CUSTOMER SUPPORT CHATBOT

A PROJECT REPORT

Submitted in Partial Fulfillment of the Requirement for the Award of the Degree of

BACHELOR OF TECHNOLOGY

(Computer Science (CT – IS))

To

POORNIMA UNIVERSITY

JAIPUR, RAJASTHAN

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Session: 2019-20

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ACKNOWLEDGEMENTS

We have undergone a project development which was meticulously planned and guided at every stage so that it became a life time experience for us. This could not be realized without the help from numerous sources and people in the Poornima University.

We are thankful to **Dr. Manoj Gupta, ProPresident, and Poornima University** for providing us a platform to carry out this activity successfully.

We are also very grateful to **Mr. Ravi Godara (HOD, Computer Engineering)** for his kind support and guidance.

We would also like to express our hearts felt appreciation to all of our friends whom direct or indirect suggestions help us to develop this project and to entire team members for their valuable suggestions.

Lastly, thanks to all faculty members of Department of Computer Engineering for their moral support and guidance.

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ABSTRACT

Customer Support Chatbot is a computer program used to conduct an on-line chat conversation via text for providing direct contact with a live human agent. Designed to convincingly simulate the way a human would behave as a conversational partner.

In this Project, we have created a Chatbot for providing Customers proactive interaction with their products and profiles.

You can customize the data according to business requirements and train the Chatbot with great accuracy. Chatbots are used everywhere and all businesses is looking forward to implementing Chatbot in their workflow.

Over past few years, messaging applications have become more popular than Social networking sites. People are using messaging applications these days such as Facebook Messenger, Skype, Viber, Telegram, Slack etc. To interact on such messaging platforms with many users, the businesses can write a computer program that can converse like a human which is called a Chatbot.

Chatbots have changed the way business and customers interact. It is an uncompromised part of your website or app now. No longer humans need to be present and answer the mundane queries, automated our high-end Chatbots designed to deliver the speech or in-text replies handle these for you. Enhancing customer interaction, query resolution and being available 24*7, Chatbots add a new dimension to the business growth.

REQUIREMENTS AND SPECIFICATION

- Hardware Requirements :

Processor : i5 7th GEN
Hard Disk : 40 GB
RAM : 1GB (Minimum)

- Software Requirements :

Operating System : Windows 10 Pro
Technology : PYTHON –V3.8 ,
Tkinter

PROPOSED SOLUTION

❖ Tkinter:

The Tkinter module (“Tk interface “) is the standard Python interface to the Tk GUI toolkit from Scriptics, which is formerly developed by Sun Labs.

Tkinter consists of a number of modules. The Tk interface is provided by a binary extension module named _tkinter. The public interface is provided through a number of Python modules. The most impotent interface module is the Tkinter module itself. To use Tkinter, all you need to do is to import the Tkinter module.

In our project we used this module in following manner:

```
from tkinter import *
from tkinter import Tk,StringVar,ttk
from tkinter import messagebox
import tkinter.messagebox as tkMessageBox
import tkinter as tk
import random


root=Tk()
root.geometry("560x420+0+0")
root.title("Chat BOT")
root.configure(background='white')
```

Fig 1: Importing tkinter Module

Interface Of Chatbot :

In Fig 2. The interface of our Chatbot is made of text, buttons and user screen.

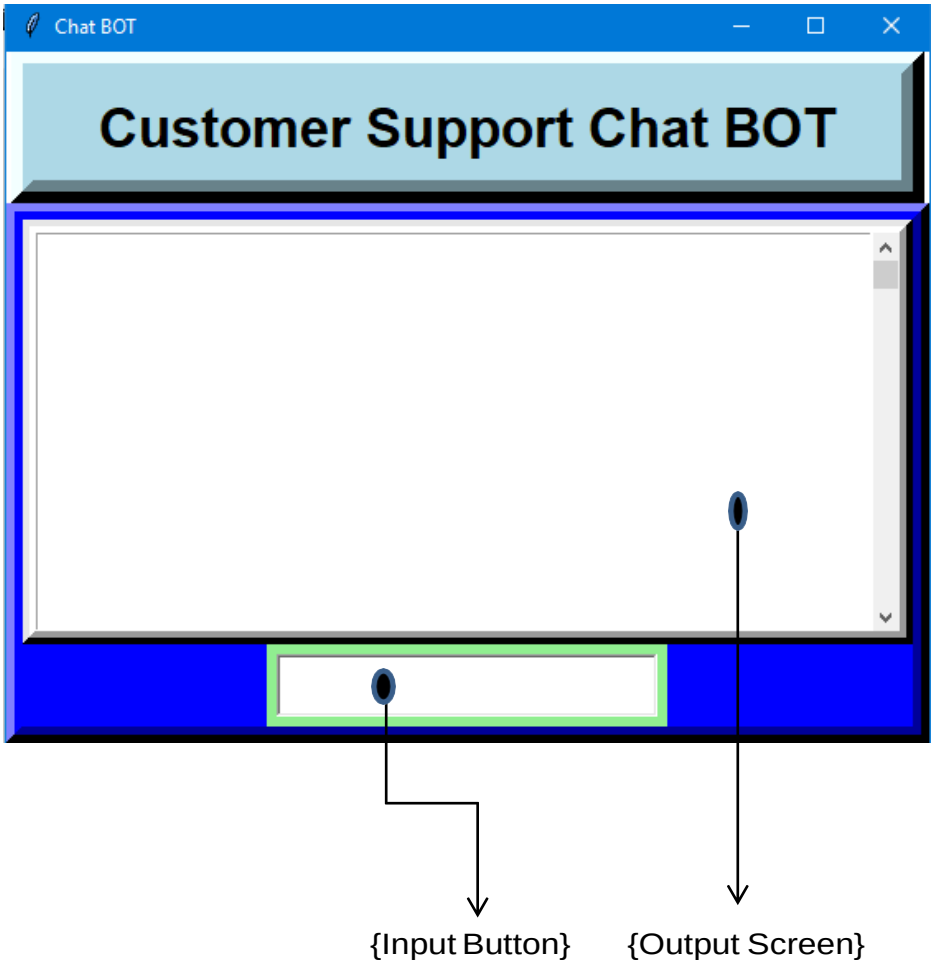


Fig 2. Interface of Chatbot

Chatbot Features :

By using our Chatbot customers can perform various operations .Like ordering products, get Discount Coupons, Edit profile, delete order, etc.

Here in (Fig 3 , Fig 4, Fig 5, Fig 6, Fig 8, Fig 9) are the snapshots of some operations performed by customer :

Fig 3: Customer Order Status

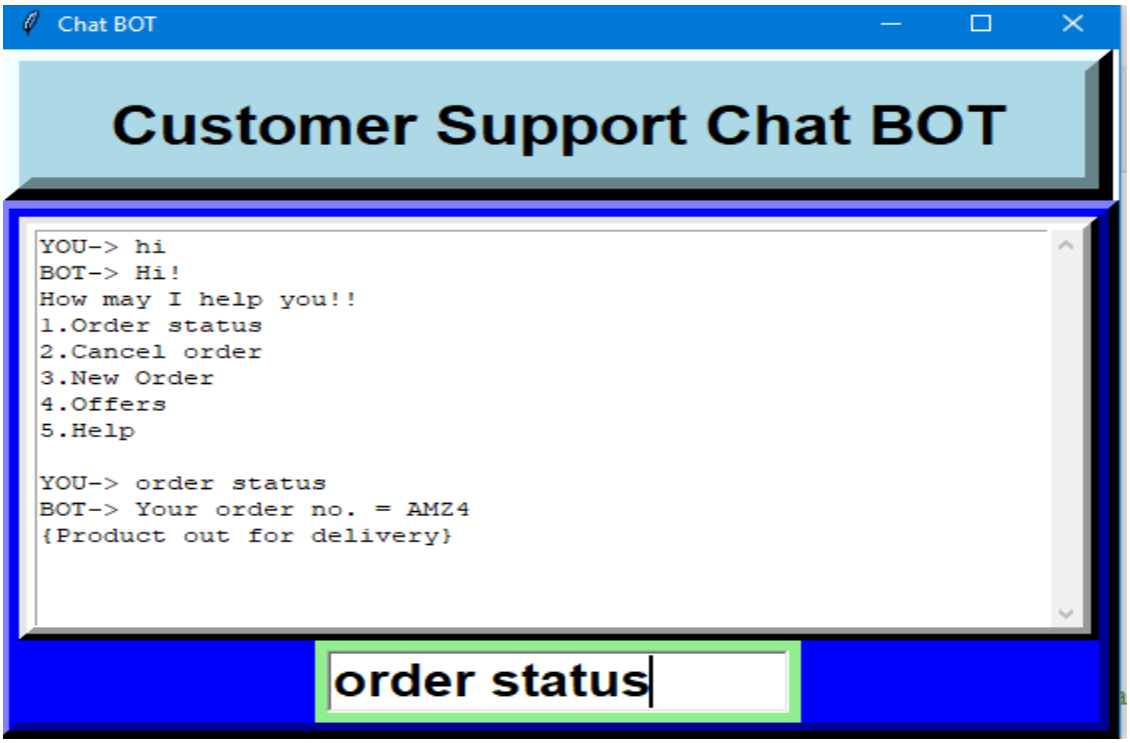


Fig 4: Cancellation of Order:

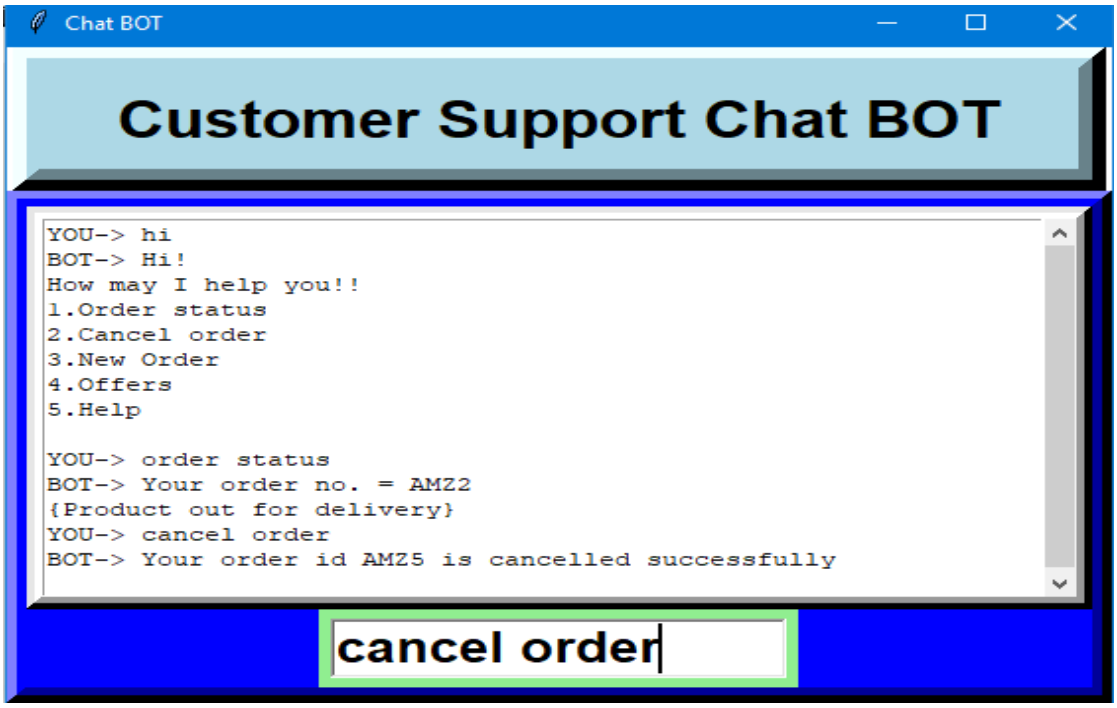
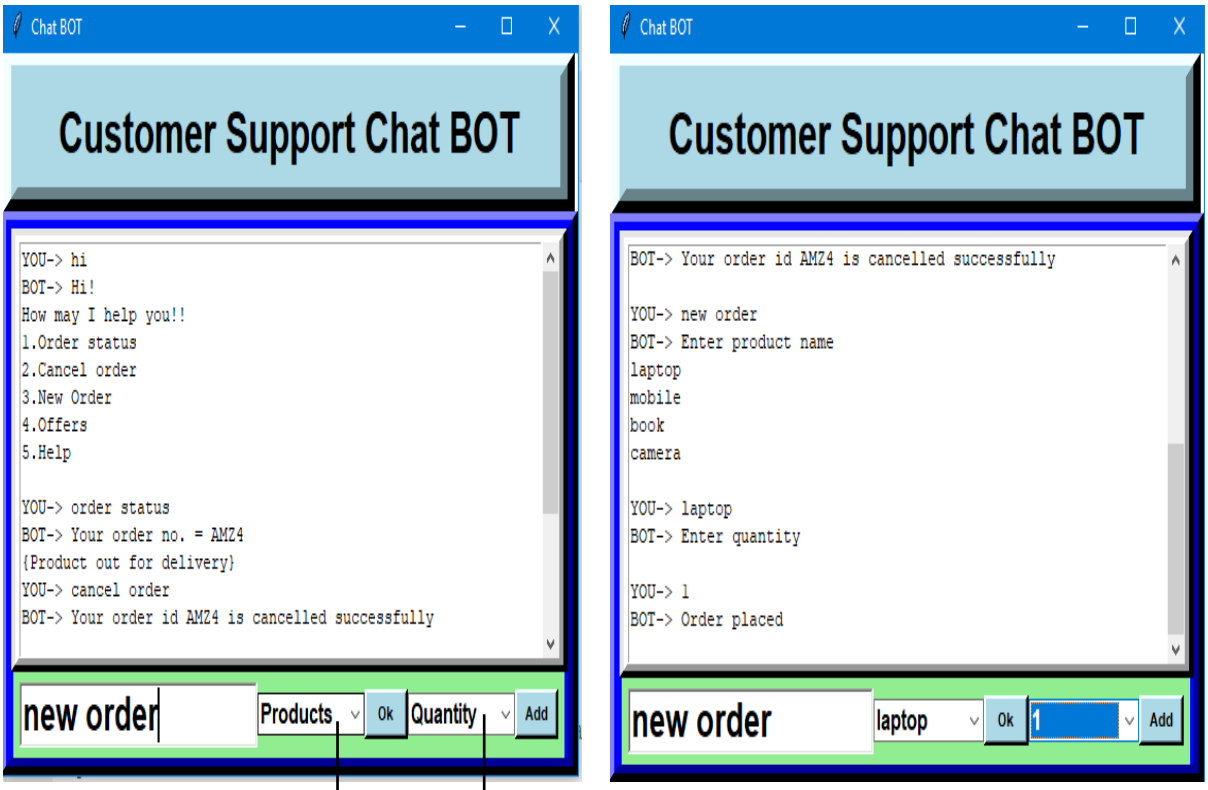


Fig 5: Ordering New Products with Quantity:



{Drop down botton with List of Products}

{Drop down Button to select Quantity}

- ✓ After selecting new product and its quantity click on OK and Add Buttons.

Fig 6: Selecting Offers

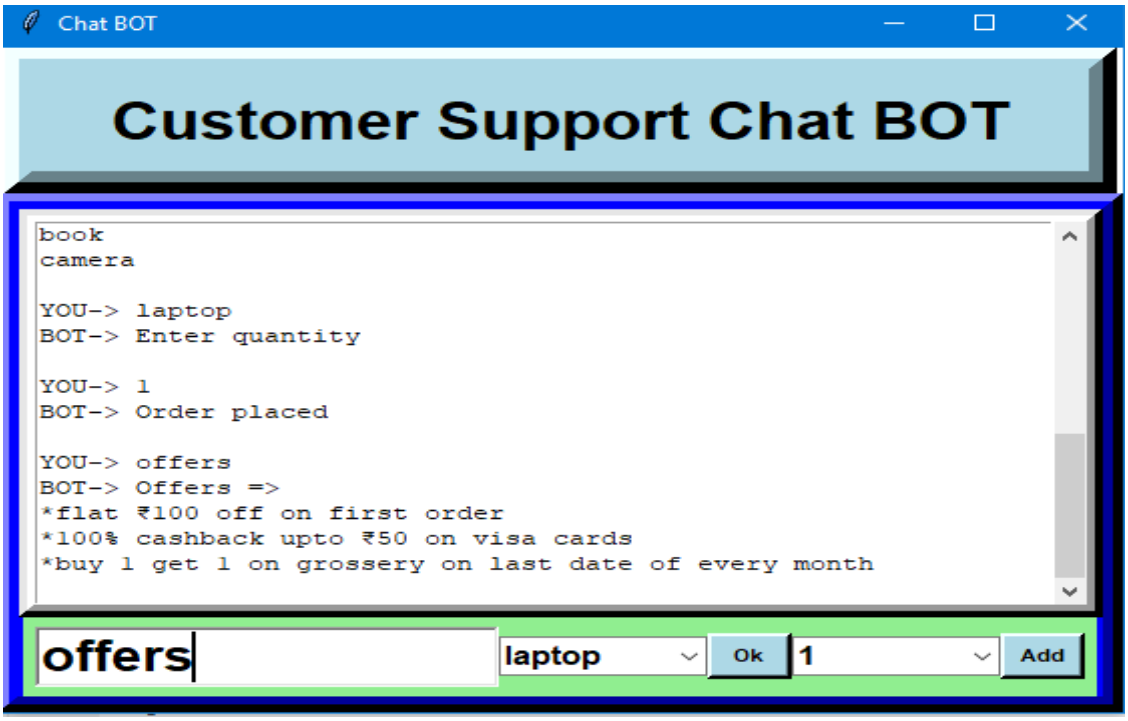


Fig 7: Viewing and Changing Credentials

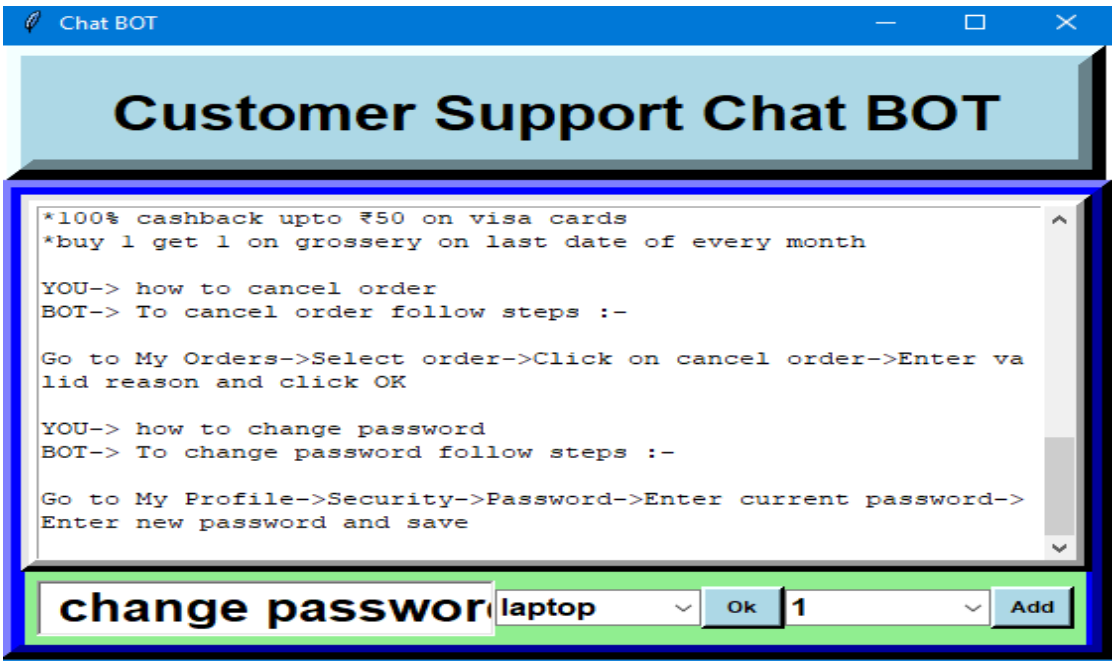


Fig 8: Changing Personal Details

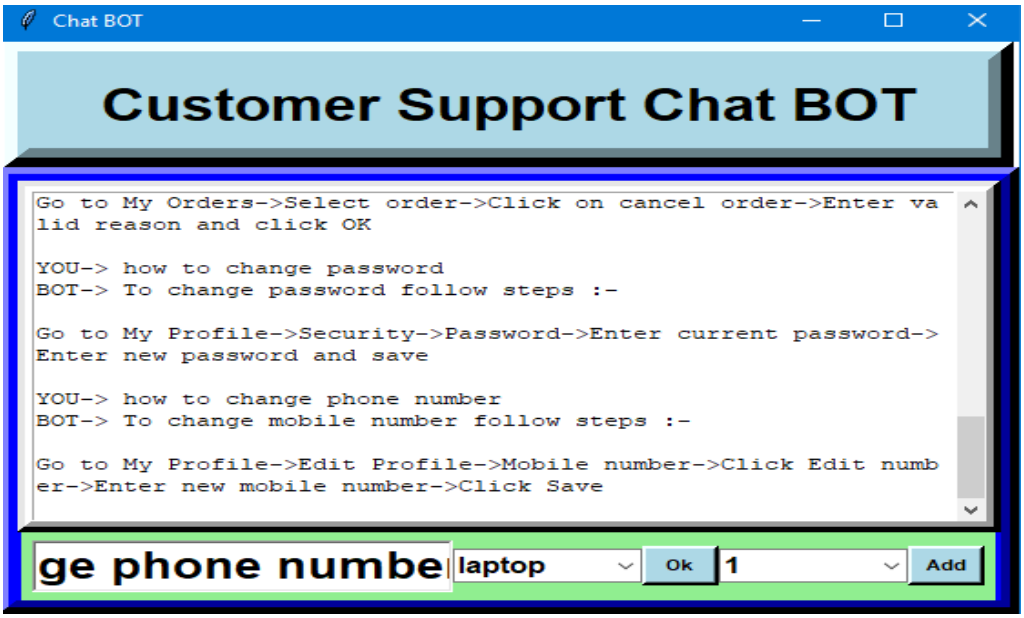
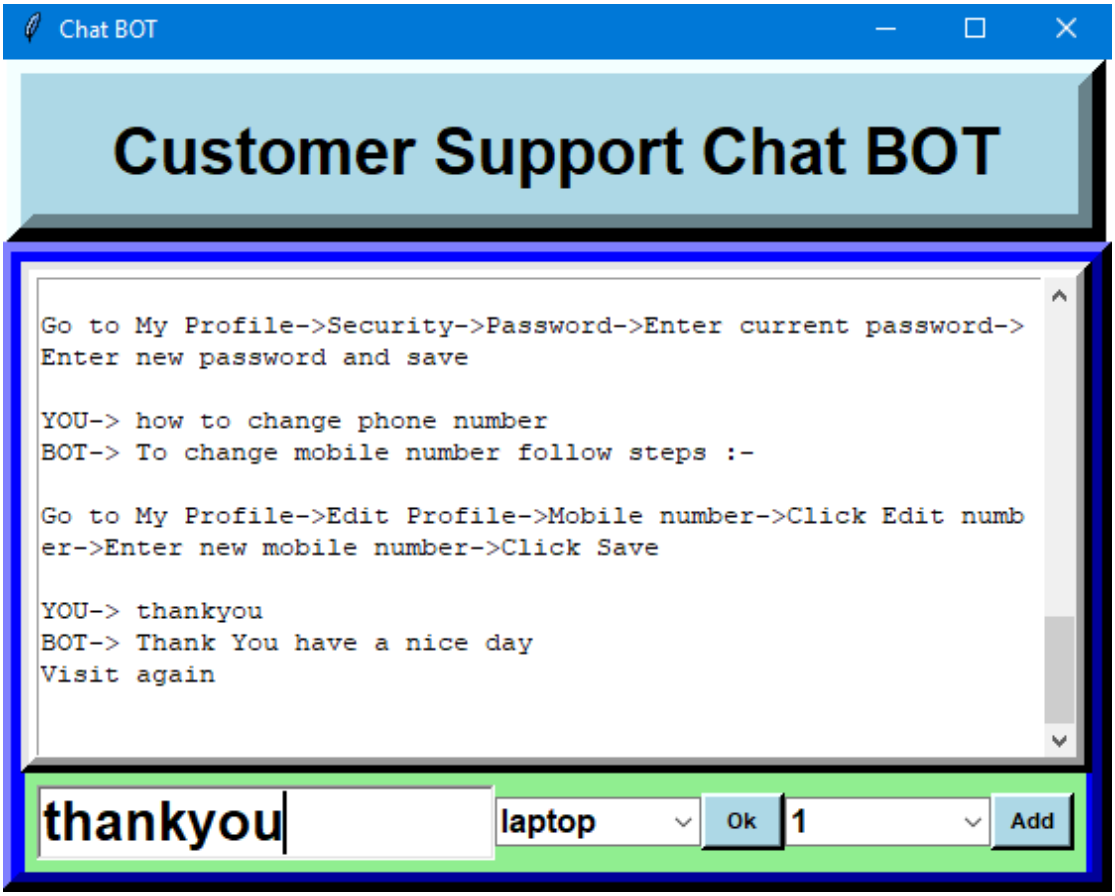


Fig 9: To Quit Chatbot



ADVANTGES & DISADVANTAGES

❖ ADVANTAGES

1. Accessible anytime: I'm sure most of you are always kept on hold while operators connect you to a customer care executive. On an average people spend around 7 minutes until they are assigned to a person. Gone are the frustrating days of waiting in a queue for the next available operative. They are replacing live chat and other forms of slower contact methods such as emails and phone calls. Since Chatbots are basically virtual robots they never get tired and continue to obey your command. They will continue to operate every day throughout the year without requiring taking a break. This improves your customer UX and helps you rank highly in your sector. Another advantage of this instant response is that you can also skillfully craft your Chatbot to maintain your image and brand.

2. Handling Capacity: Unlike humans who can only communicate with one human at a time, chat bots can simultaneously have conversations with thousands of people. No matter what time of the day it is or how many people are contacting you, every single one of them will be answered immediately. Imagine you own a restaurant, and you have a good reputation for your food of which most of your revenues come from delivery. As the demand keeps rising, you will have more customers to take orders from but very few staff to attend them all. Having a Chatbot would eliminate such problem and cater to each and every person and ensure that no order is missed. Companies like Taco Bell and Dominos are already using Chatbots to arrange delivery of parcels.

3. Customer Satisfaction: Humans are bound to change of emotions. Chatbots, on the other hand, are bound by some rules and obey them as long as they're programmed to. They will always treat a customer in the perfect way no matter how rough the person is or how foul language the person uses. Not everyone orders the same food everyday, people's choices may change everyday. In this case, it can use your order history to make suggestions for the next order, learn your address details and much more. Customers love this smooth interaction and want all their transactions to be as simple as possible.

4. Cost Effective: Hiring a human for a job is never a cheap affair, and it will be expensive if your revenue are not high or sales targets are not met and would create havoc in the business. Due to the boundaries of human beings, a single human can only handle one or two people at the same time. More than that would be extremely tough for the employee. Chatbots could help solve this age-old problem. As one Chatbot is equal to loads of employees, it can easily communicate with thousands of customers at the same time. We would only need a handful of people to jump into conversations sometimes when necessary. Hence, it would drastically bring down the expenses and bring about a steep rise in revenue and customer satisfaction.

5. Faster Onboarding: Before you want to accomplish a task, you first must learn how to work on the task and complete it. Only then will they be considered fit for the

job. There is a continuous teaching involved in every level of hierarchy the employee will go through. Also, there will be a lot of change in the employees, some stay, some get fired, some more join in etc. What we want to say is, employees will change; it's a fact. And this would require you to allot a lot time of your employees into grooming the new joiners. Chatbots could eliminate that time to almost zero, but provide a very clean and easy to understand conversation flow and structure that needs to be maintained by the Chatbot. No doubt there will be changes in this too, but it will rather take a fraction of your time to resolve as compared to human employees.

❖ DISADVANTAGES

1. Too many functions Most of developers strive to create a universal Chatbot that will become a fully-fledged assistant to user. But in practice functional bots turn out not to cope with the majority of queries. They often do not understand the user, forget what they were told 5 minutes earlier, and have many other disadvantages. And that is no wonder, as the development of a universal bot, which would understand natural language and could evaluate context, takes years of hard work for a team of experienced programmers. And even in this case, such programs should be constantly improved while in service. However, modern technologies allow building rather useful bots to perform specific actions such as booking train tickets or providing support to bank customers.

2. Complex interface talking to a bot implies talking in a chat, meaning that a user will have to write a lot. And in case a bot cannot understand the user's request, he will have to write even more. It takes time to find out which

commands a bot can respond to correctly, and which questions are better to avoid. Thus, talking to a Chatbot does not save time in the majority of cases. Perhaps the efficiency of virtual assistants will increase due to the implementation of voice recognition function in the future. But for the time being their functional capabilities are very restricted, and they can be truly useful only in a few business areas.

TECHNOLOGY

ABOUT PYTHON

Dating from 1991, Python is a relatively new programming language. From the start, Python was considered a gap-filler, a way to write scripts that "automate the boring stuff" (as one popular book on learning Python put it) or to rapidly prototype applications that will be implemented in one or more other languages.

However, over the past few years, Python has emerged as a first-class citizen in modern software development, infrastructure management, and data analysis. It is no longer a backroom utility language, but a major force in web application development and systems management and a key driver behind the explosion in big data analytics and machine Perfect for IT, Python simplifies many kinds of work, from system automation to working in cutting-edge fields like machine learning.

Python is easy to learn. The number of features in the language itself is modest, requiring relatively little investment of time or effort to produce one's first programs. Python syntax is designed to be readable and straightforward. This simplicity makes Python an ideal teaching language, and allows newcomers to pick it up quickly. Developers spend more time thinking about the problem they're trying to solve, and less time thinking about language complexities or deciphering code left by others.

Python is broadly used and supported. Python is both popular and widely used, as the high rankings in surveys like the Tiobe Index and the large number of GitHub projects using Python attest. Python runs on every major operating system and platform, and most minor ones too. Many major libraries and API-powered services have Python bindings or wrappers, allowing Python to interface freely with those services or make direct use of those libraries. Python may not be the fastest language, but what it lacks in speed, it makes up for in versatility. Python is not a "toy" language. Even though scripting and automation cover a large chunk of Python's use cases (more on that below), Python is also used to build robust, professionalquality software, both as standalone applications and as web services.

- What is Python used for?

The most basic use case for Python is as a scripting and automation language. Python isn't just a replacement for shell scripts or batch files, but is also used to automate interactions with web browsers or application GUIs or system provisioning and configuration in tools such as Ansible and Salt. But scripting and automation represent only the tip of the iceberg with Python.

- Python is used for general application programming. Both CLI and cross-platform GUI applications can be created with Python and deployed as self-contained executables.Python doesn't have the native ability to generate a standalone binary from a script, but third-party packages like cx_Freeze or PyInstaller can be used to accomplish that.
- Python is used for web services and Restful APIs. Python's native libraries and third-party web frameworks provide fast and convenient ways to create everything from simple REST APIs in a few lines of code, to full-blown, data-driven sites. Python's latest versions have powerful support for asynchronous operations, allowing sites to handle up to tens of thousands of requests per second with the right libraries.

CONCLUSION & FUTURE SCOPE

❖ Conclusions

Chatbots are the Apps! We have created a simple customer support Chatbot that gives information whenever a user ask.

As we have discussed in the above deliverables, this project brings the power of Chatbots and enriches its usability. They focused entirely on providing information and completing tasks for the humans they interact with.

❖ Future Scope

Chatbots are fully functioning, semi-autonomous systems that can assist customer service experiences and response time. ... The **future scope of Chatbots** could include many benefits for enterprises, but experts say they will need to be gently nudged in the right direction for businesses to reap these benefits.

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