Discord Bot - "Eva" A web based tool to simulate text based interactionbetween humans and computers

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Abstract:

This project is developed as a bot named EVA who acts as a virtual assistant and responds to the questions asked. This project is a chat bot in discord which will answer questions related to python coding language. Discord is a platform with the help of which the users can interact with each other through differentmediums such as messaging, voice calls and video calls. The communication happens in private chats or in communities (or partof communities) which in discord are called 'servers'.

Keywords: python, bot, virtual assistant, discord

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Introduction

The project Discord bot 'Eva' is a web based tool to simulate text based interaction between humans and computers. It is a botdeveloped to help students who are preparing for interviews for jobsrelated to python. The student can simply add the bot in their discord and can proceed with asking the questions they have related to python without going through multiple websites looking through different answers provided by different websites. All questions can be asked at one place in one conversation without worrying about even opening the browser. With the growing requirement and love of youth and technology, it is observed that people go throughsources on the internet for education purposes rather than going through books. So with that increase people look forward to measures they can take that will easily educate them instead of browsing through multiple places to get their questions answered.Our bot 'Eva' is one of a kind solution that will help students get their questions on python answered in one go. All the student has to do is greet Eva with a simple hi or hello and begin asking their questions, one at a time. It saves a lot of time that one might waste in browsing through the web pages. https://github.com/Vishallaishetty/Discord-Bot

Related Work

In order to accurately cover the field of research and deal withthe plethora of terms for chatbots in the literature (e.g. chatbot, dialogue system or pedagogical conversational agent) we propose the following definition:

Chatbots are digital systems that can be interacted with entirely through natural language via text or voice interfaces. They are intended to automate conversations by simulating a human conversation partner and can be integrated into software, such as online platforms, digital assistants, or be interfaced through messaging services.

Outside of education, typical applications of chatbots are in customer service, counseling of hospital patients, or information services in smart speakers. One central element of chatbots is the intent classification, also named the Natural Language Understanding (NLU) component, which is responsible for the sense-making of human input data. Looking at the current advances in chatbot software development, it seems that this technology's goal is to pass the Turing Test one day, which could make chatbots effective educational tools. Therefore, we ask ourselves "Are we there yet? - Will we soon have an autonomous chatbot for every learner?" To understand and underline the current need for research in the use of chatbots in education, we first examined the existing literature, focusing on comprehensive literature reviews. By looking at research questions in these literature reviews, we identified 21 different research topics and extracted findings accordingly. To structure research topics and findings in a comprehensible way, a three-stage clustering process was applied. While the first stage consisted of coding research topics by keywords, the second stage wasapplied to form overarching research categories . In the final stage, the findings within each research category were clustered to identify and structure commonalities within the literature reviews.

Architecture

The project is written in Python, the architecture is displayed in the diagram below. As Python is object oriented programming, we have written the code with the same methodology as followed in object oriented programming languages with small separate modules. Chatbot 'Eva' is an assistant that is written in Python with interactive lightweight code and chatbot architecture. First of all the token is used to integrate the bot with the person's discord account. We have used "Async" function as it is a more efficient method, it can open all 100 connections at once,then switch among each active connection as they return results.

For further communication with Eva, we can begin shooting questions about Python and she will reply with her answers to the questions asked.

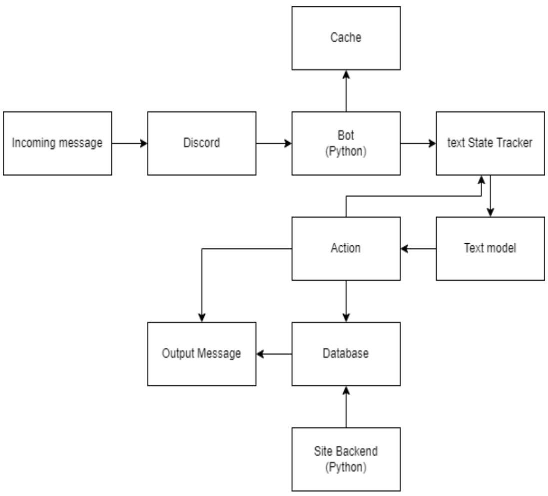


Fig no 1: Architecture of Discord Bot

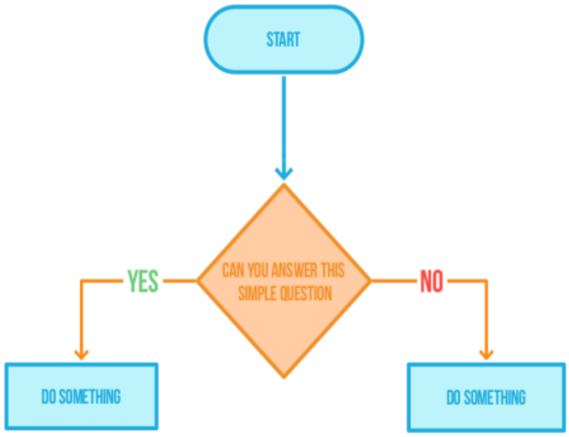
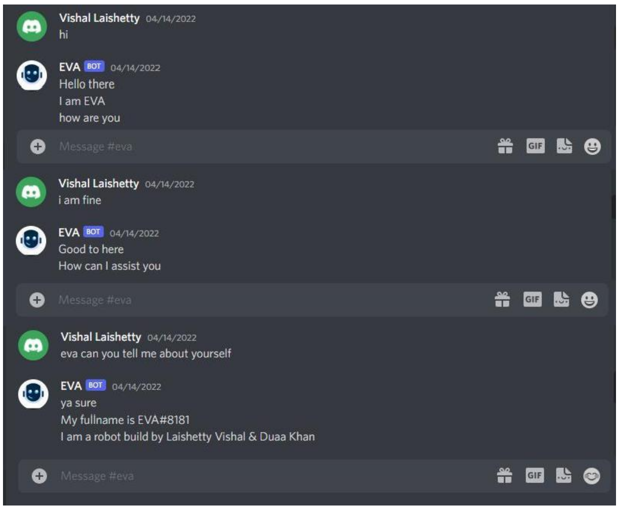


Fig no 2: Action working on Discord Bo

Dialogue flow

In order to begin the conversation with Eva, we have to greet Eva with either Hi, Hello or good morning or any greeting of their choice, as displayed in the diagram below.



CONCLUSIONS

We implemented a prototype of an Open Data chatbot by integratingobject oriented technology in Python. This demonstration showcases a conversational search application for asking questions to Eva about Python. The main limitation for users to prepare for interviews is to go through multiple websites & web pages for searching answers to their questions so we have built a solution for the users to get their questions answered in one place in one go through a chat application without even having to open any web browser.

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