CHATBOT DEVELOPMENT

REPORT

PREPARATION:

The chatbot that we intend to develop is called – 'MoBot' which helps the user to reserve a movie ticket. Our chatbot has the capability to do the following operations:

1. Book a movie ticket.
2. Confirm order for concessions.

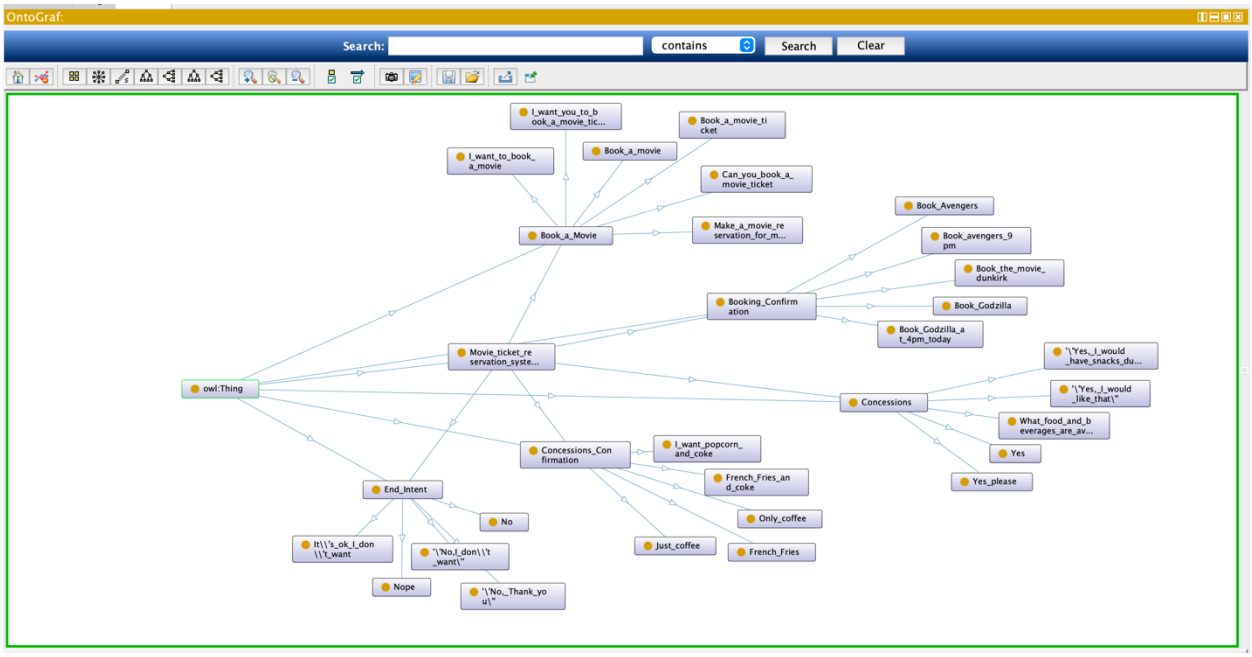
ONTOLOGY:

We have created 5 subclasses under the class Movie_ticket_reservation_system. Each of the subclasses have five subclasses under them which have the primary training phrases. We have the listed the subclasses as below:

1. Movie Ticket Reservation System
    a. Book a movie
        i. Book a movie ticket
        ii. Can you book a movie ticket
        iii. I want to book a movie
        iv. I want you to book a movie ticket
        v. Make a movie reservation for me
    b. Booking Confirmation
        i. Book Avengers
        ii. Book Avengers 9 PM
        iii. Book Godzilla
        iv. Book Godzilla at 4 PM today
        v. Book the movie Dunkirk
    c. Concessions
        i. Yes, I would have snacks during the movie
        ii. Yes, I would like that
        iii. What food and beverages are available?
        iv. Yes
        v. Yes please
    d. Concessions Confirmation
        i. French Fries
        ii. French Fries and Coke
        iii. I want popcorn and coke
        iv. Just coffee
        v. Only coffee
    e. End Intent

i. No, Thank you
ii. No, I don't want
iii. It's ok I don't want
iv. No
v. Nope

Protégé screenshot:-



COMPETENCY QUESTIONS

We have created 6 intents and under each intent at least 5 training phrases were created to train our agent.

We trained the agent with the possible questions that can be asked by the user. The most important questions are regarding booking the movie tickets and buying concessions.

SLOT-FILLING:

We have used the concept of slot-filling in the booking confirmation. For example, if the user forgets to mention the name of the movie or date or time while booking the movie, the agent will send a prompt asking the date and time when the ticket needs to be booked.

Our main competency questions are:

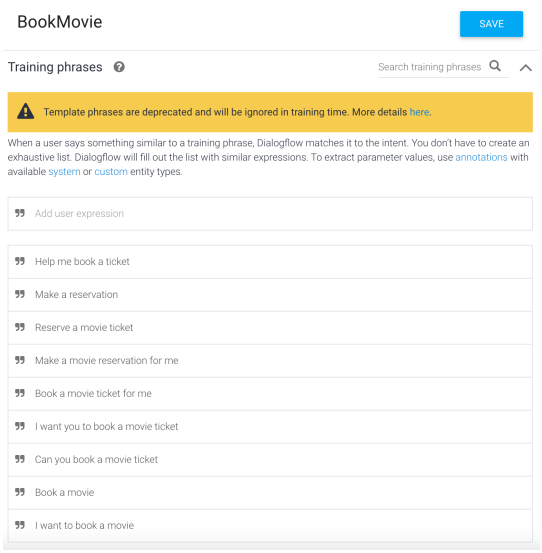
1. Asking the chatbot to book a movie ticket. There are four movies shown in the theatre right now (assuming our chatbot is used by a theatre). Our chatbot can book

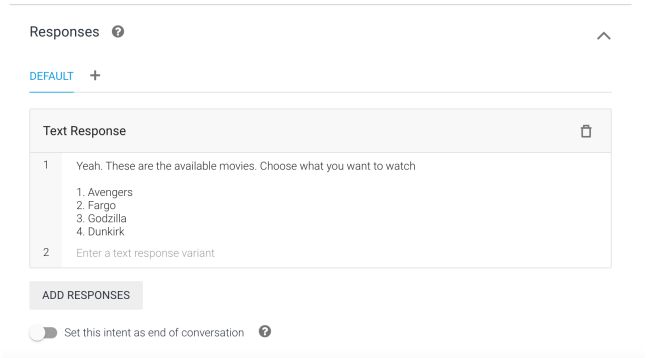
a movie ticket based on the time and date preferred by the user.

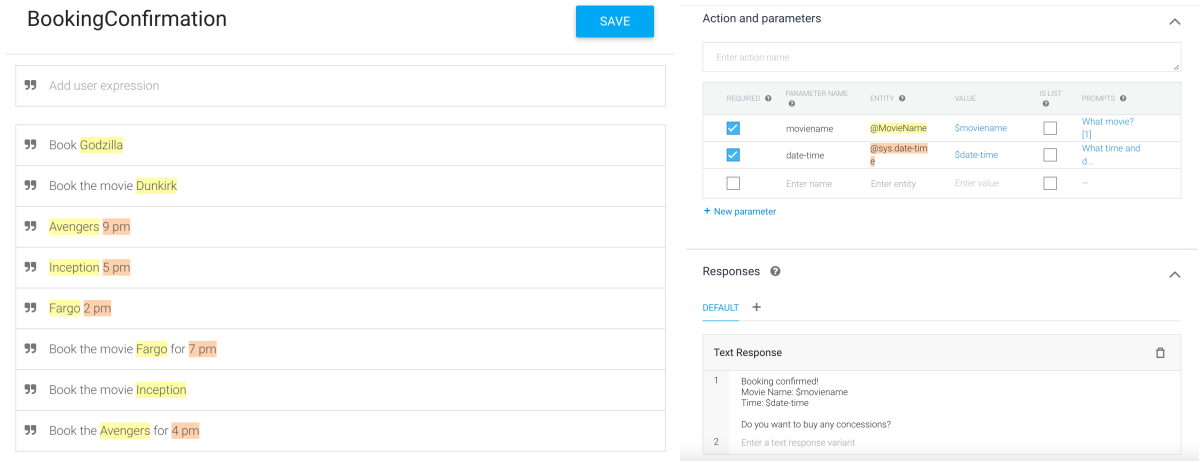
2. The chatbot can also book concessions (food and beverages) before the conversation ends. If the user agrees to book the concessions, then the chatbot shows the food items that are available in the theatre, after user's selection of the food the chatbot confirms the order thanking them and closes the conversation. If the user refuses to buy concessions, then the chatbot ends the conversation immediately.

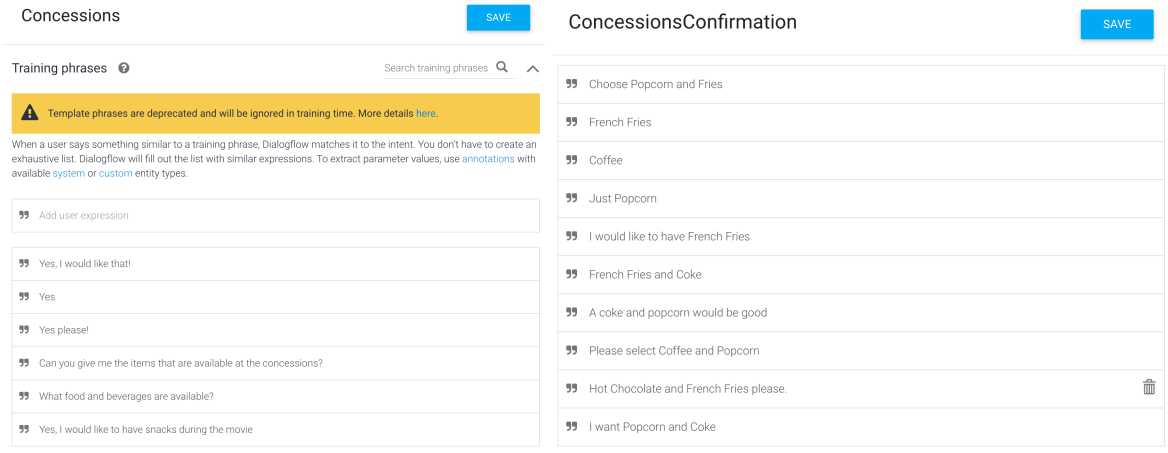
TRAINING QUESTION-ANSWERS

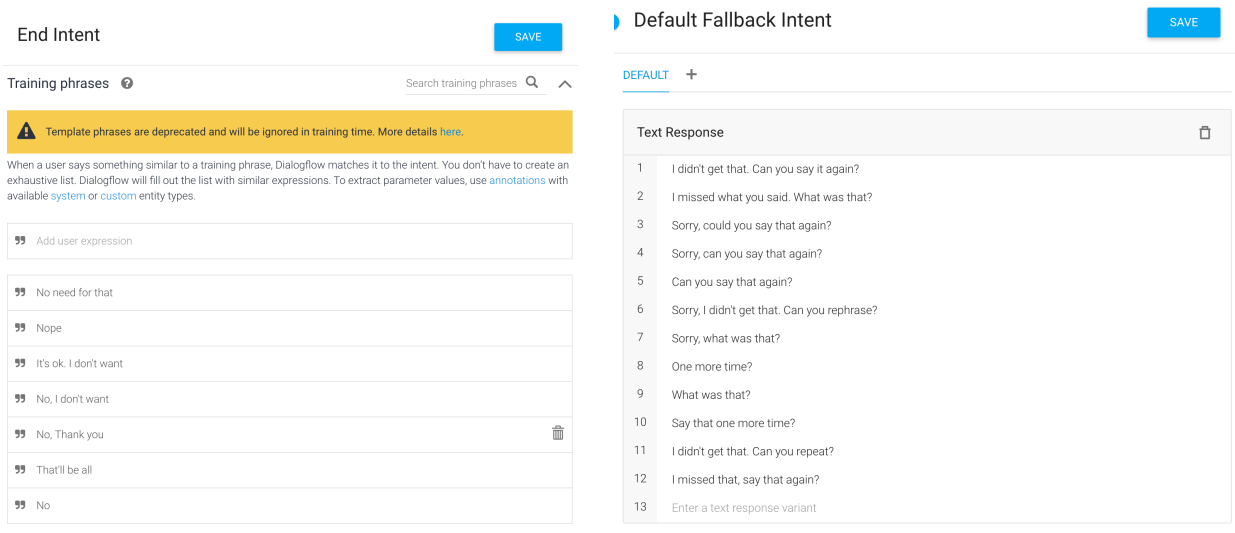
The screenshots of all the training phrases for each intent is attached below.






BookingConfirmation
SAVE
Add user expression
Book Godzilla
Book the movie Dunkirk
Avengers 9 pm
Inception 5 pm
Fargo 2 pm
Book the movie Fargo for 7 pm
Book the movie Inception
Book the Avengers for 4 pm
Action and parameters
Enter action name
REQUIRED
PARAMETER NAME
ENTITY
VALUE
IS LIST
PROMPTS
moviename
@MovieName
$moviename
What movie? [1]
date-time
@sys.date-time
$date-time
What time and d...
Enter name
Enter entity
Enter value
New parameter
Responses
DEFAULT
Text Response
Booking confirmed!
Movie Name: $moviename
Time: $date-time
Do you want to buy any concessions?
Enter a text response variant

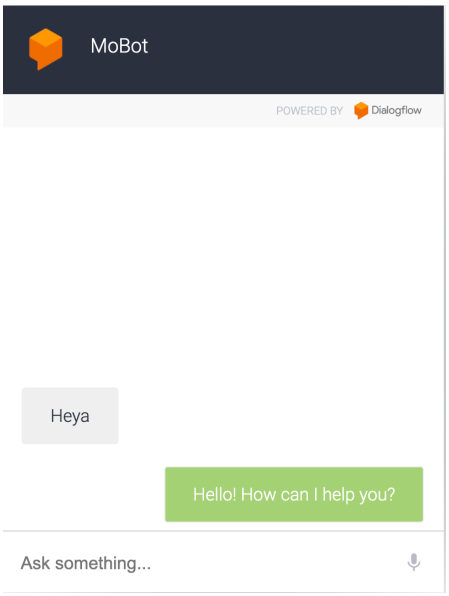

Concessions
SAVE
Training phrases
Search training phrases
Template phrases are deprecated and will be ignored in training time. More details here.
When a user says something similar to a training phrase, Dialogflow matches it to the intent. You don't have to create an exhaustive list. Dialogflow will fill out the list with similar expressions. To extract parameter values, use annotations with available system or custom entity types.
Add user expression
Yes, I would like that!
Yes
Yes please!
Can you give me the items that are available at the concessions?
What food and beverages are available?
Yes, I would like to have snacks during the movie
ConcessionsConfirmation
SAVE
Choose Popcorn and Fries
French Fries
Coffee
Just Popcorn
I would like to have French Fries
French Fries and Coke
A coke and popcorn would be good
Please select Coffee and Popcorn
Hot Chocolate and French Fries please.
I want Popcorn and Coke


End Intent
SAVE
Training phrases
Search training phrases
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
No need for that
Nope
It's ok. I don't want
No, I don't want
No, Thank you
That'll be all
No
Default Fallback Intent
SAVE
DEFAULT
Text Response
1 I didn't get that. Can you say it again?
2 I missed what you said. What was that?
3 Sorry, could you say that again?
4 Sorry, can you say that again?
5 Can you say that again?
6 Sorry, I didn't get that. Can you rephrase?
7 Sorry, what was that?
8 One more time?
9 What was that?
10 Say that one more time?
11 I didn't get that. Can you repeat?
12 I missed that, say that again?
13 Enter a text response variant

TEST-CASES

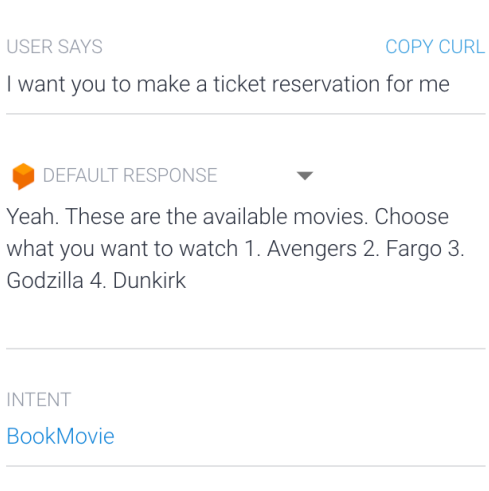
INTENT 1: Welcome Intent

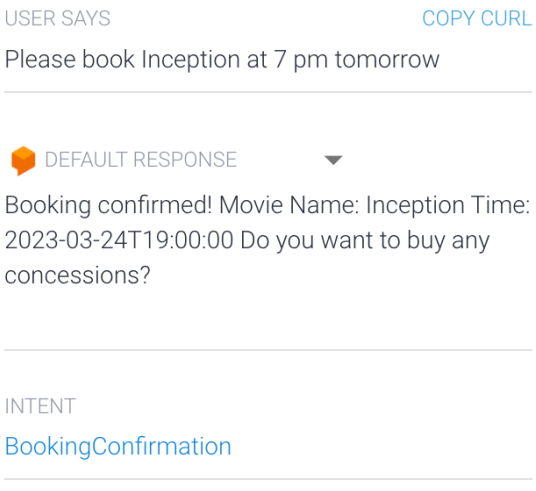
This intent is the default intent that is provided by Dialogflow to send greetings to the users.



INTENT 2: BookMovie

The BookMovie Intent helps to get the movie name from the user that are currently showing at the theatre.





INTENT 3: BookingConfirmation intent

USER SAYS COPY CURL

Please book Inception at 7 pm tomorrow

DEFAULT RESPONSE

Booking confirmed! Movie Name: Inception Time: 2023-03-24T19:00:00 Do you want to buy any concessions?

INTENT

BookingConfirmation

INTENT 4: Concessions

USER SAYS COPY CURL

I want snacks

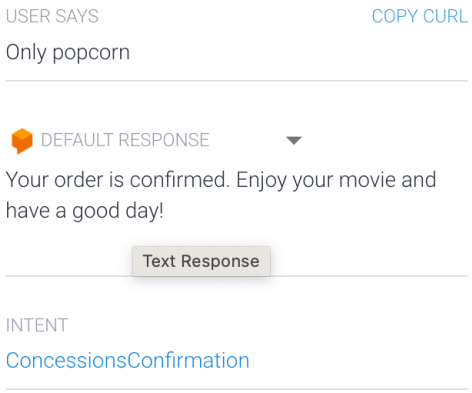
DEFAULT RESPONSE

Okay. These are the items which we provide. 1. Popcorn, 2. Coke, 3. French fries, 4. Hot Chocolate, 5. Coffee

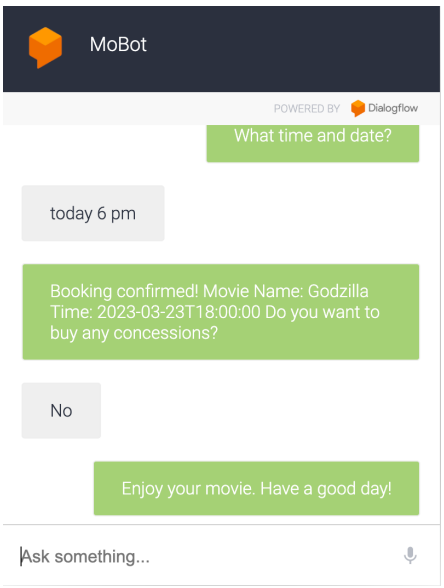
INTENT

Concessions

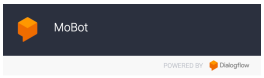
INTENT 5: ConcessionsConfirmation

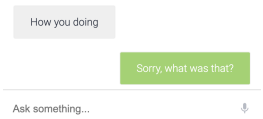


INTENT 6: END INTENT



INTENT 7: FALLBACK INTENT:





EVALUATION OF WEAKNESS:

We have hardcoded the movie names and food items so chatbot can only book movie tickets only for the displayed movie names. User cannot book a movie as he wants and the same goes for the food items.

Also, the user cannot choose the location of the theatre to view the movie which is a good usability feature that can be incorporated.

We can also display the plot of the movies screened at the theatre before the user chooses to book a movie ticket. Displaying the movie plot can influence the user's decision and improves the user experience overall.