

VIDYALANKAR INSTITUTE OF TECHNOLOGY

Affiliated to University of Mumbai
Wadala(E), Mumbai – 37



A MINI-PROJECT REPORT
ON

“ Course Enquiry Assistant ”
(Course – Intelligent System Lab)

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VIDYALANKAR INSTITUTE OF TECHNOLOGY

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CERTIFICATE

Certified that the mini-project work entitled “ **Course Enquiry Assistant** ” is a
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The report has been approved as it satisfies the academic requirements in respect of
mini-project work prescribed for the **course- Intelligent System Lab**.

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Faculty In-Charge

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Internal Examiner

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I am extremely thankful and pay my gratitude to my faculty Prof. Amit Nerurkar I for his valuable guidance and support on completion of this project presently. The project is an excellent example of Artificial Intelligence in real life that helped to improve way of thinking and solving problems with the help of different algorithms.

Last but not least, gratitude goes to all of my friends who directly or indirectly helped me to complete this project.

Abstract

Recently, education is becoming more accessible to a wider group of people through technology. The concepts of artificial intelligence and machine learning have provided substantial assistance in the field of education.

The chatbot's functioning depends on natural language processing that helps users to submit their queries. The chatbot answers all the queries related to the courses and other details and sends appropriate responses to help the users. This conversational system is built using Google Dialog Flow which is a natural language understanding platform used to design and integrate a conversational user interface into web applications.

1. INTRODUCTION

1.1 Problem statement

To build a chatbot which can answer all the queries of a customer and whenever a customer does an enquiry, it automatically sends the customer the course details. It also has small talk features in case the user has some trivial questions for the bot. It also supports commonly asked FAQs.

1.2 Scope

The user can interact with the chatbot like a real person in charge of the communication. The chatbot asks consulting questions to which the user has to reply. The user can clear all their doubts related to courses offered in the institute.

2. PROPOSED SYSTEMS

2.1 Requirements

Hardware – Laptop/Desktop

Minimum configuration – Core i3, 2GB Ram, 200MB free space

Software – Google Dialog Flow,Telegram (For deployment)

2.2 Implementation

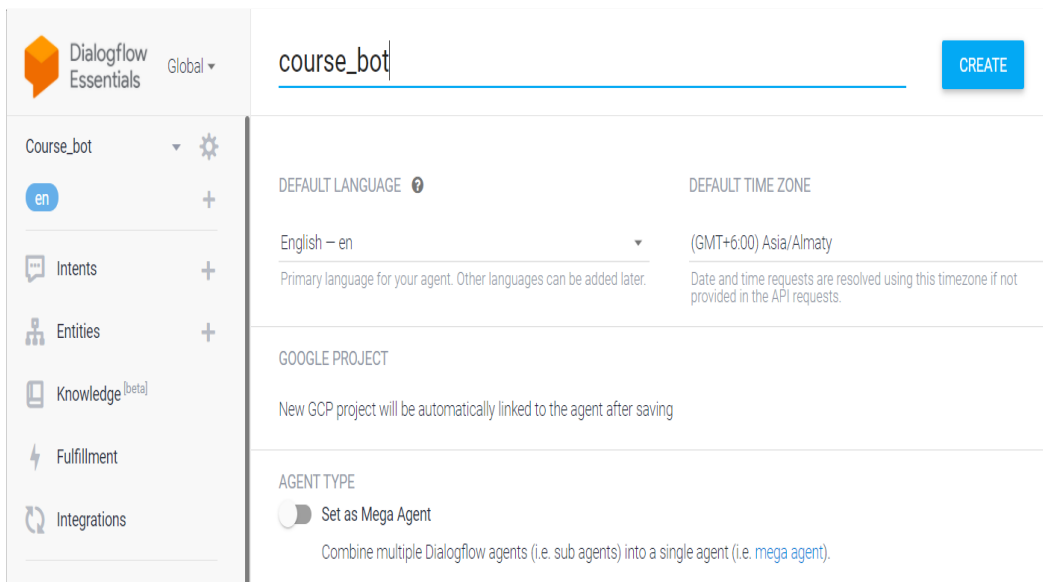
A. Dialog Flow configuration

STEP 1: Log in to Dialog Flow

<https://dialogflow.com/>

STEP 2: Create a new agent

Choose a name for your new bot and the default time zone. Keep the language in English. Name chatbot as Course_Bot. To take advantage you can create new projects that will enable cloud permissions.

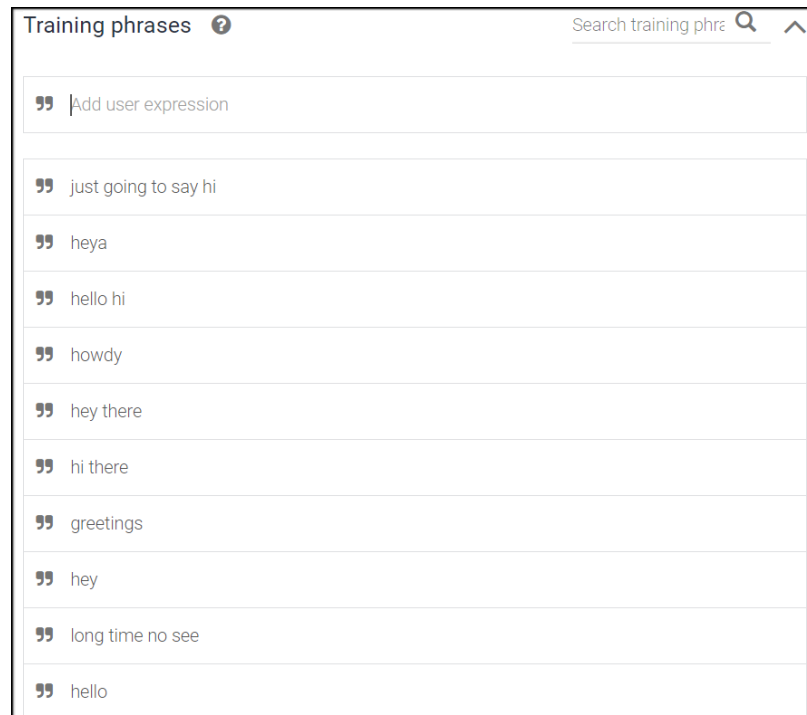


The screenshot displays the Dialogflow Essentials web interface. On the left, a sidebar menu shows the 'Course_bot' agent selected, with options for 'en' (English), 'Intents', 'Entities', 'Knowledge [beta]', 'Fulfillment', and 'Integrations'. The main area is titled 'course_bot' and features a 'CREATE' button. Below the title, there are three configuration sections: 'DEFAULT LANGUAGE' set to 'English – en', 'DEFAULT TIME ZONE' set to '(GMT+6:00) Asia/Almaty', and 'GOOGLE PROJECT' with a note about automatic linking. At the bottom, the 'AGENT TYPE' is set to 'Set as Mega Agent' with a brief explanation.

Configuration Section	Value
Agent Name	course_bot
Default Language	English – en
Default Time Zone	(GMT+6:00) Asia/Almaty
Google Project	New GCP project will be automatically linked to the agent after saving
Agent Type	Set as Mega Agent

STEP 3: Create Intents

Intents are used to understand the intention behind user response. Dialog Flow tries to understand the context of conversation. Click on intents and add keywords in training phrases that the user may enter. After that create a response for added intents. Given below is default welcome intent.



Training phrases
” Add user expression
” just going to say hi
” heya
” hello hi
” howdy
” hey there
” hi there
” greetings
” hey
” long time no see
” hello

To create follow up intents select Add follow-up intent. This enables chatbot to ask questions continuously and the user replies can be the same but for different context. This is the power of follow-up intents. Fallback intent helps to add response upon some invalid user input. There are many more such.

Entities are a mechanism in Dialog Flow for identifying and extracting useful data from natural-language inputs. We have created custom entities and used them in our intents. Prompt can be added if response is not valid.

The screenshot shows the Dialogflow Entities configuration interface. On the left is a sidebar with navigation options: Course_bot, Intents, Entities (selected), Knowledge [beta], Fulfillment, Integrations, and Training. The main area is titled 'course_name' and contains configuration options: 'Define synonyms' (checked), 'Regexp entity' (unchecked), 'Allow automated expansion' (unchecked), and 'Fuzzy matching' (unchecked). Below these is a table of synonyms:

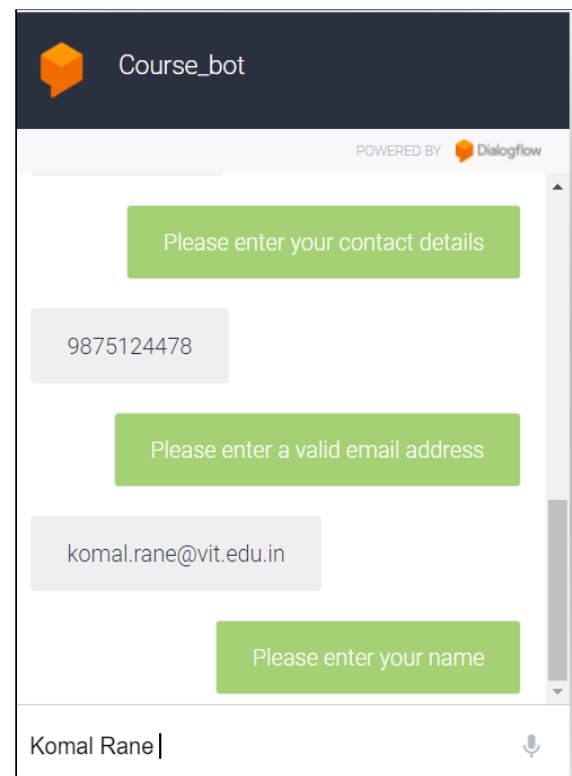
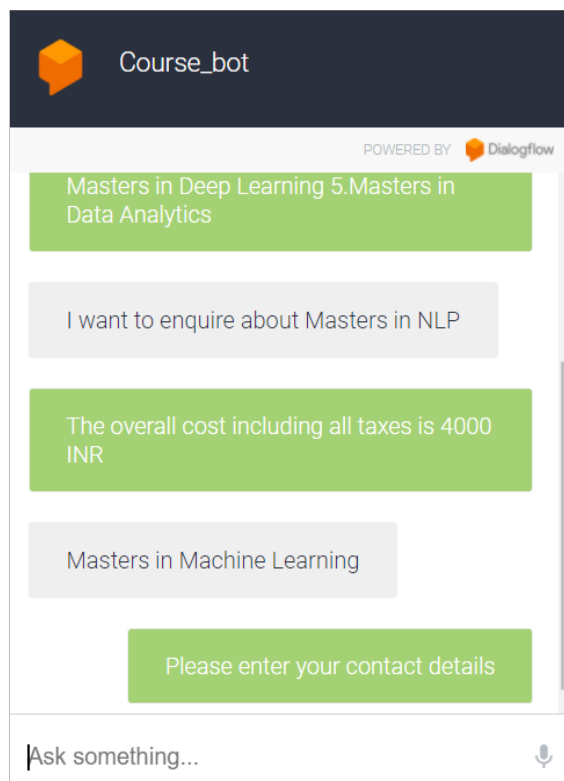
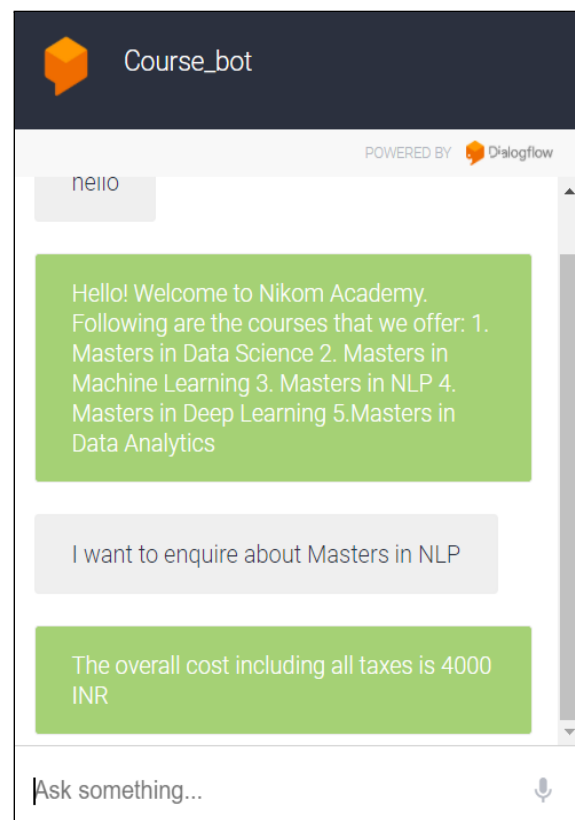
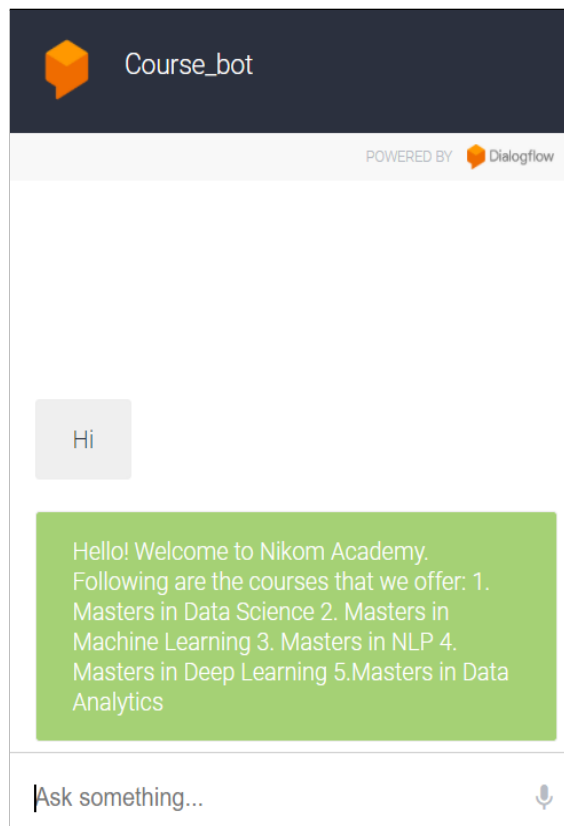
Masters in Deep Learning	Masters in Deep Learning
Masters in Machine Learning	Masters in Machine Learning
Masters in NLP	Masters in NLP
Masters in Data Science	Masters in Data Science
Masters in Data Analytics	Masters in Data Analytics

At the bottom of the table is a link 'Click here to edit entry' and a '+ Add a row' button.

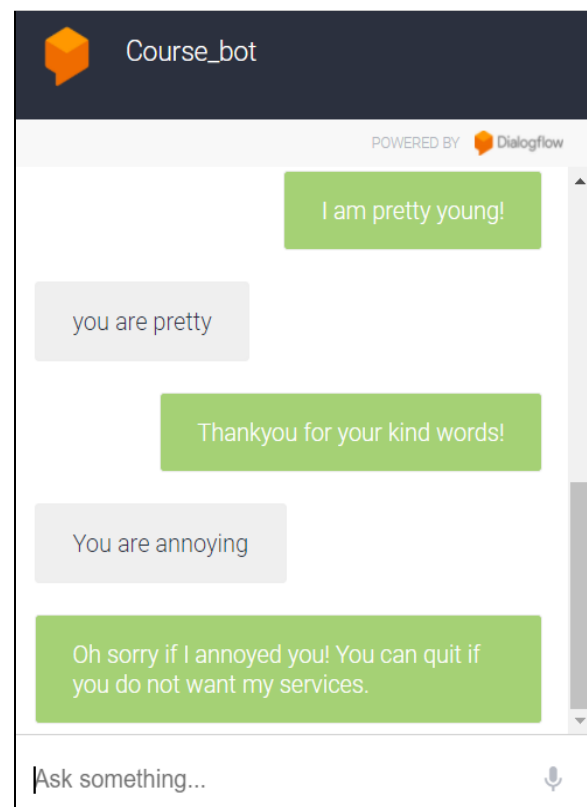
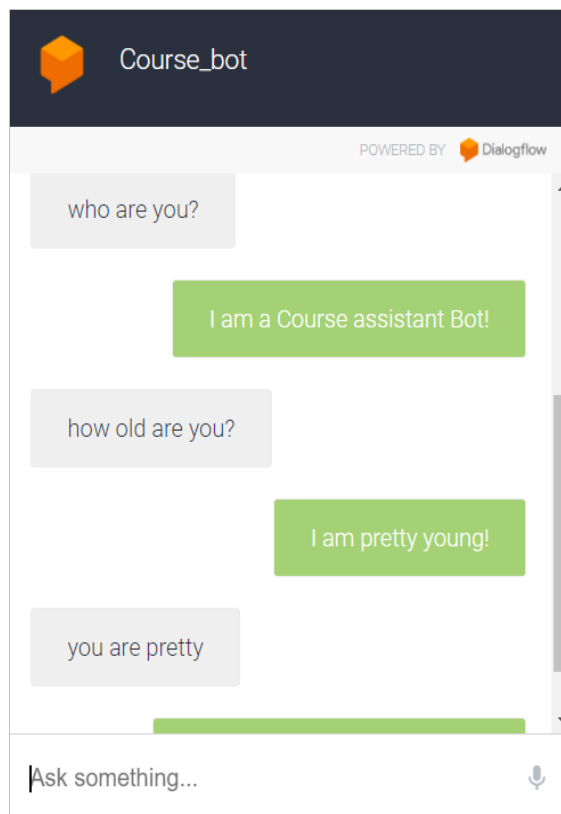
REQUIRED ?	PARAMETER NAME ?	ENTITY ?	VALUE	IS LIST ?	PROMPTS ?
<input checked="" type="checkbox"/>	cust_contact	@sys.phone-num	\$cust_contact	<input type="checkbox"/>	Please enter yo...
<input checked="" type="checkbox"/>	course_name	@course_name	\$course_name	<input type="checkbox"/>	Please select t...
<input checked="" type="checkbox"/>	cust_email	@sys.email	\$cust_email	<input type="checkbox"/>	Please enter a ...
<input checked="" type="checkbox"/>	cust_name	@sys.any	\$cust_name	<input type="checkbox"/>	Please enter yo...
<input type="checkbox"/>	Enter name	Enter entity	Enter value	<input type="checkbox"/>	—

2.3 Results

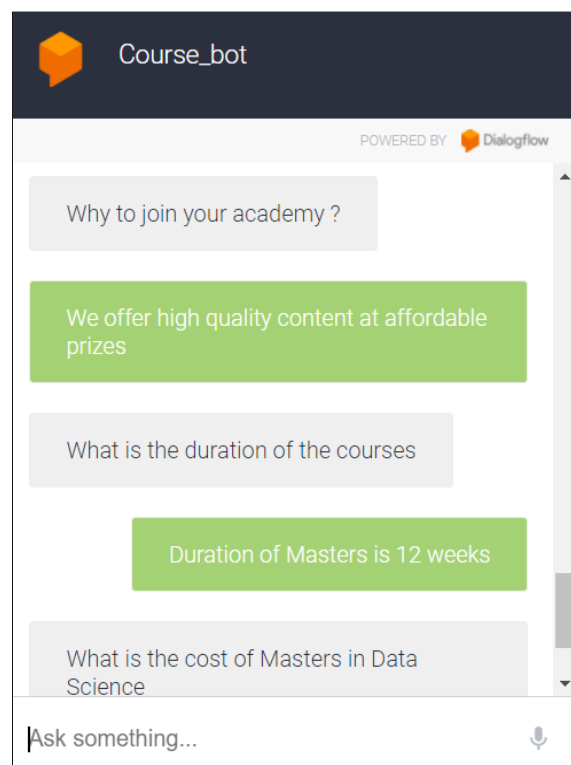
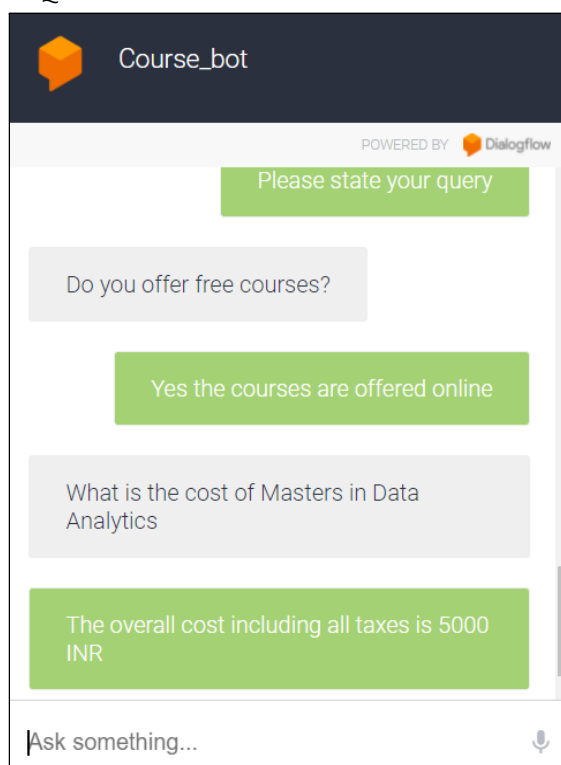
Response from chatbot:



Small Talk Output



FAQS



3. CONCLUSION AND FUTURE SCOPE

The concept of natural language processing of Google Dialog Flow is used to create interactive chatbots. The intents and entities in Dialog Flow help to determine the intention of the user and provide a valid response. It can prove to be a great assistant to handle online traffic related to course enquiries in and across large educational institutes .

By taking the advantage of the extensibility of the system in future it will be used as voice and face recognition to mimic a counsellor, also interacting with the user at deeper levels. A feature of searching nearby available tutors can be integrated to make a real time project. The system can be integrated with mobile devices with the help of applications like WhatsApp, telegram, Facebook messenger, etc.

We believe that this approach is incorporated into existing strategy in the field of education and will provide assistance to the students and other users.

4. REFERENCES

- [1] Menal. Dahiya, "A Tool of Conversation: Chatbot", *INTERNATIONAL JOURNAL OF COMPUTER SCIENCES AND ENGINEERING*, vol. 5, pp. 158-161, 2017.
- [2] Lalwani, Tarun & Bhalotia, Shashank & Pal, Ashish & Bisen, Shreya & Rathod, Vasundhara. (2018). Implementation of the ChatBot System using AI and NLP.
- [3] Bhaumik Kohli , Tanupriya Choudhury, Shilpi Sharma, Praveen Kumar., A Platform for Human- Chatbot Interaction Using Python, IEEE , 2018.
- [4] Prof.K.Bala,Mukesh Kumar,Sayali Hulawale, Sahil Pandita, Chat-Bot For College Management System Using A.I, International Research Journal of Engineering and Technology(IRJET)