DETECTION OF ONLINE SPREAD OF TERRORISM

A PROJECT REPORT

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MADHYA PRADESH - 466114

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VIT BHOPAL UNIVERSITY,KOTHRIKALAN, SEHORE
MADHYA PRADESH – 466114

BONAFIDE CERTIFICATE

Certified that this project report titled **"DETECTION OF ONLINE SPREAD OF TERRORISM"** is the bonafide work of "**AKSHAY MARKHEDKAR (19BCE10355)".** who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported here does not form part of any other project / research work on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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<tr><td>PROGRAM CHAIR
Dr. M.ASHWIN
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and Engineering
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Dr. VENKAT PRASAD PADHY
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LIST OF FIGURES

ABSTRACT

DETECTION OF ONLINE SPREAD OF TERRORISM

In the recent times, terrorism has grown in an exponential manner in certain parts of the world. This enormous growth in terrorist activities has made it important to stop terrorism and prevent its spread before it causes damage to human life or property. With development in technology, internet has become a medium of spreading terrorism through speeches and videos. Terrorist organizations use the medium of the internet to harm and defame individuals and also promote terrorist activities through web pages that force people to join terrorist organizations and commit crimes on the behalf of those organizations. The basic idea is to stop or reduce spreading of terrorism is to remove all this accounts. Web is a noteworthy wellspring of spreading psychological warfare by discourse, content, sound arrangement. Terrorists use internet to persuade individuals and it paves the way to involve in terrorist activities through provocative webpage that inspires individuals to involve in terrorist groups and organization. To execute this thought we need a great deal of human exertion to gather the data and discover the fear monger gatherings. To reduce the human effort, we implement the system which detects terrorist groups in social media. To implement this idea we are in need of a lot of human effort to gather the information and find out the terrorist groups who are involved in. Thus we implement this system for major causes which detects terrorist groups in internet and social media. It paves the way to reduce the human effort.

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Chapter 1

INTRODUCTION

Terrorist organizations are using the internet to spread their propaganda and radicalize youth online and encourage them to commit terrorist activities.In order to minimise the online presence of such harmful websites we need to devise a system which detects specific keywords in a particular website. The website should be flagged inappropriate if the keywords are found for efficient system development. Data mining consists of text mining methods that help us to scan and extract useful content from unstructured data. Text mining helps us to detect keywords, patterns and important information from unstructured texts. Hence, here we plan to implement an efficient web data mining system to detect such web properties and flag them for further human review. Data mining is a technique used to extract patterns of relevant data from large data sets and gain maximum insights to the obtained results. Web mining as well as data mining are used simultaneously for efficient system development. The literature survey shows the previous work that has been carried out on this subject. The existing systems have been explained in detail in the paper.The system that we propose to implement significantly improves the current system and eliminates the flaws that exist in the existing system.The methodology and results that we achieved after the implementation of the proposed system have also been explained in brief further. This system should be helpful in anti-terrorism and cyber security response departments. The system should help the cops to track communication held between terrorists and should detect web pages developed in different platform.

PROBLEM STATEMENT

In this paper, the real time nature of website is investigated which is designed to check whether a valid information can be extracted from it. They proposed system deliver event notification which is used to monitor the activities and delivers notification according to the investigation knowledge. This research have three stepsFirst, According to the target event, they have numerous activities based on crawl. Second, they estimate location of events and propose probabilistic activities to extract events. Finally, Alert reporting system is developed that takes earthquakes from websites and message is sent the registered user

Chapter 2

SYSTEM ANALYSIS

Websites that have been created using different platforms, different algorithm and different programming languages are tracked. The proposed system is able to check whether the websites and the contents on the internet are promoting and spreading the activities related to terrorism and the terrorism-related propaganda is checked and then detected. The proposed system is used to detect and analyze the websites and also classify them accordingly as the terrorism-related and the normal legitimate users and sort them as the normal user or the terrorist. Data mining and web data mining are the two features that are to be used together for this detection process. Data mining technique is utilized to determine and define the pattern from the available collection of the websites and the data from the websites mined are the huge volume of data sources, the results obtained are widely used . Web mining is also similar to data mining since it involves the text mining methods that are used to scan the data and also extracting the useful pattern from unstructured data. The proposed system is widely used by the government for anti-terrorism organizations. The proposed system aims to help such organizations for tracking the terrorist.

 It is restricted for websites. Prominently classification is the undertaking of making a qualification between genuine client and a psychological militant is a noteworthy arrangement issue with two alternative classes as terrorists non-terrorists. Although, the most common classification algorithm called as Native Bayes are naturally probabilistic. That is they accepted and likelihood dispersion of classes in a stable and moderately adjusted classes over population. Moreover, they as a rule overlook the unmistakable between the misclassification article costs having a place with various classes. All those assumptions are totally wrong while they involving with terrorist detection on the internet. The monitored population is unbalanced so that entire population of internet users is actually close to low, that is zero. It is not expected that the terrorists' activities on the internet to be a stable either-in fact. In web Activities, it is interested in any fluctuations in those web activities and it missing one real terrorists in haystack of user may be highly affected than suspecting several users of being active participant of terrorists.

CHAPTER 3

System Requirement

Minimal Hardware Requirements

Processor	Intel(R) Core (TM) i3-4005U CPU @ 1.70 GHz
RAM	4 GB
Hard Disk	250GB
Input Devices	Keyboard, Mouse

Software Requirements

Operating System	Windows XP+ all version
Front END	Python
Modules	Tkinter, Requests, BeautifulSoup4, Pillow, Ttkthemes

ABOUT THE TOOLS & TECHNOLOGIES

Python
- Python can be easy to pick up whether you're a first time programmer or you're experienced with other languages. The community hosts conferences and meetups, collaborates on code, and much more.
- Python is developed under an OSI-approved open source license is administered by the Python Software Foundation.

Python modules
- The Python Package Index (PyPI) hosts thousands of third-party modules for Python. Both Python's standard library and the community-contributed modules allow for endless possibilities.
-

1) Tkinter

- Python has a lot of GUI frameworks, but Tkinter is the only framework that's built into the Python standard library.
- Tkinter has several strengths. It's cross-platform, so the same code works on Windows, macOS, and Linux.
- Visual elements are rendered using native operating system elements, so applications built with Tkinter look like they belong on the platform where they're run.

2) Requests
- Requests allows you to send HTTP/1.1 requests extremely easily. There's no need to manually add query strings to your URLs, or to form-encode your PUT & POST data — but nowadays, just use the json method!
- Requests is one of the most downloaded Python package today, pulling in around 14M Downloads / Week according to GitHub. Requests is a simple, yet elegant HTTP library.

3) BeautifulSoup4
- Beautiful Soup is a Python library for pulling data out of HTML and XML files.
- It works with your favorite parser to provide idiomatic ways of navigating, searching, and modifying the parse tree.
- It commonly saves programmers hours or days of work.

4) Pillow
- The Python Imaging Library adds image processing capabilities to your Python interpreter.
- This library provides extensive file format support, an efficient internal representation, and fairly powerful image processing capabilities.
- The core image library is designed for fast access to data stored in a few basic pixel formats. It should provide a solid foundation for a general image processing tool.

5) Ttkthemes
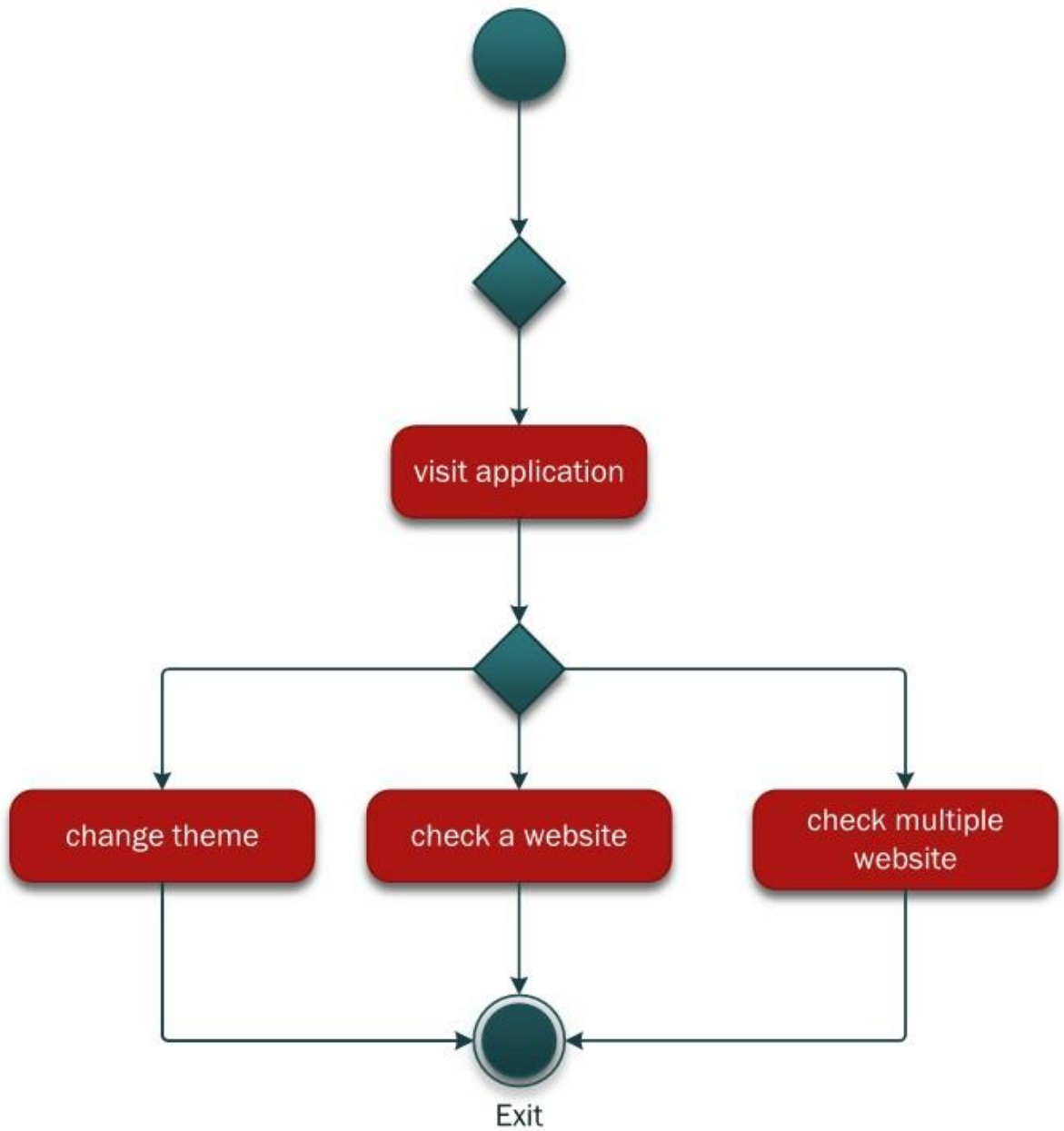- A group of themes for the ttk extenstions for Tkinter gathered together by RedFantom and created by various authors.

SYSTEM DESIGN

1) Use Case diagram
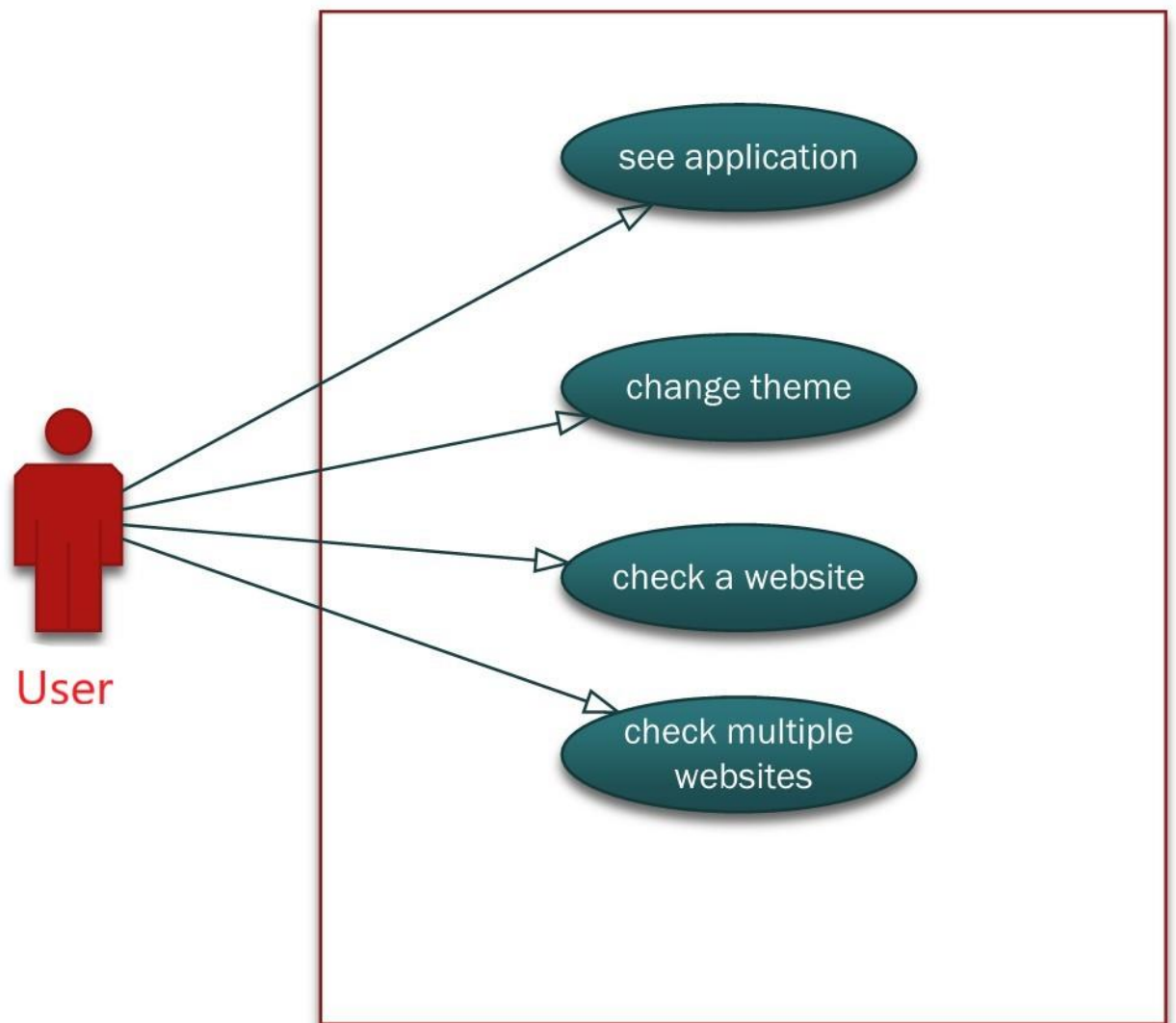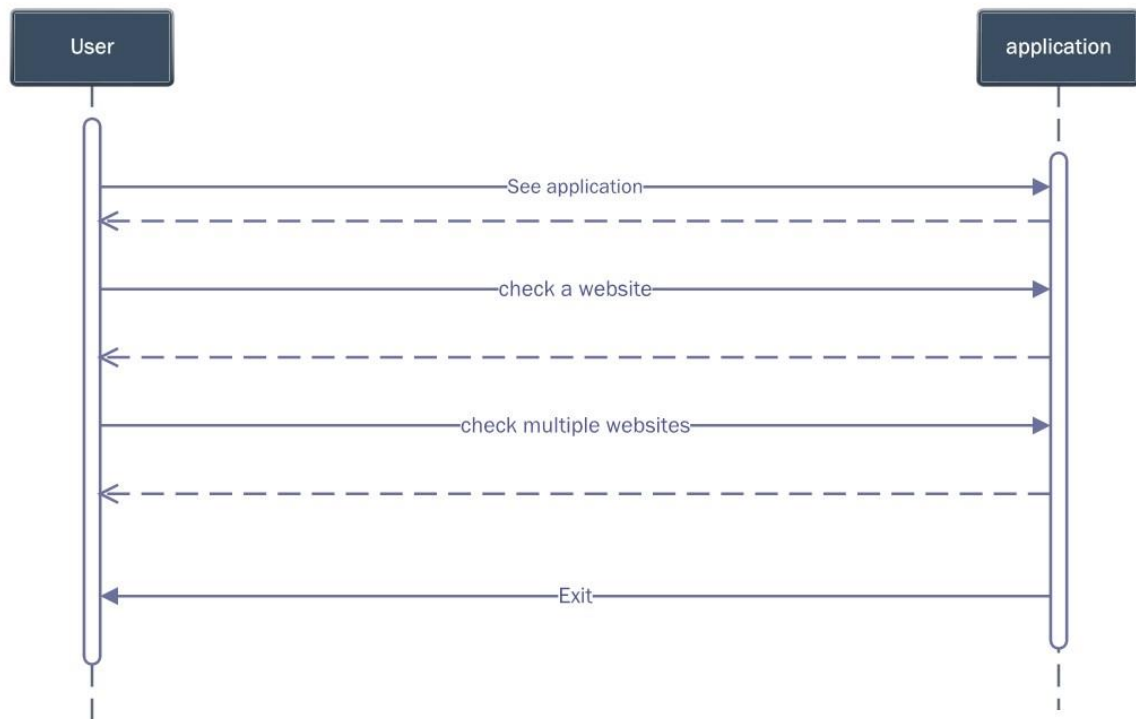
2) Activity Diagram

Activity Diagram for User:

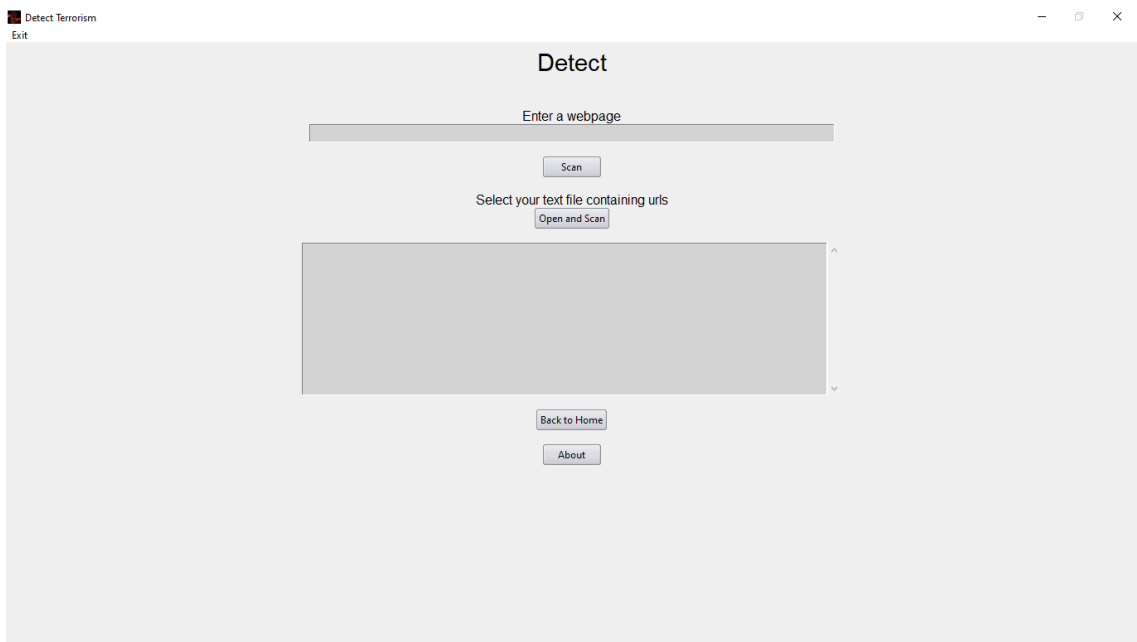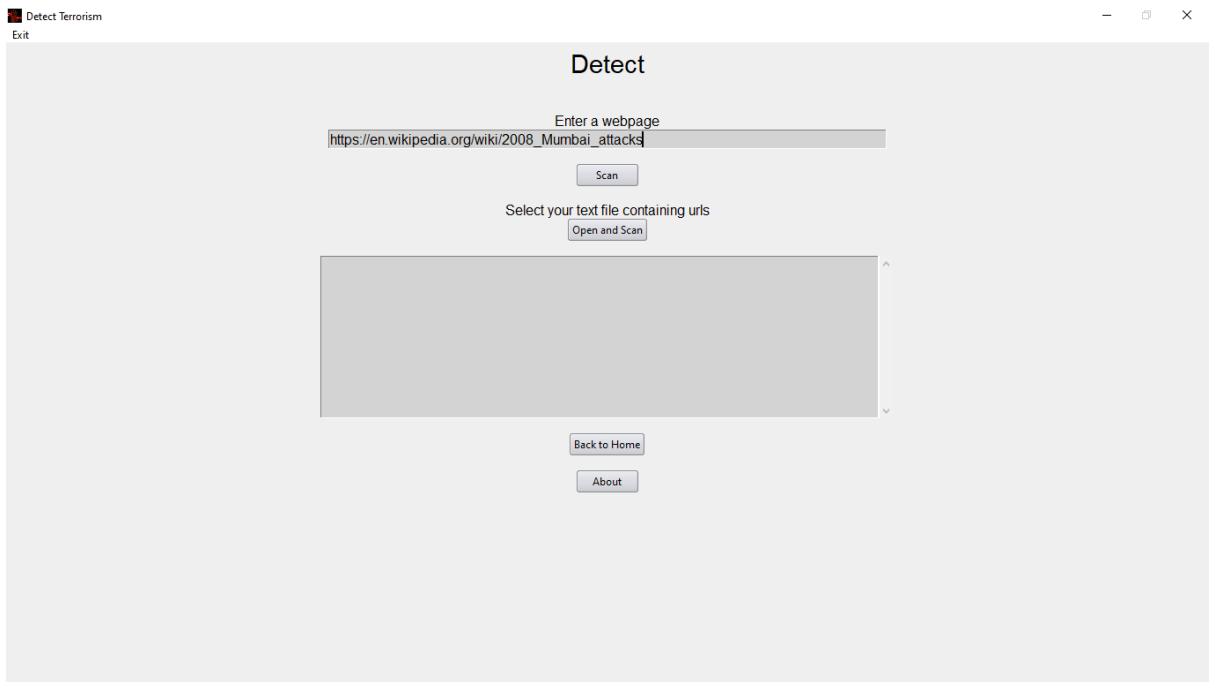**3)** Sequence Diagram

Sequence Diagram for Donor:

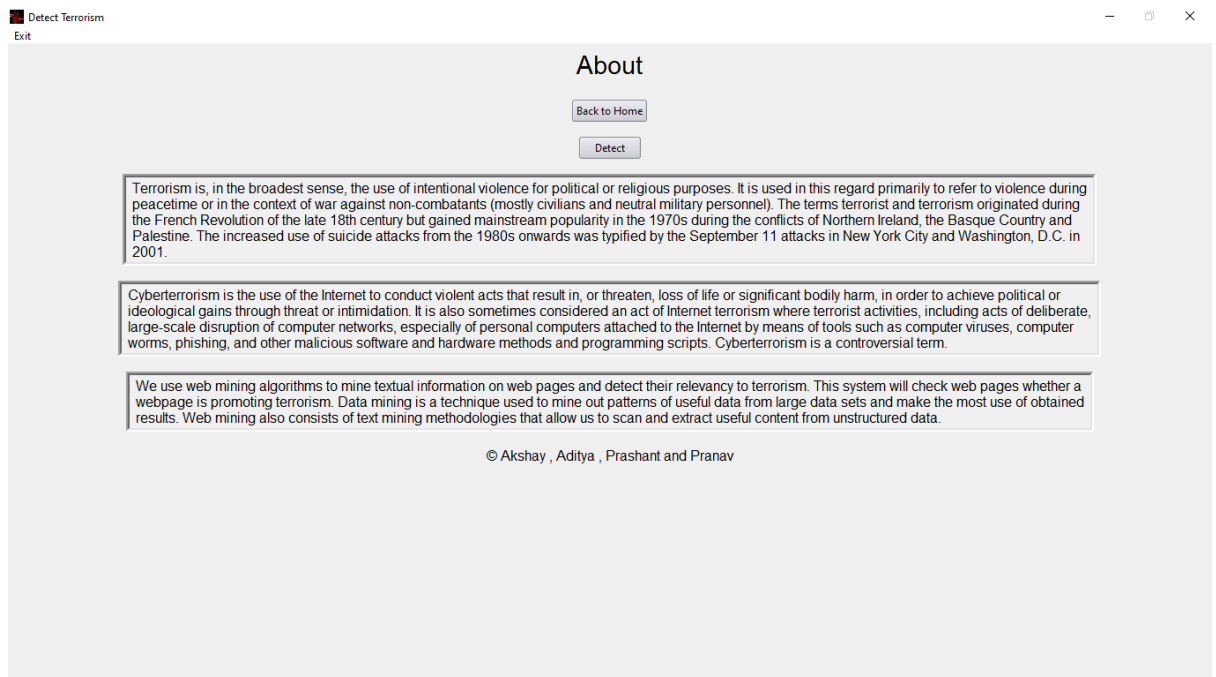# Screenshots

- **Homepage**

- **Detect terrorism page**

- **SEARCH PAGE**

- ## **SEARCHED RESULT**

- ## **About page**

CHAPTER 4

CODE

- ## Install script :-

```
import subprocess
import sys

subprocess.check_call([sys.executable, '-m', 'pip', 'install', 'requests'])
subprocess.check_call([sys.executable, '-m', 'pip', 'install', 'bs4'])
subprocess.check_call([sys.executable, '-m', 'pip', 'install', 'ttkthemes'])
subprocess.check_call([sys.executable, '-m', 'pip', 'install', 'lxml'])
subprocess.check_call([sys.executable, '-m', 'pip', 'install', 'tkinter'])
subprocess.check_call([sys.executable, '-m', 'pip', 'install', 'PIL'])
```

- ## Main code :-

```
import json                              # to print list/dict in textbox
import tkinter as tk                     # root GUI module
import tkinter.scrolledtext as scrolledtext      # module for scrollable
text widget
import tkinter.ttk as ttk                # themed GUI module
from tkinter.filedialog import askopenfile       # module to read file

import requests                          # module to get all contents of a
website
from bs4 import BeautifulSoup            # module to get only text
from a website
from PIL import Image, ImageTk           # module to open and load
a image
from ttkthemes import ThemedStyle        # module to use in-built
GUI themes


# class to get all frames together
class MyApp(tk.Tk):
```

```python
    def __init__(self, *args, **kwargs, ):
        tk.Tk.__init__(self, *args, **kwargs)
        container = tk.Frame(self)
        container.pack(side="top", fill="both", expand=True)

        container.grid_rowconfigure(0, weight=1)
        container.grid_columnconfigure(0, weight=1)

        self.frames = {}

        menu = tk.Menu(container)

        ex = tk.Menu(menu, tearoff=0)
        menu.add_cascade(menu=ex, label="Exit")
        ex.add_command(label="Exit",
                command=self.destroy)



        tk.Tk.config(self, menu=menu)

        for F in (Startpage, PageOne, PageTwo):
            frame = F(container, self)
            self.frames[F] = frame
            frame.grid(row=0, column=0, sticky="nsew")

        self.show_frame(Startpage)

    def show_frame(self, cont):
        frame = self.frames[cont]
        frame.tkraise()


# Home page
class Startpage(ttk.Frame):

    def __init__(self, parent, controller):
        ttk.Frame.__init__(self, parent)
```

```python
        label = ttk.Label(self, text="Detection of Online
Terrorism",font=("Simplifica",22))         # page heading
        label.pack(pady=5, padx=5)

        ttk.Label(self,text="").pack()

        button1 = ttk.Button(self, text="Detect",
                command=lambda: controller.show_frame(PageOne))     #
got to detect page
        button1.pack()

        ttk.Label(self,text="").pack()

        button2 = ttk.Button(self, text="About",
                command=lambda: controller.show_frame(PageTwo))     #
got to about page
        button2.pack()

        ttk.Label(self,text="").pack()


img=ImageTk.PhotoImage(Image.open(r'E:\Detect_Online_Spread_Of_T
errorsim\wallpaper.jpg').resize((1200,700)))   # set the home page image
        img.image = img
        ttk.Label(self,image=img).pack()




#  *****  PAGES  *****
# Detect page
class PageOne(ttk.Frame):

    def __init__(self, parent, controller):
        ttk.Frame.__init__(self, parent)
        label = ttk.Label(self, text="Detect",font=("Simplifica",22))       #
page heading
        label.pack(pady=5, padx=5)

        ttk.Label(self,text="\n").pack()
```

```python
        ttk.Label(self,text="Enter a webpage",font=(18)).pack()
        text = tk.Entry(self,font=(26),width=70,bg="lightgray")           #
textbox to enter a website
        text.pack()

        ttk.Label(self,text="").pack()


        # load the file containing fixed keywords
        j=[]
        f = open(r'E:\Detect_Online_Spread_Of_Terrorsim\keywords.txt')
        for line in f:
            j.append(line.strip())
        f.close()
        d = dict.fromkeys(j,0)

        # code to scan the website given in textbox
        def scan():
            count=0
            url = text.get()
            text.delete(0,"end")
            result = requests.get(url.strip())
            soup = BeautifulSoup(result.content, 'lxml')
            for i in soup.get_text().split():
                if(i.lower()in j):
                    count+=1
                    if i.lower() in d:
                        d[i.lower()] +=1
            l3.config(state=tk.NORMAL)
            l3.delete('1.0',"end")
            di = dict(sorted(d.items(),reverse=True, key=lambda item:
item[1]))
            lis = [(k,v) for k,v in di.items() if v >= 1]
            l3.insert(tk.END,url.strip()+" = "+str(count)+"\n\nKeywords
matched: \n"+json.dumps(lis))
            l3.config(state=tk.DISABLED)

        b2=ttk.Button(self,text="Scan",command= scan)
```

```
        b2.pack()

        ttk.Label(self,text="").pack()



        # code to open and scan the list of websites given in a text file
        def open_n_scan():
            files = askopenfile(mode ='r', filetypes =[("Text File", "*.txt")])
            l3.config(state=tk.NORMAL)
            l3.delete('1.0',"end")
            for url in files:
                count=0
                result = requests.get(url.strip())
                soup = BeautifulSoup(result.content, 'lxml')
                for i in soup.get_text().split():
                    if(i.lower()in j):
                        count+=1
                l3.insert(tk.END,url.strip()+" = "+str(count)+"\n")
            l3.config(state=tk.DISABLED)

        ttk.Label(self,text="Select your text file containing
urls",font=(18)).pack()

        b1=ttk.Button(self,text="Open and Scan",command= open_n_scan)
        b1.pack()

        ttk.Label(self,text="").pack()



l3=scrolledtext.ScrolledText(self,font=(18),height=10,width=70,bg="ligh
tgray",state=tk.DISABLED)        # multiline textbox
        l3.pack()

        ttk.Label(self,text="").pack()

        button1 = ttk.Button(self, text="Back to Home",
                    command=lambda: controller.show_frame(Startpage))
# go to home page
        button1.pack()
```

```python
        ttk.Label(self,text="").pack()

        button2 = ttk.Button(self, text="About",
                    command=lambda: controller.show_frame(PageTwo))
# got to about page
        button2.pack()



# About page
class PageTwo(ttk.Frame):

    def __init__(self, parent, controller):
        ttk.Frame.__init__(self, parent)
        label = ttk.Label(self, text="About",font=("Simplifica",22))
# page heading
        label.pack(pady=5, padx=5)

        ttk.Label(self,text="").pack()

        button1 = ttk.Button(self, text="Back to Home",
                    command=lambda: controller.show_frame(Startpage))
# got to home page
        button1.pack()

        ttk.Label(self,text="").pack()

        button2 = ttk.Button(self, text="Detect",
                    command=lambda: controller.show_frame(PageOne))
# got to detect page
        button2.pack()

        ttk.Label(self,text="").pack()


tk.Message(self,relief="sunken",bd=4,font=(20),width=1100,text="Terror
ism is, in the broadest sense, the use of intentional violence for political
or religious purposes. It is used in this regard primarily to refer to
violence during peacetime or in the context of war against non-
combatants (mostly civilians and neutral military personnel). The terms
terrorist and terrorism originated during the French Revolution of the late
```

18th century but gained mainstream popularity in the 1970s during the conflicts of Northern Ireland, the Basque Country and Palestine. The increased use of suicide attacks from the 1980s onwards was typified by the September 11 attacks in New York City and Washington, D.C. in 2001.").pack()

Info on terrorism

        ttk.Label(self,text="").pack()

tk.Message(self,relief="sunken",bd=4,font=(20),width=1100,text="Cyber terrorism is the use of the Internet to conduct violent acts that result in, or threaten, loss of life or significant bodily harm, in order to achieve political or ideological gains through threat or intimidation. It is also sometimes considered an act of Internet terrorism where terrorist activities, including acts of deliberate, large-scale disruption of computer networks, especially of personal computers attached to the Internet by means of tools such as computer viruses, computer worms, phishing, and other malicious software and hardware methods and programming scripts. Cyberterrorism is a controversial term.").pack()

Info on cyberterrorism

        ttk.Label(self,text="").pack()

tk.Message(self,relief="sunken",bd=4,font=(20),width=1100,text="We use web mining algorithms to mine textual information on web pages and detect their relevancy to terrorism. This system will check web pages whether a webpage is promoting terrorism. Data mining is a technique used to mine out patterns of useful data from large data sets and make the most use of obtained results. Web mining also consists of text mining methodologies that allow us to scan and extract useful content from unstructured data.").pack()

About

        ttk.Label(self,text="").pack()

        ttk.Label(self,text="© Akshay , Aditya , Prashant & Pranav",font=(20)).pack()   # copyright

app = MyApp()

```python
# set default app theme
style = ThemedStyle(app)
style.set_theme("plastik")

# set app icon
icon =
ImageTk.PhotoImage(Image.open(r'E:\Detect_Online_Spread_Of_Terror
sim\icon.jpg'))
app.iconphoto(True,icon)

app.resizable(0,0)
app.title("Detect Terrorism")                               # app
title
app.state('zoomed')                                         #
maximized app by default
app.mainloop()
```

CHAPTER 5

RESULT

This report presents the detection of web based terrorist activities methods and Knowledge. This study results the concepts and methods to detect terrorists and their behavior and their supporters who supports for terror related activities in society using an Internet access. the following these terror activities as a major backflow of the society we have to create awareness against these online terrorism and make sure that no one nearby us , get fall in their tarp.

DISCUSSION

Psychological oppressor associations are utilizing the web to spread their purposeful publicity and radicalize youth on the web and urge them to submit fear based oppressor exercises. To reduce the online foot print of such harmful websites we need to create a system which detects specific keywords in that particular website and if those keywords are found then that website should be blacklisted The development for efficient system uses two mining methods for detect terror-related activities as called data and web based mining .Text Mining is one of the concepts of Web Mining techniques. Its function is to extract and scan the unstructured data contents. The another efficient techniques is to find patterns and keyword in unstructured data contents.

CONCLUSION

To check the threat of psychological oppression and to pulverize the online nearness of hazardous fear mongers associations like ISIS and other radicalization sites. We need a legitimate framework to detect and end sites which are spreading hurtful substance used to radicalizing youth and powerless individuals. This Project have been implement Web based Platform and Also, different attributes have been added to the project which will prove to be advantageous on the real time application of the system. This application can be implemented by any admin manager for distributing it to their administrators who can detect the spread of terrorism.

This paper presents the detection of web based terrorist activities methods and Knowledge. This study results the concepts and methods to detect terrorists and their behaviour and their supporters who supports for terror related activities in society using an Internet access.

The application that is to be developed will stop the spread of terrorism by preventing the radicalization of the people through online websites and the other media available on the internet. People are denied access to these websites and these media because the terrorist organizations are using the internet as the media to promote and spread terrorism and hence the terrorism is avoided.