



Chatbot in Python

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ABSTRACT

Chatbots, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chatbot allows a user to simply ask questions in the same manner that they would address a human. The most wellknown chatbots currently are voice chatbots: Alexa and Siri. However, chatbots are currently being adopted at a high rate on computer chat platforms. A simple chatbot can be created by loading an FAQ (frequently asked questions) into chatbot software. The functionality of the chatbot can be improved by integrating it into the organization's enterprise software. Most commercial chatbots are dependent on platforms created by the technology giants for their natural language processing. These include Amazon Lex, Microsoft Cognitive Services, Google Cloud Natural Language API, Facebook DeepText, and IBM Watson. Platforms where chatbots are deployed include Facebook Messenger, Skype, and Slack, among many others.

Scripting Language -Python , **Development tool** - Pycharm.

1. INTRODUCTION

Chatbots, also known as conversational agents, are designed with the help of AI (Artificial Intelligence) software. They simulate a conversation (or a chat) with users in a natural language via messaging applications, websites, mobile apps, or phone.

There are two primary ways chatbots are offered to visitors:

- Web-based applications
- Standalone applications

Chatbots represent a potential shift in how people interact with data and services online. While there is currently a surge of interest in chatbot design and development, we lack knowledge about why people use chatbots.

2. LITERATURE REVIEW

Ramkumar Malvi & Ketan Dharurkar et al. paper presents on survey of various chatbot implementation techniques. The research is based on the survey of various chatbot and it is shown that how the various chatbot differs from each other's. To make chatbot the various technology has been used to make. A chatbot can be considered as a question-answer system where experts provide knowledge for solicitation of users. A chatbot is a software designed to simulate a conversation with human partner. This survey paper aims to present an overview of an existing approaches of implementing a chatbot system. In this paper it compares various chatbot from the first chatbot ELIZA to one of the latest chatbot like ALEXA, not only this is as shown various chatbots like IBM Watson, Siri, Tay, etc. It tells us about how it is implemented and how they actually work. The design and implementation of several chatbots are developed a detailed survey of those systems. I paper presents on college management Chatbot. The college inquiry chat-bots will be built using artificial algorithms that analyse user's queries and understand user's message. The User can ask the question any college-related activities through the chat-bot without physically available to the college for inquiry. The System analysis the question and then answer it to the user. The user can ask any question. In this the Chatbot usually remember the previous command in order to provide the functionality. So, whatever the user ask it will remember for it, it will help the Chatbot and it can analysis it for future references. If

the Chatbot couldn't answer the query asked by the user, then the admin will answer to that question. And that question along with answer is

stored in database so that whenever such questions will be asked so that they get answered directly from the software. Due to this admin doesn't need to answer same question manually anymore. The system replies using an effective Graphical User Interface as if a real person is talking to the user. The user just has to register himself to the system and has to login to the system. The chat-bots consists of core and interface that is accessing the core in (MySQL).

3. TECHNOLOGIES USED

- A. Hardware used – Laptop with Installed memory – 4GB and more ram
System type – 64 bit OS
- B. Platform
 - 1. Laptop/Desktop
- C. Software Tools Used
 - 1. Python
 - 2. This software requirement specification (SRS) report expresses complete description about proposed System. This document includes all the functions and specifications with their explanations to solve related problems.

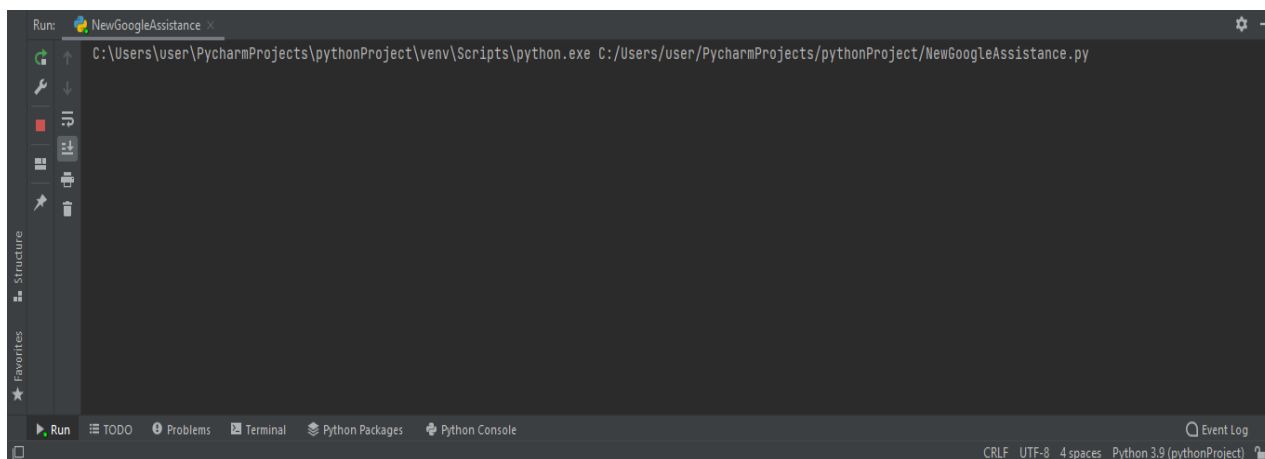
Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

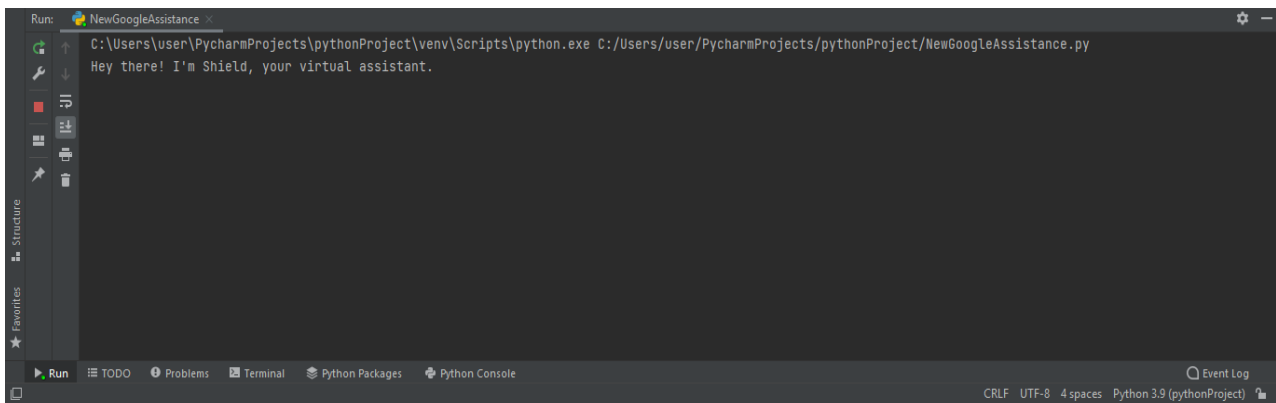
4. METHODOLOGY

The chatbot development methodology blends several modern frameworks and methodologies including design thinking, AI innovation sprints, and agile software development

Artificial Intelligence is the driving force behind the creation of innovative products like autonomous vehicles and chatbots. Recent advancements in Natural Language Processing (NLP) have made chatbots, also referred to as virtual assistants, a great option for improving the customer experience. Answering frequently asked questions, filing claims, checking the status of an order and getting feedback from customers are among the most popular use cases for chatbots. Building a chatbot that offers a good experience to customers requires collaboration from an interdisciplinary team of business analysts, service designers, data scientists, machine learning engineers and software developers. The chatbot development methodology blends several modern frameworks and methodologies including design thinking, AI innovation sprints, and agile software development.

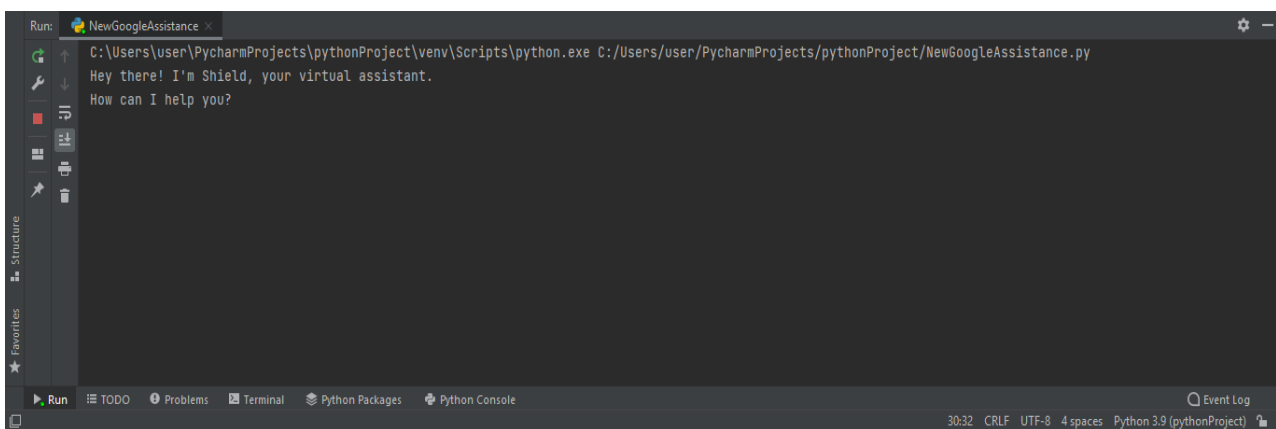
5. SCREENSHOTS OF APPLICATION





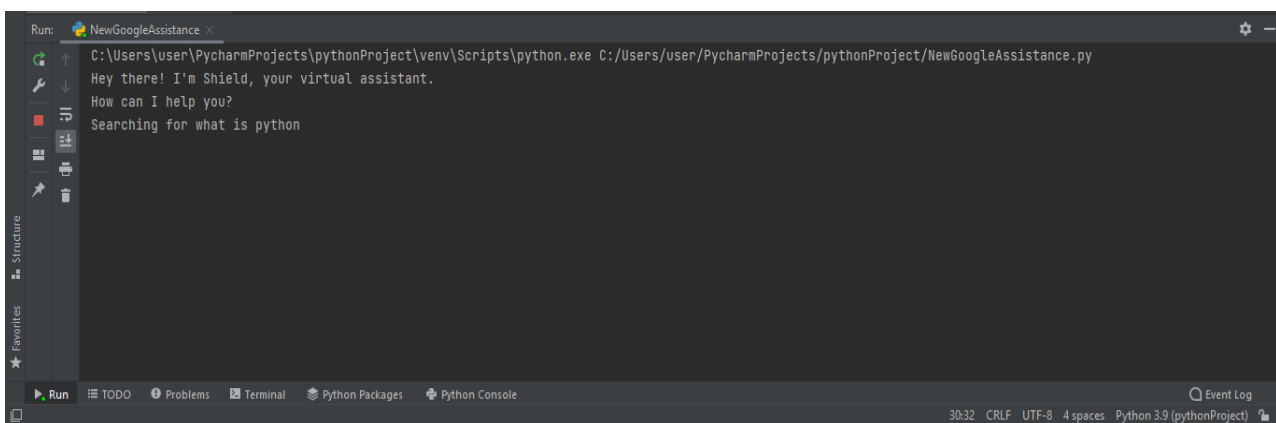
```
Run: NewGoogleAssistance
C:\Users\user\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/user/PycharmProjects/pythonProject/NewGoogleAssistance.py
Hey there! I'm Shield, your virtual assistant.
```

The screenshot shows a PyCharm Run console window titled "NewGoogleAssistance". The command prompt shows the execution of a Python script. The output is "Hey there! I'm Shield, your virtual assistant." The interface includes a toolbar on the left with icons for Run, Stop, and other actions, and a bottom status bar with "Run", "TODO", "Problems", "Terminal", "Python Packages", and "Python Console" tabs. The status bar also shows "CRLF UTF-8 4 spaces Python 3.9 (pythonProject)".



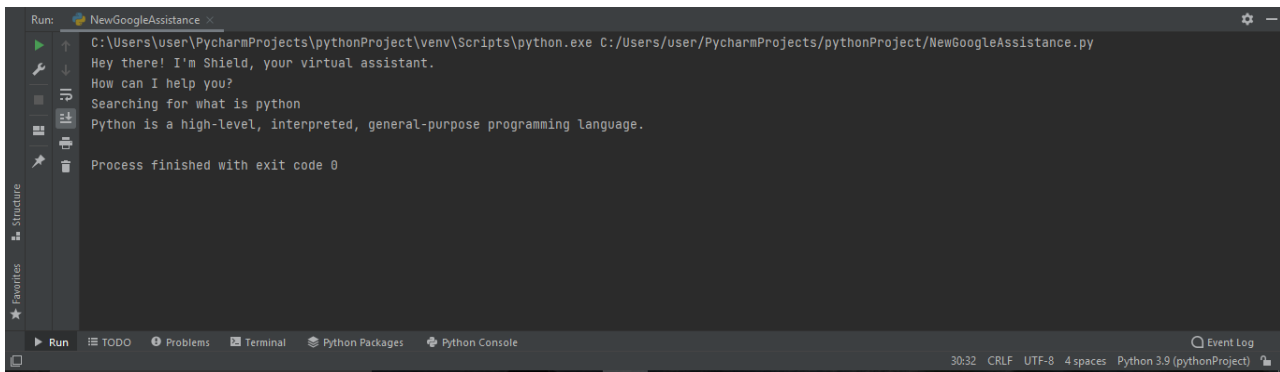
```
Run: NewGoogleAssistance
C:\Users\user\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/user/PycharmProjects/pythonProject/NewGoogleAssistance.py
Hey there! I'm Shield, your virtual assistant.
How can I help you?
```

The screenshot shows the same PyCharm Run console window. The output now includes a second line: "How can I help you?". The status bar at the bottom shows the time "30:32" and the same configuration as the previous screenshot.

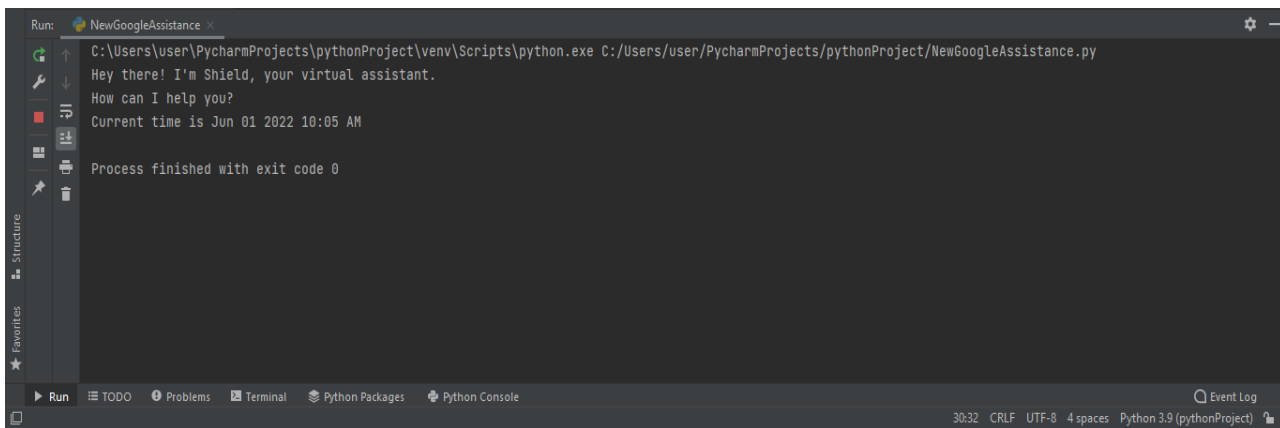


```
Run: NewGoogleAssistance
C:\Users\user\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/user/PycharmProjects/pythonProject/NewGoogleAssistance.py
Hey there! I'm Shield, your virtual assistant.
How can I help you?
Searching for what is python
```

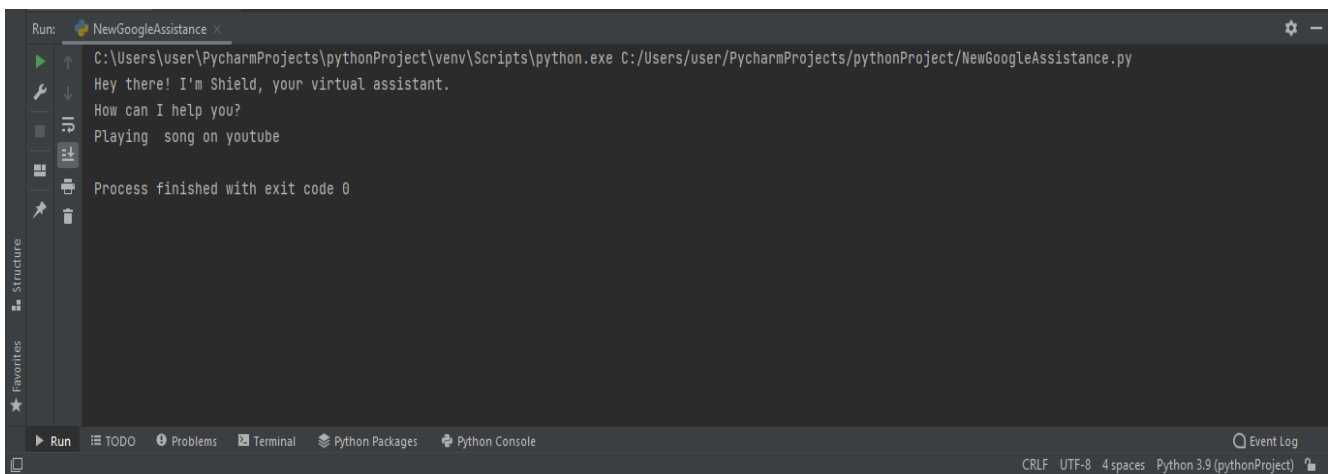
The screenshot shows the PyCharm Run console window with a third line of output: "Searching for what is python". The status bar at the bottom shows the time "30:32" and the same configuration as the previous screenshots.



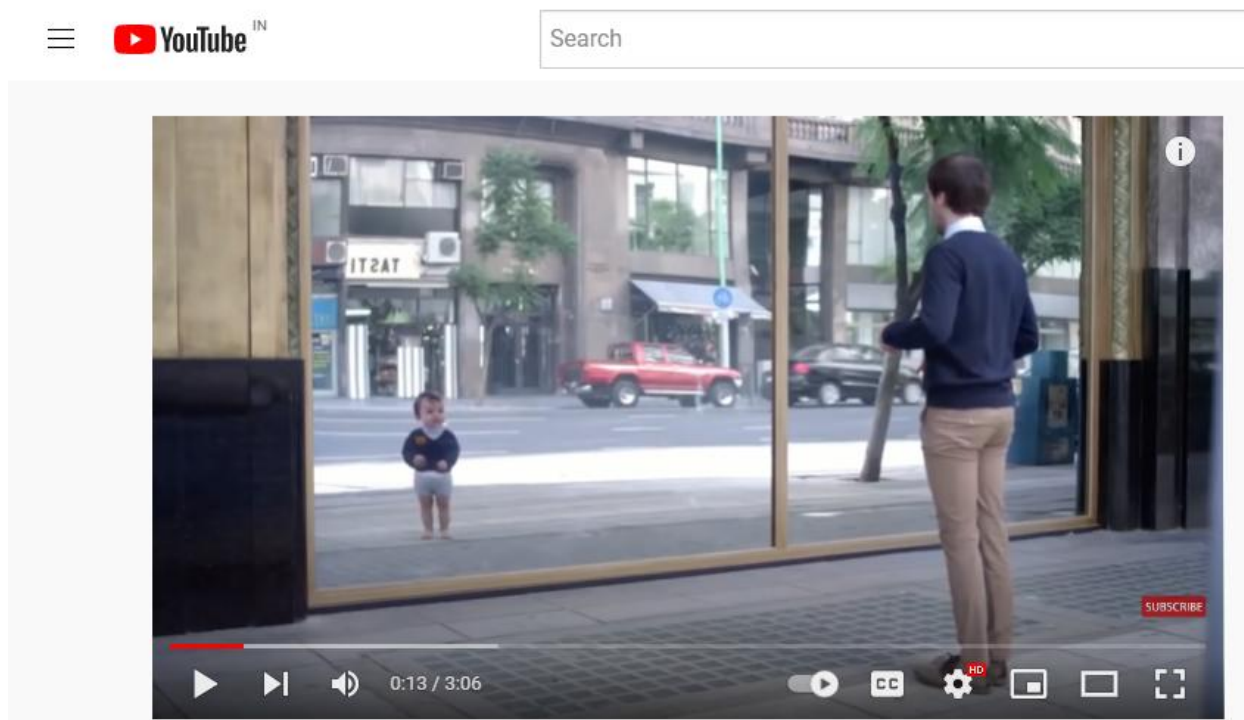
```
Run: NewGoogleAssistance x
C:\Users\user\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/user/PycharmProjects/pythonProject/NewGoogleAssistance.py
Hey there! I'm Shield, your virtual assistant.
How can I help you?
Searching for what is python
Python is a high-level, interpreted, general-purpose programming language.
Process finished with exit code 0
```



```
Run: NewGoogleAssistance x
C:\Users\user\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/user/PycharmProjects/pythonProject/NewGoogleAssistance.py
Hey there! I'm Shield, your virtual assistant.
How can I help you?
Current time is Jun 01 2022 10:05 AM
Process finished with exit code 0
```



```
Run: NewGoogleAssistance x
C:\Users\user\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/user/PycharmProjects/pythonProject/NewGoogleAssistance.py
Hey there! I'm Shield, your virtual assistant.
How can I help you?
Playing song on youtube
Process finished with exit code 0
```



6. Conclusion

Chatbots are an extremely promising technology. They are bound to stay with us and will grow in popularity with the increasing adoption of messaging apps and new

digital communication channels. You should get used to them as more and more companies are choosing chatbots for marketing purposes and to automate customer service.

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