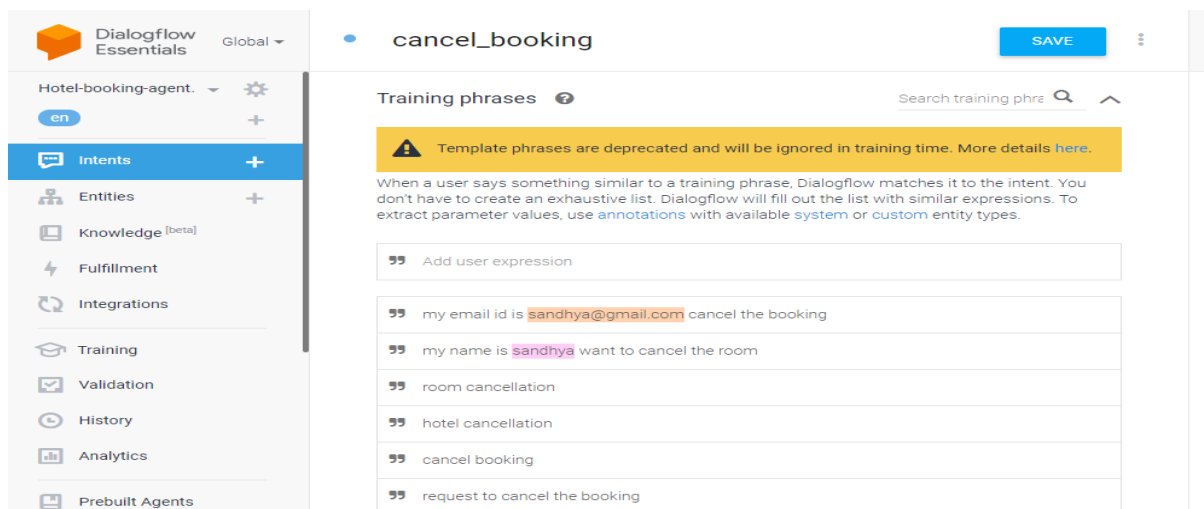
The screenshot shows the Dialogflow Essentials interface for the 'Hotel_booking' intent, specifically the 'Responses' section. The left sidebar is the same as in the previous screenshot. The main panel is titled 'Responses' and includes a 'SAVE' button. Below the title is a 'DEFAULT' tab with a '+' icon. A 'Text Response' card is visible, showing a list of response variants. The variants are numbered 1, 2, and 3. Variant 1 is a long sentence: 'Sperson on Stime Sdate your hotel booking request for Snumber persons confirmed we will contact you on Semail'. Variant 2 is 'your request is accepted'. Variant 3 is 'Enter a text response variant'. An 'ADD RESPONSES' button is at the bottom.

| Variant | Text |
|---------|---|
| 1 | Sperson on Stime Sdate your hotel booking request for Snumber persons confirmed we will contact you on Semail |
| 2 | your request is accepted |
| 3 | Enter a text response variant |

2)Cancel_Booking intent:

Now create cancel_booking intent to cancel the hotel room. Due to many reasons customers want to cancel the hotel booking.

Training phrases:



The screenshot shows the Dialogflow console for the 'cancel_booking' intent. The left sidebar lists various components, with 'Intents' selected. The main area displays the 'Training phrases' section. A warning message states: 'Template phrases are deprecated and will be ignored in training time. More details here.' Below this, a list of training phrases is shown, including 'my email id is sandhya@gmail.com cancel the booking', 'my name is sandhya want to cancel the room', 'room cancellation', 'hotel cancellation', 'cancel booking', and 'request to cancel the booking'.

Dialogflow Essentials Global

Hotel-booking-agent. en

Intents +

Entities +

Knowledge [beta]

Fulfillment

Integrations

Training

Validation

History

Analytics

Prebuilt Agents

cancel_booking

SAVE

Training phrases ? Search training phrase

⚠ Template phrases are deprecated and will be ignored in training time. More details [here](#).

When a user says something similar to a training phrase, Dialogflow matches it to the intent. You don't have to create an exhaustive list. Dialogflow will fill out the list with similar expressions. To extract parameter values, use [annotations](#) with available [system](#) or [custom](#) entity types.

” Add user expression

” my email id is sandhya@gmail.com cancel the booking

” my name is sandhya want to cancel the room

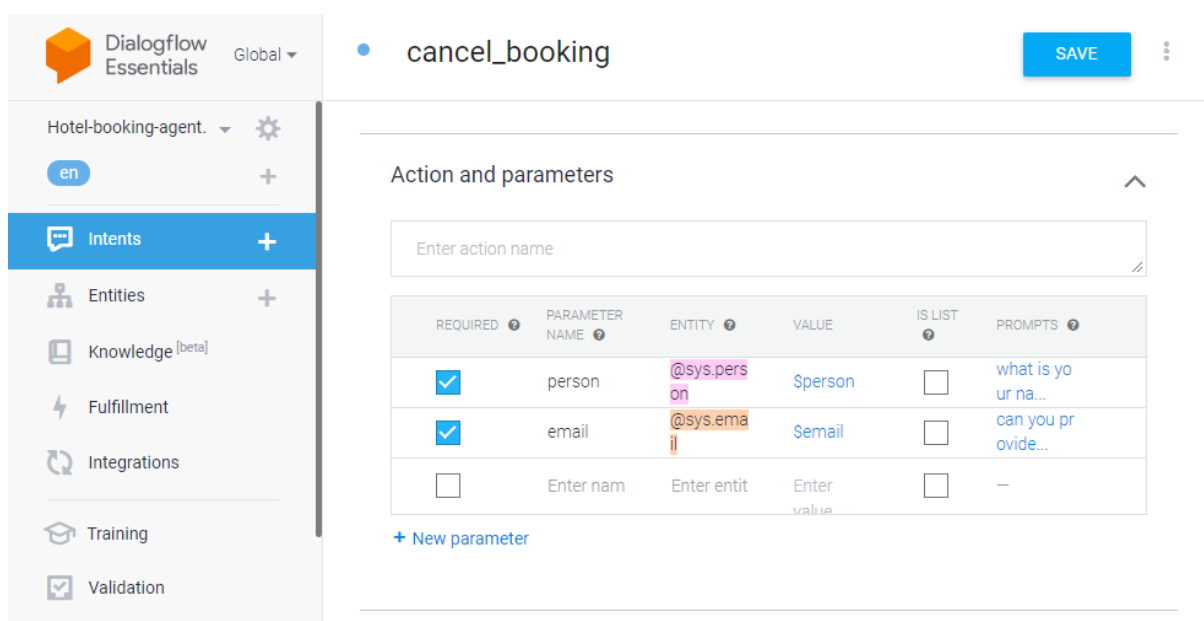
” room cancellation

” hotel cancellation

” cancel booking

” request to cancel the booking

Action and Parameters:



The screenshot shows the Dialogflow console for the 'cancel_booking' intent, specifically the 'Action and parameters' section. The left sidebar is the same as in the previous screenshot. The main area displays the 'Action and parameters' section. A text input field for 'Enter action name' is at the top. Below it is a table with columns: 'REQUIRED', 'PARAMETER NAME', 'ENTITY', 'VALUE', 'IS LIST', and 'PROMPTS'. The table contains three rows: 'person' (required, entity @sys.person, value \$person, not a list, prompt 'what is your name...'), 'email' (required, entity @sys.email, value \$email, not a list, prompt 'can you provide...'), and 'Enter name' (not required, entity Enter entity, value Enter value, not a list, prompt '-'). A '+ New parameter' link is at the bottom.

Dialogflow Essentials Global

Hotel-booking-agent. en

Intents +

Entities +

Knowledge [beta]

Fulfillment

Integrations

Training

Validation

cancel_booking

SAVE

Action and parameters

Enter action name

| REQUIRED | PARAMETER NAME | ENTITY | VALUE | IS LIST | PROMPTS |
|-------------------------------------|----------------|--------------|-------------|--------------------------|----------------------|
| <input checked="" type="checkbox"/> | person | @sys.person | \$person | <input type="checkbox"/> | what is your name... |
| <input checked="" type="checkbox"/> | email | @sys.email | \$email | <input type="checkbox"/> | can you provide... |
| <input type="checkbox"/> | Enter name | Enter entity | Enter value | <input type="checkbox"/> | - |

+ New parameter


Text response:

The screenshot displays the Dialogflow Essentials web interface. On the left is a sidebar with navigation options: 'Hotel-booking-agent.' (selected), 'en' (language), 'Intents' (highlighted in blue), 'Entities', 'Knowledge [beta]', 'Fulfillment', 'Integrations', and 'Training'. The main area shows the configuration for the 'cancel_booking' intent. At the top right of this area is a blue 'SAVE' button. Below the intent name is a '+ New parameter' link. The 'Responses' section is expanded, showing a 'DEFAULT' response. Under 'Text Response', there is a list of two variants: 1. 'Thank you for your information, your request has been forwarded to booking department.we will update you Semail.' and 2. 'Enter a text response variant'.

Web demo for

1)Hotel booking:


Below is a follow up intent where user is trying to book a hotel through chatbot.


 Dialogflow [API & DOCS](#) [PRICING](#) [GO TO CONSOLE](#)

Hotel-booking-agent.

Use following code to integrate this agent into your site:

```
<iframe width="350" height="430" allow="microphone;" src="https://console.dialogflow.com/api-client/demo/embedded/67c3a7b6-a9ea-4e94-8170-18393cedb6ae"></iframe>
```

 Hotel-booking-agent.

POWERED BY  Dialogflow

book room

what is your name


sandhya


For how many people do you want to book room?

3

Ask something...

Confirmation for hotel booking:

 Hotel-booking-agent.

POWERED BY  Dialogflow

12th september

which branch?

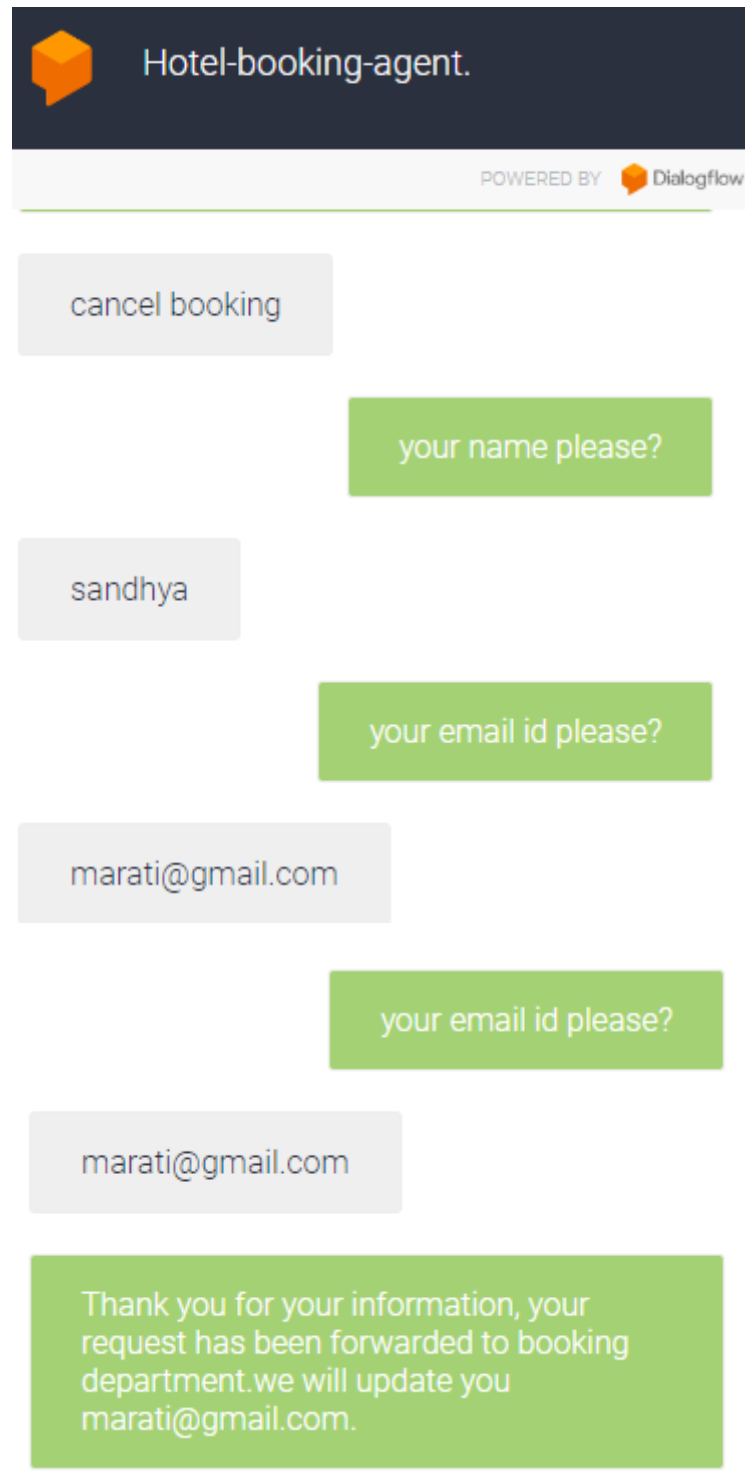
hitechcity

sandhya on 2022-10-17T14:00:00+06:00
2023-09-12T12:00:00+06:00 your hotel
booking request for 3 persons confirmed
we will contact you on marati@gmail.com

Ask something...

2)cancel booking:

Below is a follow up intent where user is trying to cancel their hotel booking through chatbot.



Conclusion:

It is very important that your bot can provide dynamic responses based on question asked. Always give your bot users an option to restart the conversation if they are stuck somewhere. It could be a simple message saying “If you want to restart the conversation, please say Hi”. This is not ideal but at-least your users would be able to continue conversation with the bot if they are stuck somewhere.

This chatbot make customers to book and cancel the hotel booking easily within fractions.