DATA SECURITY APPROACH ON CYBER-CRIME WITH WEB VULNERABILITY

A PROJECT WORK REPORT Submitted to

Jawaharlal Nehru Technological University Hyderabad

In partial fulfillment of the requirements
for the award of the degree of

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE ENGINEERING

Submitted
by

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Department of Computer Science and Engineering
BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY
Accredited by NAAC, Accredited by NBA (UG Programmes: CSE, ECE, EEE & Mechanical)
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Ibrahimpatnam-501 510, Hyderabad, Telangana.

APRIL 2020

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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Certificate

This is to certify that the project work entitled "Data security approach on cyber-crime with web vulnerability" is the bonafide work done

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PO8:	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9:	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10:	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
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PO12:	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

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PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1:	**Foundation of mathematical concepts:** To use mathematical methodologies to crack problem using suitable mathematical analysis, data structure and suitable algorithm.
PSO2:	**Foundation of Computer System:** The ability to interpret the fundamental concepts and methodology of computer systems. Students can understand the functionality of hardware and software aspects of computer systems.
PSO3:	**Foundations of Software development:** The ability to grasp the software development lifecycle and methodologies of software systems. Possess competent skills and knowledge of software design process. Familiarity and practical proficiency with a broad area of programming concepts and provide new ideas and innovations towards research.

QUALITY OF THE PROJECT

I. Consideration to Factors

Factors ***(Environment, Safety, Ethics, Cost)***	**Type of Project** ***(Application, Product, Research, Review, etc.)***	**Standards**

II. POs and PSOs addressed through the project with justification

S. No.	POs and PSOs addressed	Justification
1.	PO1	
2.	PO2	
3.	….	
4.	PSO1	
5.	…	

DECLARATION

We hereby declare that this Project Work is titled "*Data security approach on cyber-crime with web vulnerability*" is a genuine project work carried out by us, in **B.Tech(Computer Science and Engineering)** degree course of **Jawaharlal Nehru Technology University Hyderabad, Hyderabad** and has not been submitted to any other course or university for the award of my degree by us.

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ABSTRACT

Internet is a significant wellspring of spreading terrorism oppression through discourses and recordings. Terrorist organizations use internet particularly social networks to mentally program people and furthermore advance terrorist activities through provocative web pages that inspire helpless people to join terrorist organizations. Web pages are comprised of HTML (Hypertext markup language). In various arrangements and have images, texts etc., intermixed on a single web page. Here, we used Data mining as well as web mining to detect patterns and mine out textual information on web pages. Here, we are using E-mail System to detect the unwanted messages that are more susceptible to terrorism and will send to the spam directly to the recipient who is using the system.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVATIONS AND SYMBOLS

Symbol	Description
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheets
JS	JavaScript
CNAP	CyberSecurity National Action Plan
IP	Internet Protocol
MVC	Model View Controller
MVT	Model View Template
BSD	Berkeley Source Distribution
DSF	Django Software Foundation
CRUD	Create Read Update Delete
HTTP	Hyper Text Transfer Protocol
UML	Unified Modelling Language
SQL	Structured Query Language

1. INTRODUCTION

1.1 INTRODUCTION

Internet is a significant wellspring of spreading terrorism oppression through discourses and recordings. Terrorist organizations use internet particularly social networks to mentally program people and furthermore advance terrorist activities through provocative web pages that inspire helpless people to join terrorist organizations. Web pages are comprised of HTML (Hypertext markup language). In various arrangements and have images, texts etc., intermixed on a single web page. Here, we used Data mining as well as web mining to detect patterns and mine out textual information on web pages. Here, we are using E-mail System to detect the unwanted messages that are more susceptible to terrorism and will send to the spam directly to the recipient who is using the system.

1.2 MODULE DESCRIPTION:

This system have of 5 modules as follows,

MODULE 1: MAILING

First, User should Register with their basic details through create an account link. By using that details they need to Login for enter into the system. Then they will receive the message of "success". Here, we are using the system like E-mail. Hence, it contains the features of inbox, sent mail, spam, recent histories, etc., The user can compose the mail with whom to send. It may be related to terrorism or may something has related to common things. Here, the recent history denotes the person who is doing mail recently.

MODULE 2: FILTERING

In this Module, we have a few data's in my Dataset. With that, I will check whether the sent message have contained the filteration words about terrorism or not? I have using Data mining technique to mine out text data from large data sets and make the most use of obtained results. Web mining consists of text mining methodologies. Through that text mining, we can extract the text or content what are all related to terrorism. If the filteration words are match with the sent message means, the receiver receives the mail in his/her spam box or else inbox.

MODULE 3: SPAM DETECTION

In this Module, Admin should login first. It will contain the predefined user name and password. Admin side, it will have the features of keywords, spam, analysis, chart. By using Mining concepts Administrator can add few terrorism related words manually in few parameters/ categories. That keywords will also going to add with the existing dataset. In spam, we can see what are all spam messages from starting. In analysis, it contains a mail having how many words in those keyword categories and their total count per each mail.

MODULE 4: PREPROCESSING

In this Module, Admin can see all the spam mail sent and receive in this system, whereas, Spam Detection will contain preprocessing which means it will remove all the common words/stop words such as the, and, or, here, there, etc., Here. I have used the Naïve Bayes algorithm. After preprocessing I have highlight the filteration words in mails. Then it contains every category count as total spam Detection count. Finally, by make use of the total spam Detection count, did the chart.

1.3 ALGORITHM IMPLEMENTATION:

NAÏVE BAYES ALGORITHM:

A naive Bayes classifier is an algorithm that uses Bayes' theorem to classify objects. Naive Bayes classifiers assume strong, or naive, independence between attributes of data points. Popular uses of naive Bayes classifiers include spam filters, text analysis and medical diagnosis. These classifiers are broadly utilized for machine learning since they are easy to implement. Naive Bayes is otherwise called simple Bayes or independence Bayes.

Here, I am using the Naïve Bayes classifier to mining out of common words or stop words from the mail what’s the user send. The common words such as, and, then, the, there, or, therefore, hereafter, these, it, is, it’s, this, he, she, her, him, etc., This are called preprocessing. In this process we have eliminate these kinds out words. From that messages, we are going to featuring the filteration words.

2. LITERATURE SURVEY

2.1 LITERATURE REVIEW

A ransomware cyber-attack that may have originated from the theft of "cyber weapons" linked to the US government has hobbled hospitals in England and spread to countries across the world. Security researchers with Kaspersky Lab have recorded more than 45,000 attacks in 99 countries, including the UK, Russia, Ukraine, India, China, Italy, and Egypt. In Spain, major companies including telecommunications firm Telefónica were infected.

By Friday evening, the ransomware had spread to the United States and South America, however Europe and Russia remained the hardest hit, as indicated by security specialists Malware Hunter Team. The Russian interior ministry says around 1,000 PCs have been influenced.

Markus Jakobsson, chief researcher with security firm Agari, said that the assault was "scattershot" as opposed to focused. "It's an extremely wide spread," Jakobsson stated, taking note of that ransom demand is "generally little".

From the earliest starting point of his Administration, the President has clarified that cybersecurity is one of the most significant difficulties we face as a Nation, and for more than seven years he has acted comprehensively to confront that challenge. Cooperating with Congress, we stepped forward right now December with the section of the Cybersecurity Act of 2015, which gives significant apparatuses important to fortify the Nation's cybersecurity, especially by making it simpler for privately owned businesses to share digital danger data with one another and the Government.

But the President believes that progressively should be done – with the goal that citizens have the tools which they have to secure themselves, organizations can defend their operations and data, and the Government does its part to ensure the American individuals and the data they depend to us. That is the reason, today, the President is guiding his Administration to actualize a Cybersecurity National Action Plan (CNAP) that takes close term activities and sets up a long haul methodology to upgrade cybersecurity mindfulness and insurances, ensure protection, keep up open wellbeing just as financial and national security, and enable Americans to assume better responsibility for their advanced security.

2.2 THE CHALLENGE

From purchasing items to running organizations to discovering headings to speaking with our loved ones, an online world has on a very basic level reshaped our everyday lives. But just as the continually evolving digital age presents boundless opportunities for our economy, our businesses, and our people, it also presents a new generation of threats that we must adapt to meet. Criminals, terrorists, and nations who wish to do us hurt have all understood that assaulting us online is regularly simpler than attacking us face to face. As an ever-increasing number of delicate information is put away on the web, the outcomes of those assaults develop progressively huge every year. Data fraud is currently the quickest developing wrongdoing in America. Our innovators and entrepreneurs have strengthened our worldwide leadership and developed our economy, yet with each new story of a prominent organization hacked or a neighbor defrauded, more Americans are left to ponder whether technology's advantages could also risk being outpaced by its expenses.

The President accepts that gathering these new threats is vital and inside our grip. In any case, it requires an intense reassessment of the manner in which we approach security in the digital age. In case we will be associated, we should be ensured. We have to consolidate—Government, organizations, and people—to continue the soul that has constantly made America incredible.

2.3 OUR APPROACH

That is the reason, today, the Administration is declaring a progression of close term activities to upgrade cybersecurity capacities inside the Federal Government and the nation over. Be that as it may, given the unpredictability and earnestness of the issue, the President is additionally soliciting some from our Nation's top key, business, and specialized masterminds from outside of government to study and report on what more we can do to improve cybersecurity mindfulness and assurances, ensure protection, keep up open wellbeing just as monetary and national security, and engage Americans to assume better responsibility for their advanced security. Intense activity is required to make sure about our advanced society and keep America serious in the worldwide computerized economy.

The President's Cybersecurity National Action Plan (CNAP) is the capstone of over seven years of decided exertion by this Administration, expanding upon exercises gained from cybersecurity patterns, dangers, and interruptions. This arrangement guides the Federal

Government to make new move now and encourages the conditions required for long haul enhancements in our way to deal with cybersecurity over the Federal Government, the private segment, and our own lives. Features of the CNAP incorporate activities to:

Establish the "Commission on Enhancing National Cybersecurity." This Commission will be involved top vital, business, and specialized scholars from outside of Government – including individuals to be assigned by the bi-fanatic Congressional initiative. The Commission will cause proposals on activities that to can be assumed control throughout the following decade to fortify cybersecurity in both the general population and private divisions while ensuring protection; keeping up open wellbeing and monetary and national security; cultivating revelation and advancement of new specialized arrangements; and supporting organizations between Federal, State, and nearby government and the private part in the improvement, advancement and utilization of cybersecurity innovations, strategies, and best practices.

Modernize Government IT and transform how the Government manages cybersecurity through the proposal of a **$3.1 billion Information Technology Modernization Fund**, which will enable the retirement, replacement, and modernization of legacy IT that is difficult to secure and expensive to maintain, as well as the formation of a new position – the **Federal Chief Information Security Officer** – to drive these changes across the Government.

Empower Americans to secure their online accounts by moving beyond just passwords and adding an extra layer of security. By judiciously combining a strong password with additional factors, such as a fingerprint or a single use code delivered in a text message, Americans can make their accounts even more secure. This focus on **multi-factor authentication** will be central to a new **National Cybersecurity Awareness Campaign** launched by the **National Cyber Security Alliance** designed to arm consumers with simple and actionable information to protect themselves in an increasingly digital world. The National Cyber Security Alliance will partner with leading technology firms like **Google**, **Facebook**, **Dropbox**, and **Microsoft** to make it easier for millions of users to secure their online accounts, and financial services companies such as **MasterCard**, **Visa**, **PayPa**l, and **Venmo** that are making transactions more secure. In addition, the Federal Government will take steps to safeguard personal data in online transactions between citizens and the government, including through a new action plan to drive the Federal Government's adoption and use of effective identity proofing and strong multi-

factor authentication methods and a systematic review of where the Federal Government can reduce reliance on Social Security Numbers as an identifier of citizens.

Contribute over $19 billion for cybersecurity as a major aspect of the President's Fiscal Year (FY) 2017 Budget. This speaks to an in excess of 35 percent expansion from FY 2016 in generally Federal assets for cybersecurity, a vital venture to make sure about our Nation later on.

Through these activities, extra new advances sketched out underneath, and other approach endeavors spread over the Federal Government, the Administration has outlined a course to upgrade our long-term security and strengthen American authority in building up the innovations that power the digital world.

Commission on Enhancing National Cybersecurity

For more than four decades, PC innovation and the Internet have given a key bit of leeway to the United States, its residents, and its partners. In any case, if principal cybersecurity and character issues are not tended to, America's dependence on advanced framework dangers turning into a wellspring of vital risk. To address these issues, we should analyze and address the reasons for digital vulnerabilities, and not simply treat the side effects. Meeting this test will require a long haul, national responsibility.

To direct this survey, the President is building up the Commission on Enhancing National Cybersecurity, involved top vital, business, and specialized scholars from outside of Government – including individuals to be assigned by the bi-factional Congressional initiative. The Commission is entrusted with causing point by point proposals on activities that to can be assumed control over the course of the following decade to upgrade cybersecurity mindfulness and assurances all through the private division and at all degrees of Government, to ensure protection, to keep up open wellbeing and financial and national security, and to engage Americans to assume better responsibility for their advanced security. The National Institute of Standards and Technology will furnish the Commission with help to permit it to do its strategic. The Commission will answer to the President with its particular discoveries and suggestions before the finish of 2016, giving the nation a guide to future activities that will expand on the CNAP and ensure our long-term security online.

3. MOTIVATION

- In an Existing system, detection of terrorism was presented by using Web traffic content as the audit information.
- After that the typical behavior of terrorists by applying a data mining algorithm to the textual content of terror-related Web sites.
- The resulting profile was used by the system to perform detection of users suspected of being engaged in terrorist activities.
- And this algorithm should be based on the content of existing terrorist sites and known terrorist traffic on the Web.

E-mail fraud (or e-mail scam) is a deliberate failure for personal gain or harm to an individual via e-mail. It started to act as a method to defraud people almost as soon as email was commonly used. Email fraud may be an "ad game" or scam. Trust games tend to manipulate their victims 'latent greed and dishonesty. The prospect of 'company' or 'nothing' can be very enticing. Email fraud is typically targeted, as with other 'bunco schemes,' at naive persons who put their faith in get-rich schemes like 'too good for real' investments or offer to sell famous products at 'impossible small' rates. Many people lost their lives because of fraud.

Email has become one of the main communication types. It is estimated at 4.1 billion e-mail accounts worldwide in 2014, with around 196 billion e-mails being sent worldwide every day. Spam is one of the biggest risks to e-mail users. In 2013, 69.6% of all email streams were spam. Spam email links that lead to malware-based websites or phishing programs that access the recipient's computer system and interrupt it. Sensitive information may also be obtained from these pages. In fact, spam costs businesses some $2000 annually per employee due to decreased productivity. Efficient spam filtering technology thus contributes significantly to the survival of cyberspace and our society.

Specific methods to spam detection currently exist. These approaches include blacklisting, mass emails detection, Scanning message headings, grey listing, and content-based filtering:

- Blacklisting is an IP addressing strategy that sends vast amounts of spam. Such IP addresses are included in a blackhole-based domain name system list and potential IP

emails on the list are refused. However, spammers use larger IP addresses to bypass these lists.

- Another way to block spam is to track bulk emails. This approach uses the recipient number to determine whether or not an email is spam. Many valid emails may however have large volumes of traffic.
- Scanning Email headings are a fairly accurate approach to spam identification. The spammers written software creates email headings. Often these headings include errors that do not comply with normal heading regulations. If there are errors in these headings it is a warning that the email probably is spam. Nonetheless, spammers learn from their failures and fewer frequently make such mistakes
- Grey listing is a way to deny the email and send an error message to the sender. Spam programs will ignore this and not resend the email, while people will resend emails more likely. This method, however, is irritating to people and is not an ideal solution.

Present spam techniques may be combined with spam filtering approaches based on content in order to improve performance. Content-based approaches can analyze the email content to determine if the email is spam. Our research aims at testing Data Mining algorithms and assessing their performance as content-based spam filters.

4.OBJECTIVE

- There are two features used in this system that is data mining and web mining.
- Data mining is a technique used to mine out patterns of useful data from large data sets.
- Web mining also consists of text mining methodologies that allow us to scan and extract useful content from unstructured data.
- This system will check the sender messages and whether the message is promoting terrorism.
- Data mining as well as web mining are used together at times for efficient system development.
- System will find the unwanted messages that are more susceptible to terrorism and will send directly to the receiver's spam account.
- It will give more awareness to the users.

4.1 FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

- ECONOMICAL FEASIBILITY
- TECHNICAL FEASIBILITY
- SOCIAL FEASIBILITY

4.1.1 ECONOMICAL FEASIBILITY

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the organization can fill the research and development of the system is restricted. The expenditures must be justified. Thus, the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

4.1.2 TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

4.1.3 SOCIAL FEASIBILITY

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The degree of acknowledgment by the users exclusively relies upon the methods that are utilized to educate the user about the system and to make him acquainted with it. His degree of confidence must be raised with the goal that he is additionally ready to make some useful analysis, which is invited, as he is the last client of the framework.

5.DESIGN METHODLOGY & IMPLEMENTATION

5.1 DJANGO INTRODUCTION:

Django is a web application framework written in Python programming language. It is based on MVT (Model View Template) design pattern. The Django is very demanding due to its rapid development feature. It takes less time to build application after collecting client requirement.

This framework uses a famous tag line: **The web framework for perfectionists with deadlines.**

By using Django, we can build web applications in very less time. Django is designed in such a manner that it handles much of configure things automatically, so we can focus on application development only.

5.1.1 HISTORY

Django was design and developed by Lawrence journal world in 2003 and publicly released under BSD license in July 2005. Currently, DSF (Django Software Foundation) maintains its development and release cycle.

Django was released on 21, July 2005. Its current stable version is 2.0.3 which was released on 6 March, 2018.

Features of Django

- Rapid Development
- Secure
- Scalable
- Fully loaded
- Versatile
- Open Source
- Vast and Supported Community

Rapid Development

Django was designed with the intention to make a framework which takes less time to build web application. The project implementation phase is a very time taken but Django creates it rapidly.

Secure

Django takes security seriously and helps developers to avoid many common security mistakes, such as SQL injection, cross-site scripting, cross-site request forgery etc. Its user authentication system provides a secure way to manage user accounts and passwords.

Scalable

Django is scalable in nature and has ability to quickly and flexibly switch from small to large scale application project.

Fully loaded

Django includes various helping task modules and libraries which can be used to handle common Web development tasks. Django takes care of user authentication, content administration, site maps, RSS feeds etc.

Versatile

Django is versatile in nature which allows it to build applications for different-different domains. Now a days, Companies are using Django to build various types of applications like: content management systems, social networks sites or scientific computing platforms etc.

Open Source

Django is an open source web application framework. It is publicly available without cost. It can be downloaded with source code from the public repository. Open source reduces the total cost of the application development.

Vast and Supported Community

Django is a one of the most popular web frameworks. It has widely supportive community and channels to share and connect.

5.1.2 DJANGO INSTALLATION:

To install Django, first visit to **Django official site (https://www.djangoproject.com)** and download Django by clicking on the download section. Here, we will see various options to download The Django.

Django requires **pip** to start installation. Pip is a package manager system which is used to install and manage packages written in python. For Python 3.4 and higher versions **pip3** is used to manage packages.

In this tutorial, we are installing Django in Ubuntu operating system.

The complete installation process is described below. Before installing make sure **pip** is installed in local system.

Here, we are installing Django using pip3, the installation command is given below.

$ pip3 install django==2.0.3

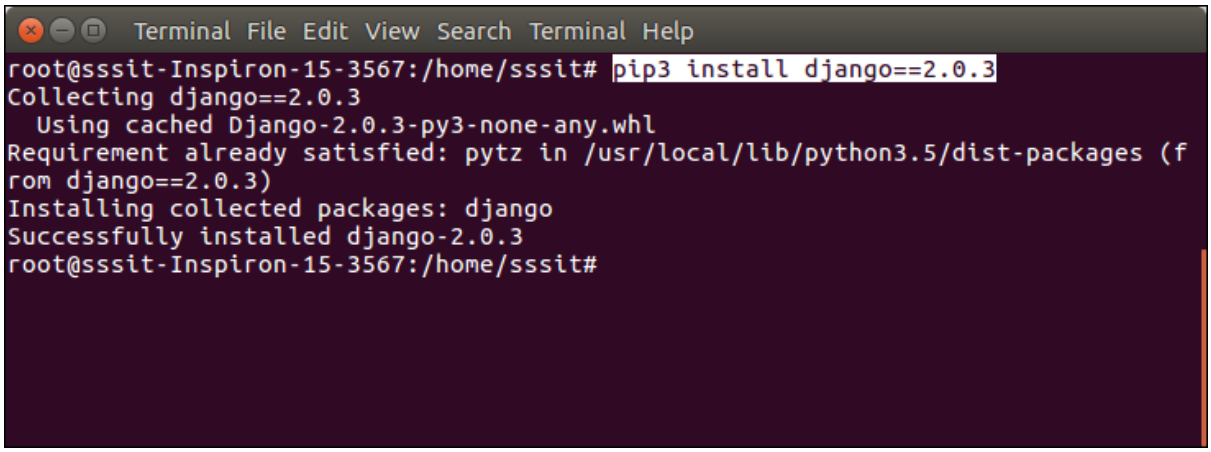

Fig 5.1 Installing Django

Verify Django Installation

After installing Django, we need to verify the installation. Open terminal and write **python3** and press enter. It will display python shell where we can verify the Django installation.

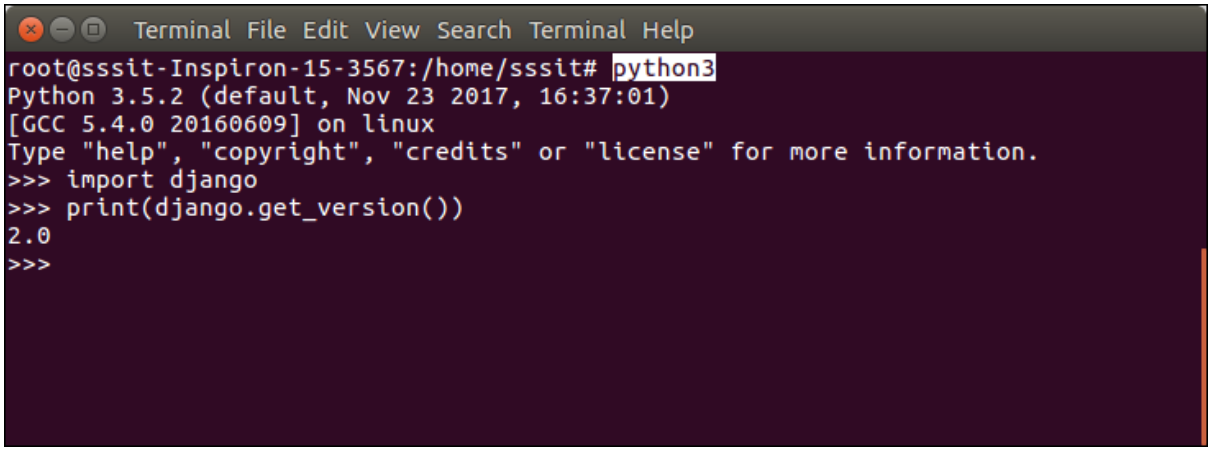

Fig 5.2 verifying Django installation

Look at the Django version displayed by the print method of the python. Well, Django is installed successfully. Now, we can build Django web applications.

5.1.3 DJANGO PROJECT

In the previous topic, we have installed Django successfully. Now, we will learn step by step process to create a Django application.

To create a Django project, we can use the following command. projectname is the name of Django application.

$ django-admin startproject projectname

Django Project Example

Here, we are creating a project **djangpapp** in the current directory.

$ django-admin startproject djangpapp

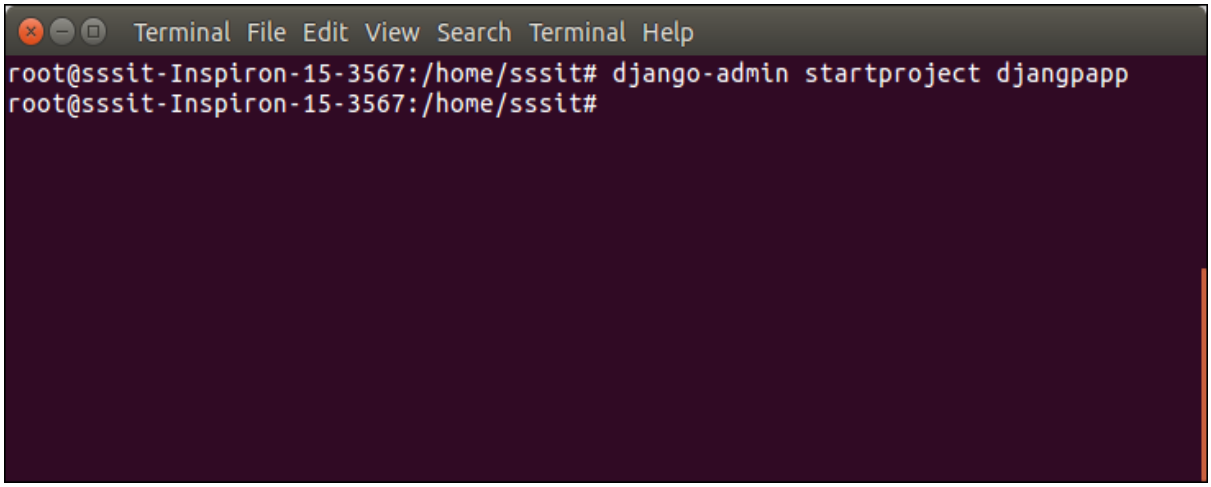

Fig 5.3 Starting project in Django

Locate into the Project

Now, move to the project by changing the directory. The Directory can be changed by using the following command.

cd djangpapp

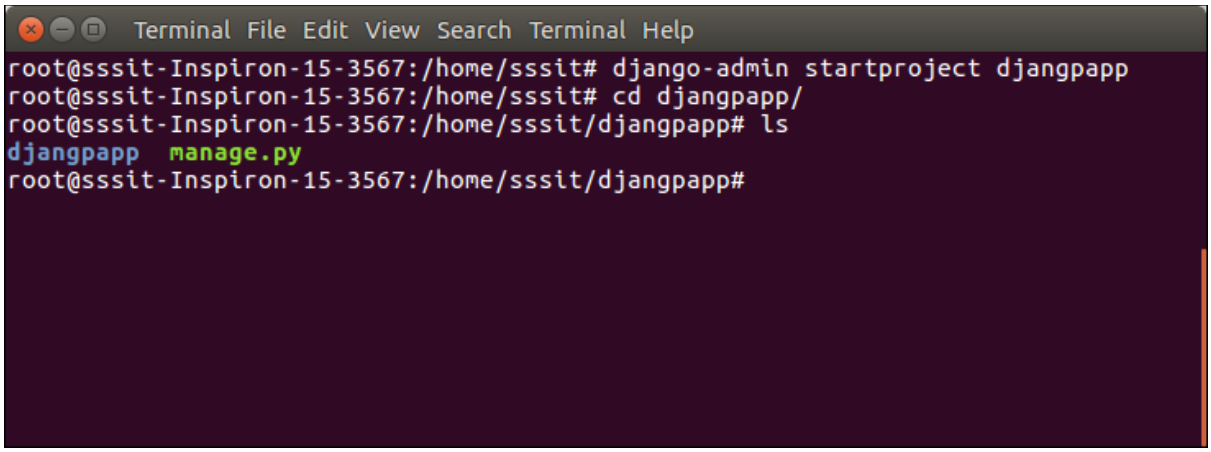

Fig 5.4 locate into project

To see all the files and subfolders of Django project, we can use **tree** command to view the tree structure of the application. This is a utility command, if it is not present, can be downloaded via **apt-get install tree** command.

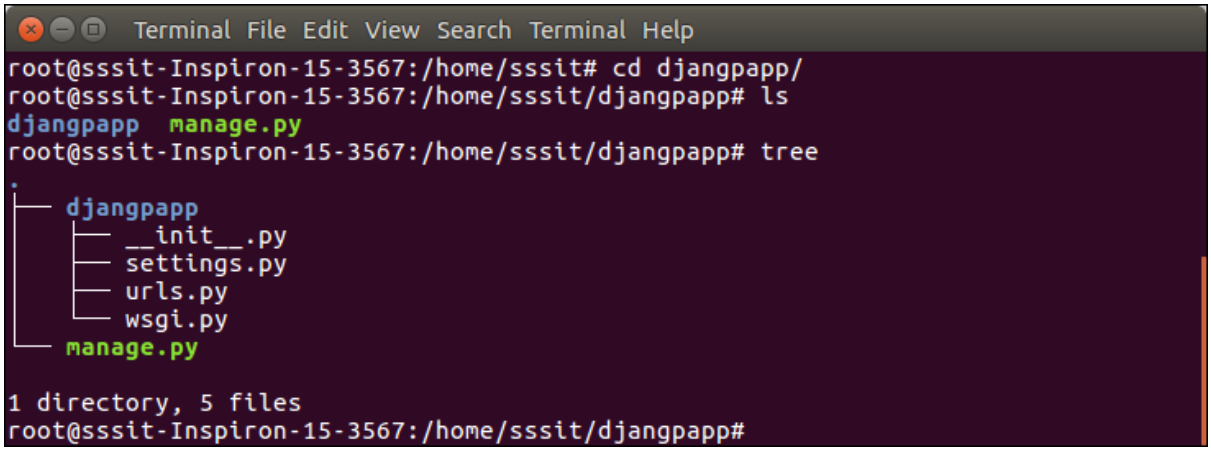

Fig 5.5 Tree Structure of Application

A Django project contains the following packages and files. The outer directory is just a container for the application. We can rename it further.

- **manage.py:** It is a command-line utility which allows us to interact with the project in various ways and also used to manage an application that we will see later on in this tutorial.
- A directory (djangpapp) located inside, is the actual application package name. Its name is the Python package name which we'll need to use to import module inside the application.
- **__init__.py:** It is an empty file that tells to the Python that this directory should be considered as a Python package.
- **settings.py:** This file is used to configure application settings such as database connection, static files linking etc.
- **urls.py:** This file contains the listed URLs of the application. In this file, we can mention the URLs and corresponding actions to perform the task and display the view.
- **wsgi.py:** It is an entry-point for WSGI-compatible web servers to serve Django project.

Initially, this project is a default draft which contains all the required files and folders.

Django Configuration with Apache Web Server

Django uses its built-in development server to run the web application. To start this server, we can use **python manage.py runserver** command.

This command starts the server which runs on port 8000 and can be accessed at browser by entering localhost:8000. It shows a welcome page of the application.

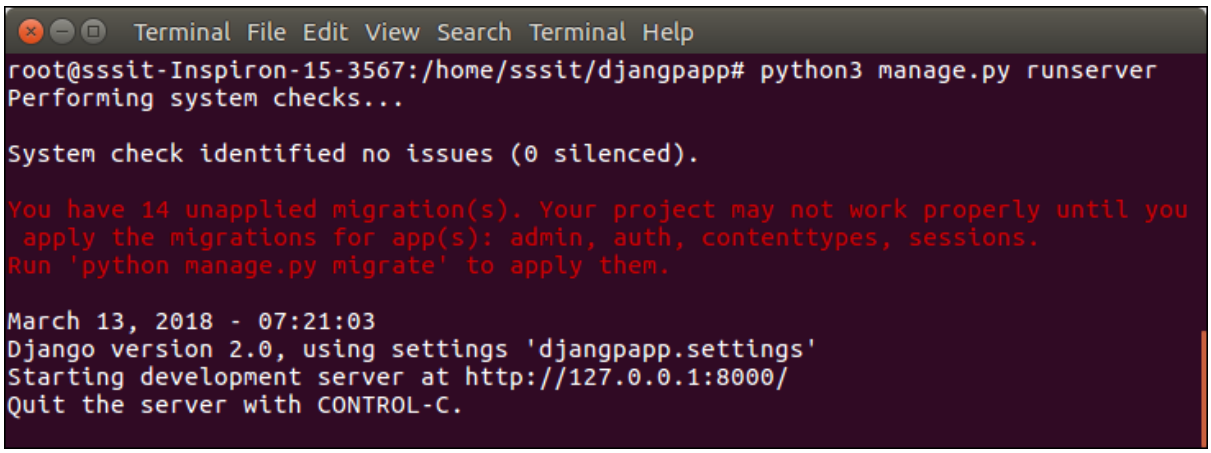

Fig 5.6 Running Django Application

And at browser, it can be accessed as below.

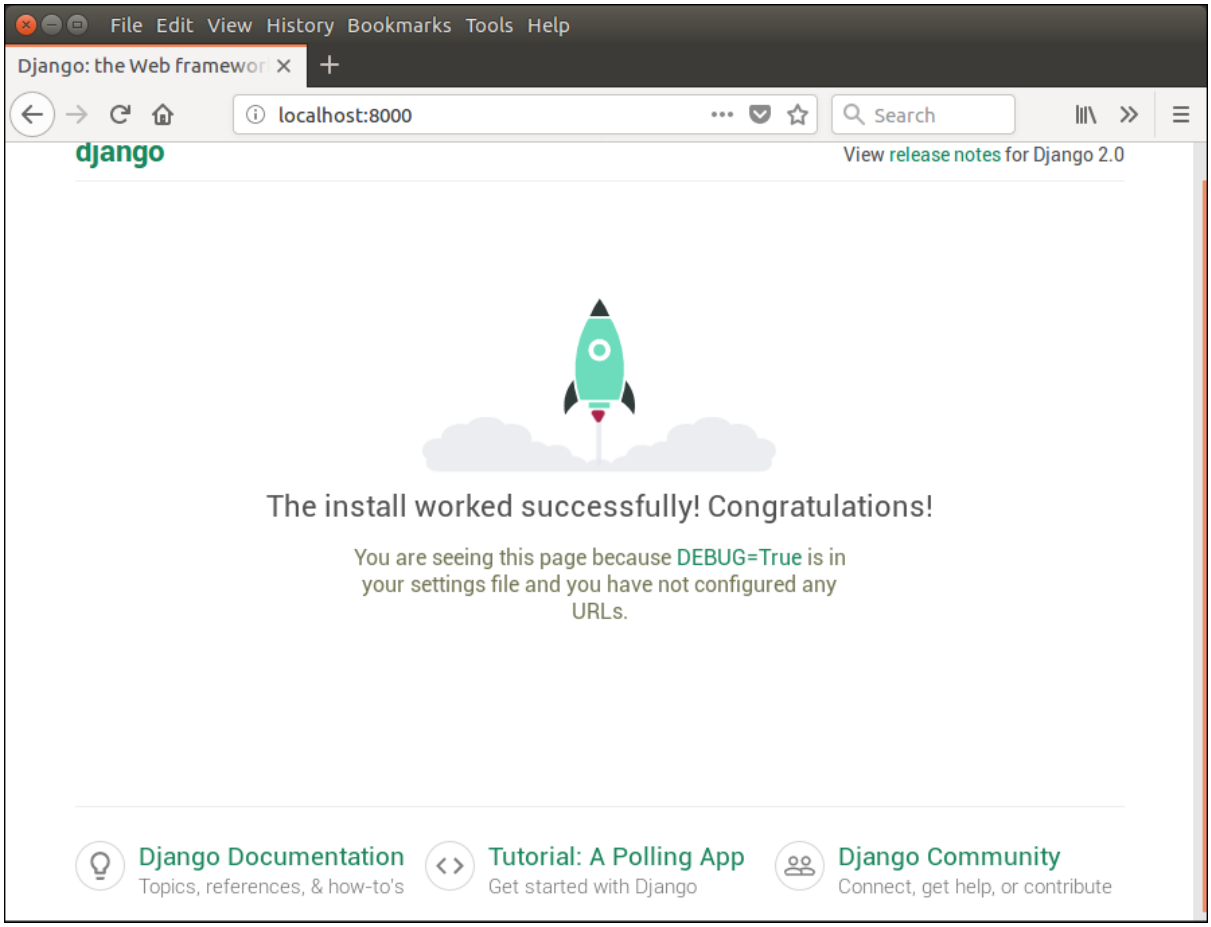

Fig 5.7 Accessing Application through browser

But if we want to run our application by using **apache server** rather than built-in development server, we need to configure **apache2.conf** file located at /**etc**/**apache** directory. Add the following code into this file.

// apache2.conf

```
1. WSGIScriptAlias / /var/www/html/django7/django7/wsgi.py
2. WSGIPythonPath /var/www/html/django7/
3.
4. <Directory /var/www/html/django7>
5.     <Files wsgi.py>
6.             Require all granted
7.     </Files>
8. </Directory>
```

After adding these lines, restart apache server by using the **service apache2 restart** command and then type **localhost** to the browser's address bar. This time, project will

run on apache server rather than a built-in server. See, it shows the home page of the application.

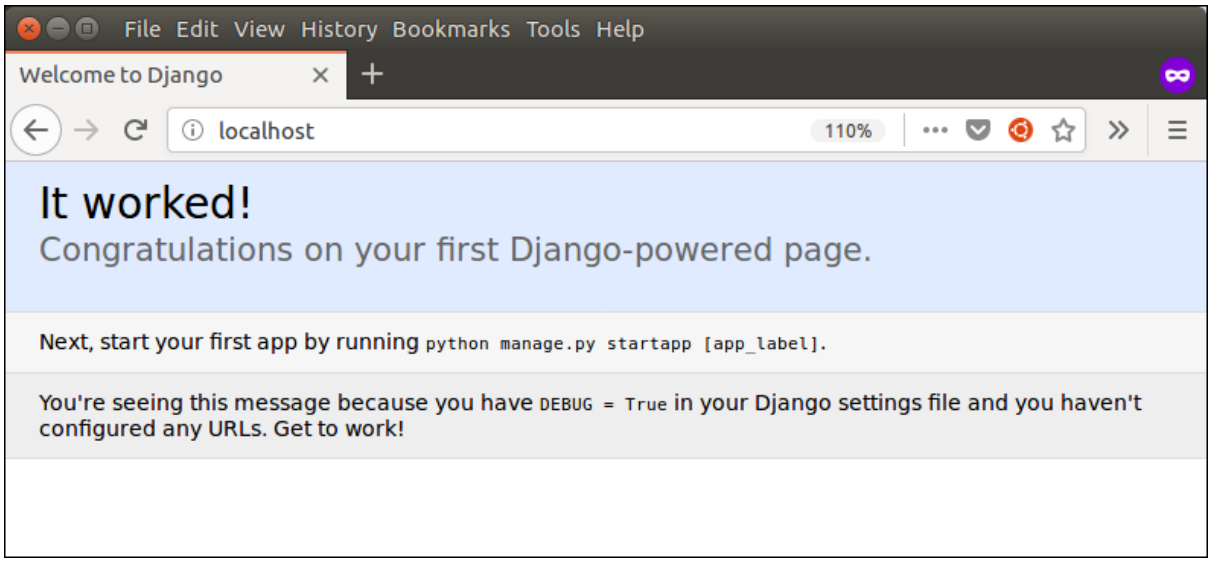

Fig 5.8 Running project on Apache Server

5.1.4 DJANGO VIRTUAL ENVIRONMENT SETUP

The virtual environment is an environment which is used by Django to execute an application. It is recommended to create and execute a Django application in a separate environment. Python provides a tool **virtualenv** to create an isolated Python environment. We will use this tool to create a virtual environment for our Django application.

To set up a virtual environment, use the following steps.

1. Install Package

First, install **python3-venv** package by using the following command.

$ apt-get install python3-venv

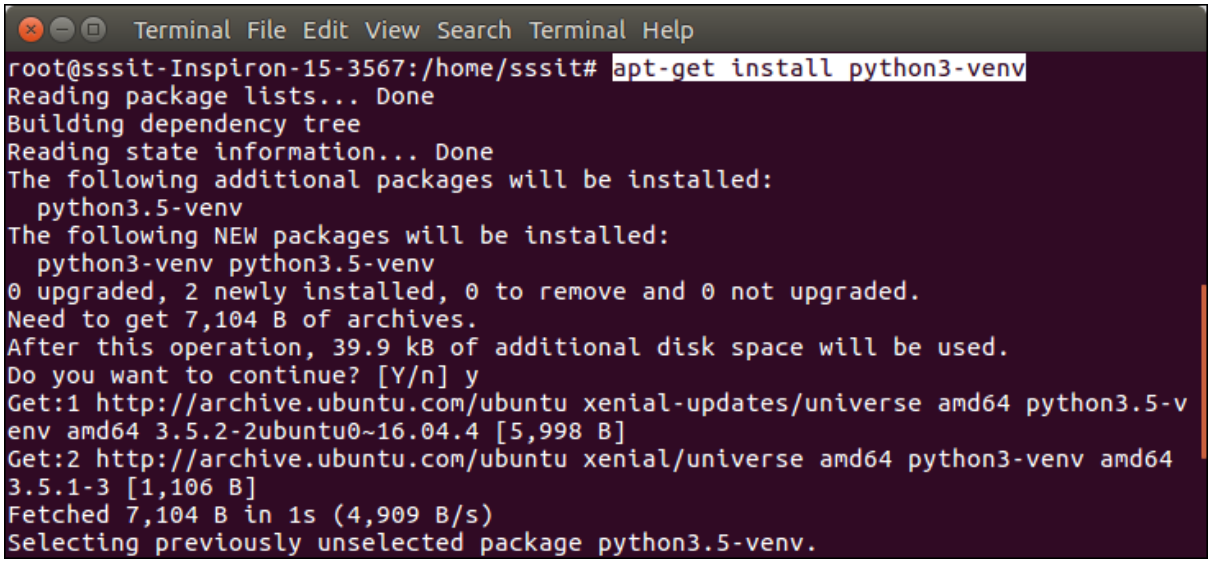

Fig 5.9 Installing python virtual environment

2. Create a Directory

$ mkdir djangoenv

After it, change directory to the newly created directory by using the **cd djangoenv.**

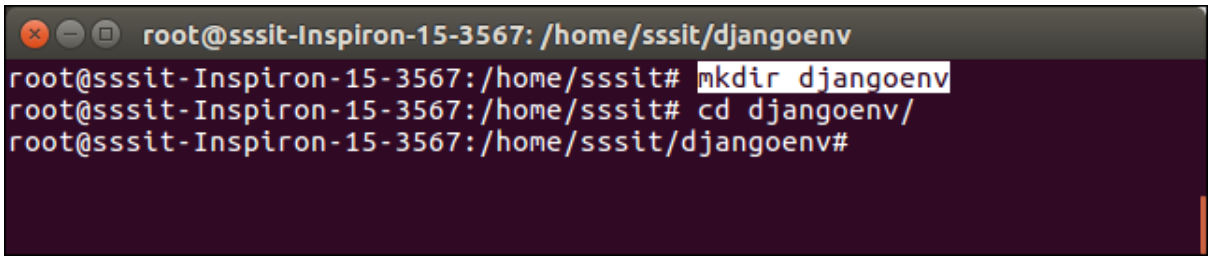

Fig 5.10 Creating directory for environment

3. Create Virtual Environment

$ python3 -m venv djangoenv

4. Activate Virtual Environment

After creating a virtual environment, activate it by using the following command.

$ source djangoenv/bin/activate

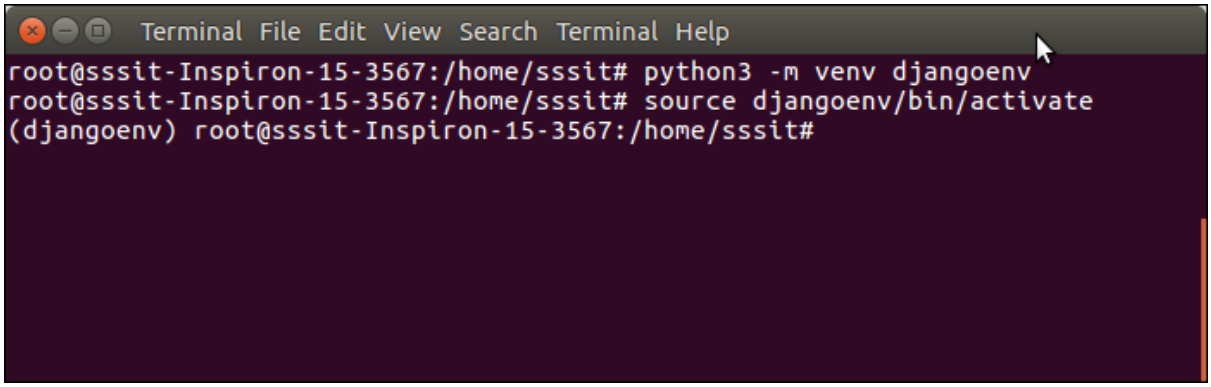

Fig 5.11 Activate Virtual Environment

Till here, the virtual environment has started. Now, we can use it to create Django application.

5.1.5 DJANGO

Install Django in the virtual environment. To install Django, use the following command.

$ pip install django

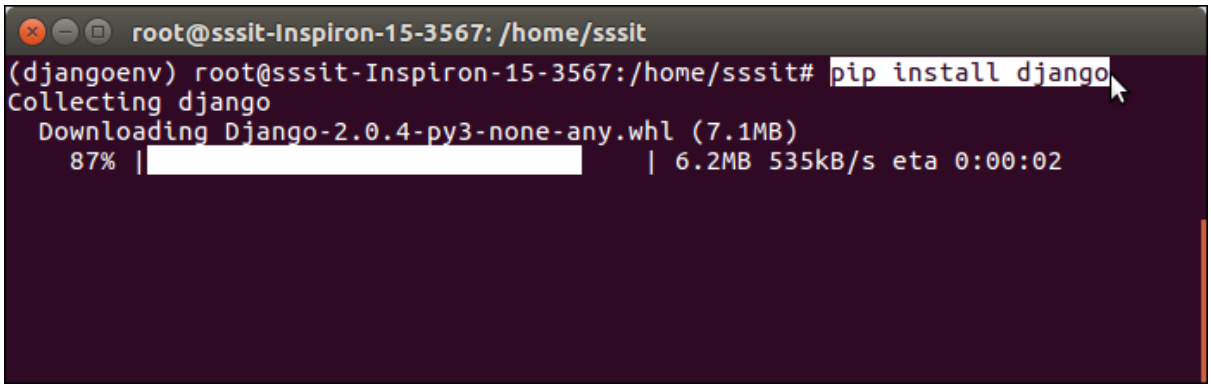

Fig 5.12 Installing Django in Virtual Environment

Django has installed successfully. Now we can create a new project and build new applications in the separate environment

5.1.6 DJANGO ADMIN INTERFACE

Django provides a built-in admin module which can be used to perform CRUD operations on the models. It reads metadata from the model to provide a quick interface where the user can manage the content of the application.

This is a built-in module and designed to perform admin related tasks to the user. Let's see how to activate and use Django's admin module (interface).

The admin app **(django.contrib.admin)** is enabled by default and already added into INSTALLED_APPS section of the settings file.

To access it at browser use '/**admin**/' at a local machine-like **localhost:8000**/**admin**/ and it shows the following output:

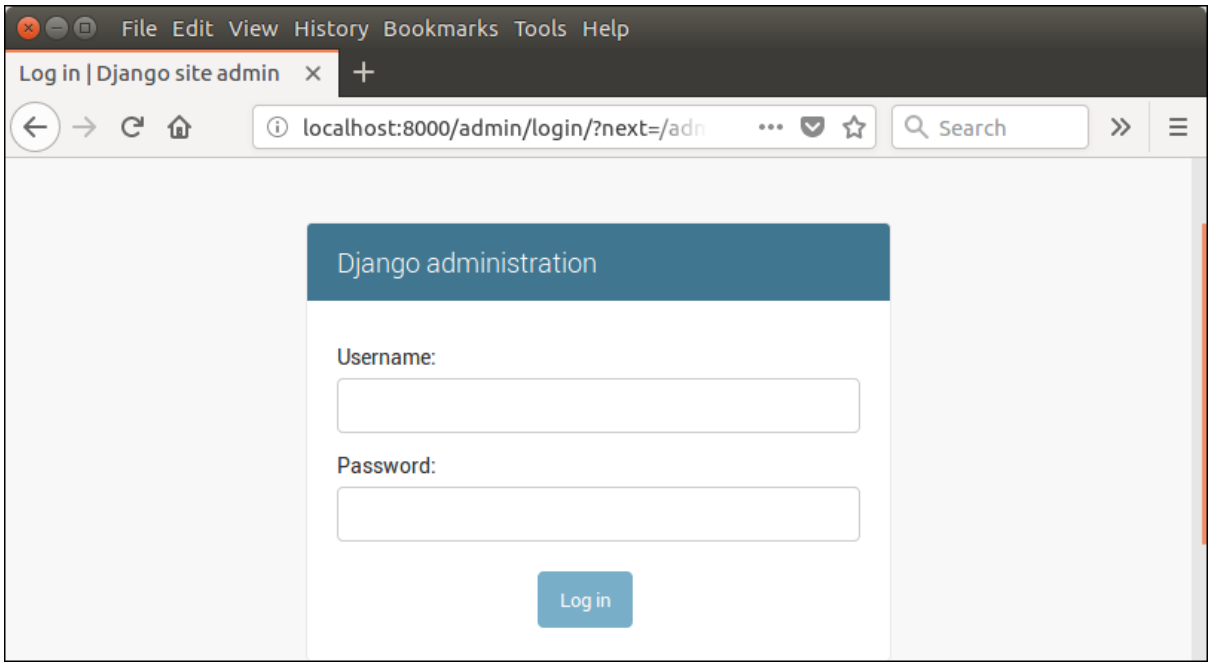

Fig 5.13 Django Admin Interface Login

It prompts for login credentials if no password is created yet, use the following command to create a user.

Create an Admin User:

$ python3 managen.py createsuperuser

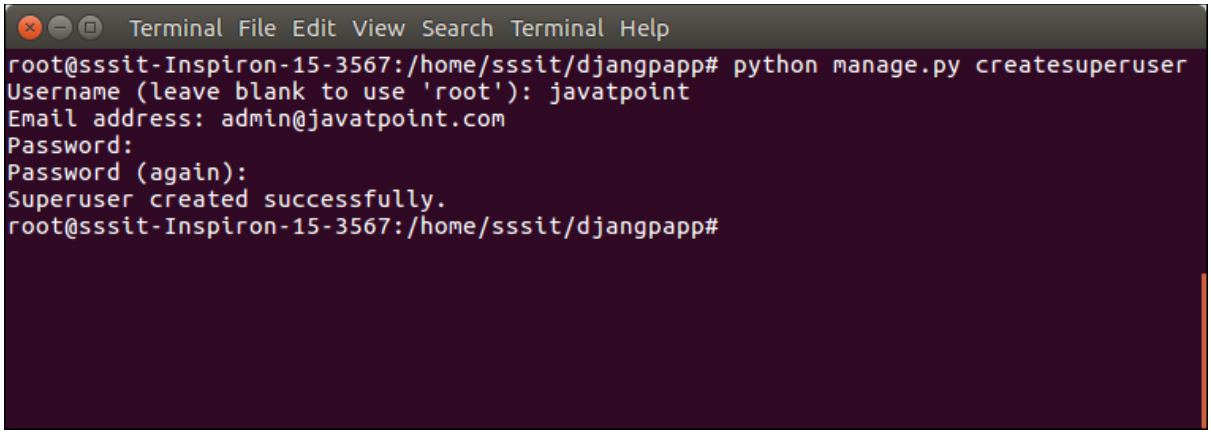

Fig 5.14 Creating Admin User

Now start development server and access admin login.

```
$ python3 manage.py runserver
```

Provide created username and password and login.

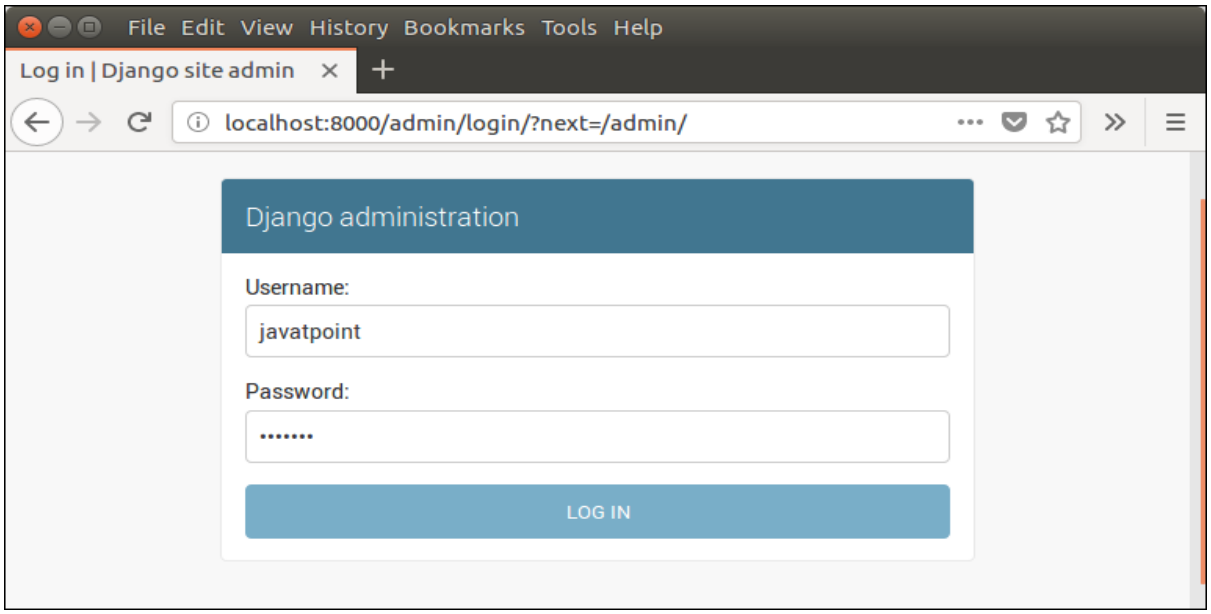

Fig 5.15 Accessing Admin User

After login successfully, it shows the following interface.

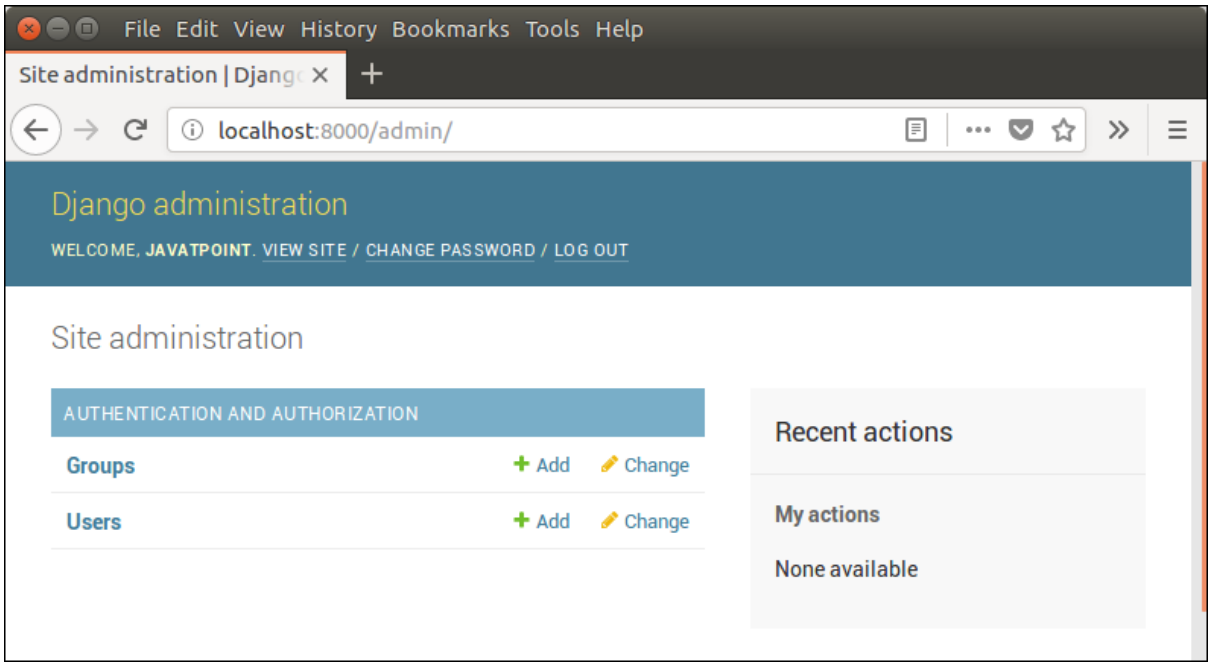

Fig 5.16 Django Admin Dashboard

It is a Django Admin Dashboard.

5.1.7 DJANGO APP

In the previous topics, we have seen a procedure to create a Django project. Now, in this topic, we will create app inside the created project.

Django application consists of project and app, it also generates an automatic base directory for the app, so we can focus on writing code (business logic) rather than creating app directories.

The difference between a project and app is, a project is a collection of configuration files and apps whereas the app is a web application which is written to perform business logic.

Creating an App

To create an app, we can use the following command.

$ python3 manage.py startapp appname

Django App Example

$ python3 manage.py startapp myapp

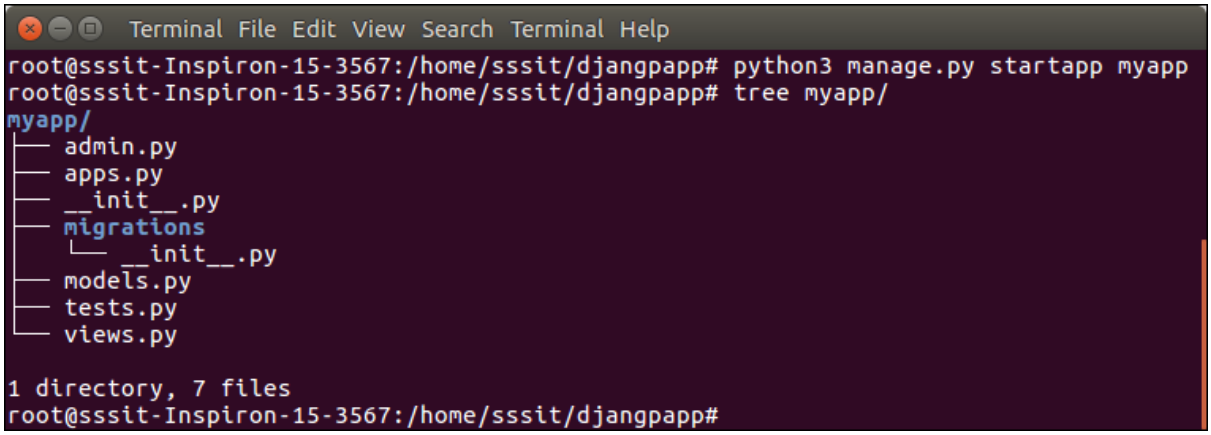

Fig 5.17 Creating a App in Django

See the directory structure of the created app, it contains the **migrations** folder to store migration files and model to write business logic.

Initially, all the files are empty, no code is available but we can use these to implement business logic on the basis of the MVC design pattern.

To run this application, we need to make some significant changes which display **hello world** message on the browser.

Open **views.py** file in any text editor and write the given code to it and do the same for **urls.py** file too.

// views.py

```
1. from django.shortcuts import render
2.
3. # Create your views here.
4. from django.http import HttpResponse
5.
6. def hello(request):
7.     return HttpResponse("<h2>Hello, Welcome to Django!</h2>")
```

// urls.py

```
1. from django.contrib import admin
2. from django.urls import path
3. from myapp import views
4.
5. urlpatterns = [
6.     path('admin/', admin.site.urls),
7.     path('hello/', views.hello),
8. ]
```

We have made changes in two files of the application. Now, let's run the it by using the following command. This command will start the server at port 8000.

Run the Application

```
$ python3 manage.py runserver
```

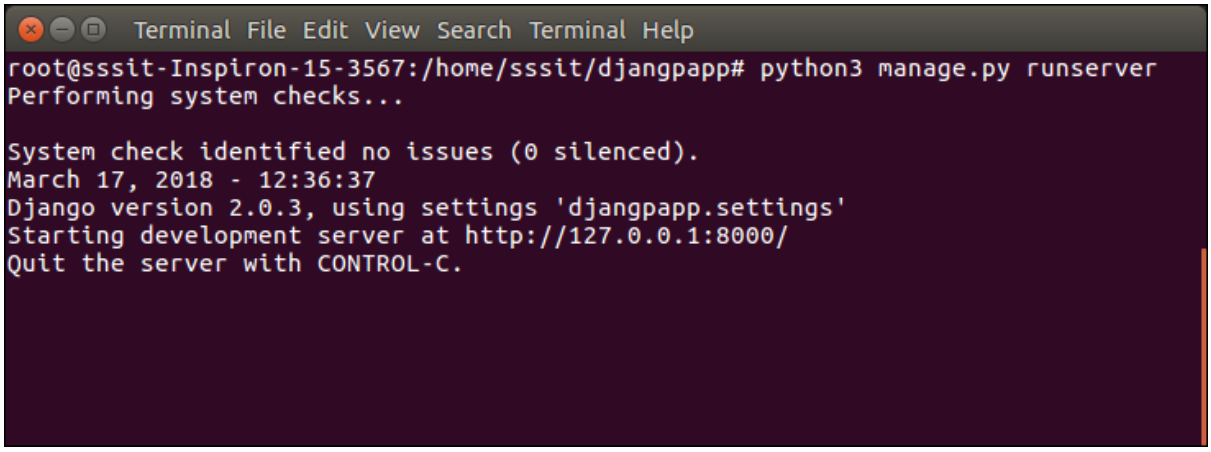

Fig 5.18 Running Server

Open any web browser and enter the URL **localhost:8000/hello**. It will show the output given below.

Fig 5.19 Viewing Webpage in browser

5.1.8 DJANGO MVT

The MVT (Model View Template) is a software design pattern. It is a collection of three important components Model View and Template. The Model helps to handle database. It is a data access layer which handles the data.

The Template is a presentation layer which handles User Interface part completely. The View is used to execute the business logic and interact with a model to carry data and renders a template.

Although Django follows MVC pattern but maintains its own conventions. So, control is handled by the framework itself.

There is no separate controller and complete application is based on Model View and Template. That's why it is called MVT application.

See the following graph that shows the MVT based control flow.

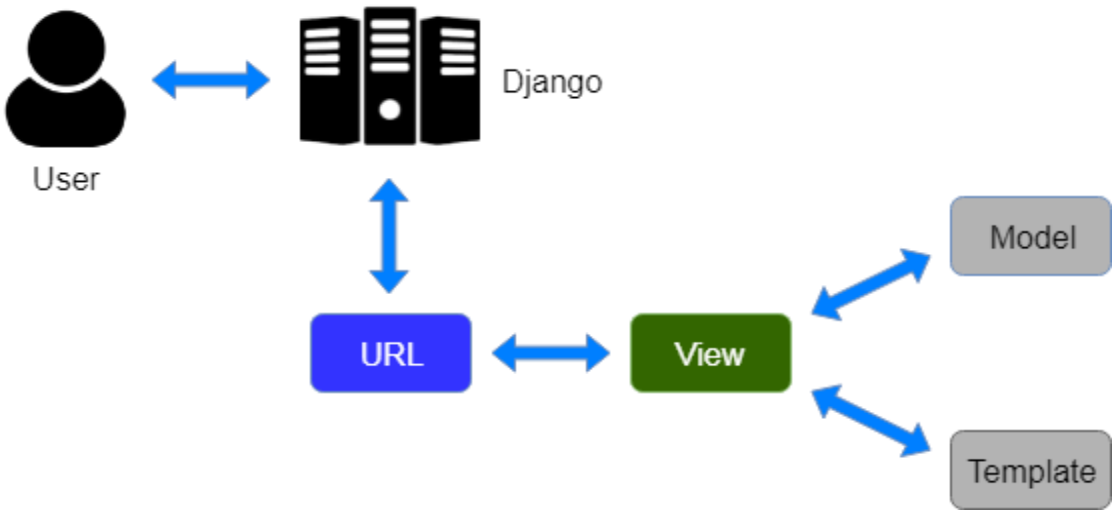

Fig 5.20 Django MVT

Here, a user **requests** for a resource to the Django, Django works as a controller and check to the available resource in URL.

If URL maps, **a view is called** that interact with model and template, it renders a template.

Django responds back to the user and sends a template as a **response**.

5.1.9 DJANGO VIEWS

A view is a place where we put our business logic of the application. The view is a python function which is used to perform some business logic and return a response to the user. This response can be the HTML contents of a Web page, or a redirect, or a 404 error.

All the view function is created inside the **views.py** file of the Django app.

Django View Simple Example

//views.py

```
1. import datetime
2. # Create your views here.
3. from django.http import HttpResponse
4. def index(request):
5.     now = datetime.datetime.now()
6.     html = "<html><body><h3>Now time is %s.</h3></body></html>" % now
7.  return HttpResponse(html)    # rendering the template in HttpResponse
```

Let's step through the code.

First, we will import DateTime library that provides a method to get current date and time and HttpResponse class.

Next, we define a view function index that takes HTTP request and respond back.

View calls when gets mapped with URL in **urls.py.** For example

```
1. path('index/', views.index),
```

Output:

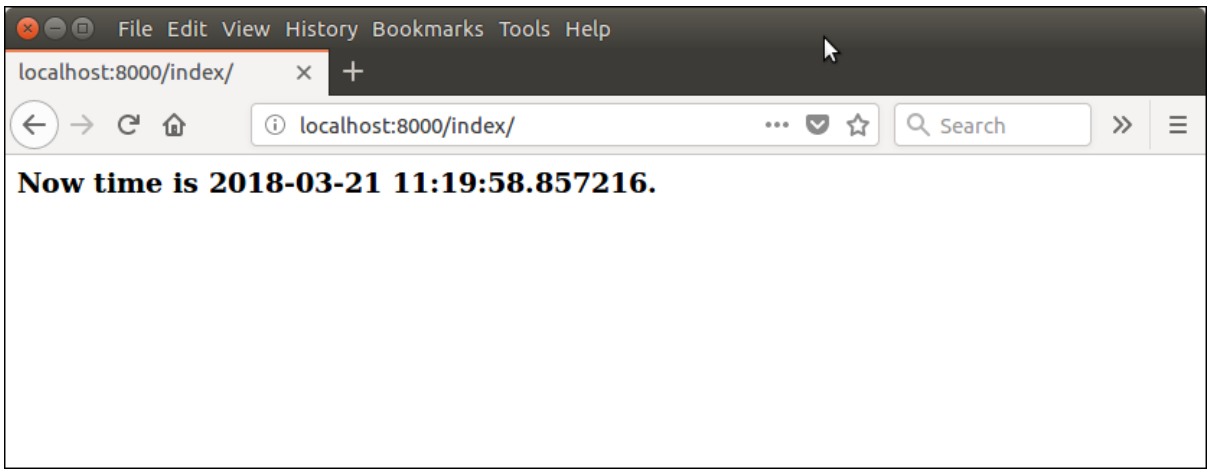

Fig 5.21 Django Views

5.2 SYSTEM SPECIFICATION:

HARDWARE REQUIREMENTS:

- **System** : Pentium IV 2.4 GHz.
- **Hard Disk** : 40 GB.
- **Floppy Drive** : 1.44 Mb.
- **Monitor** : 14’ Colour Monitor.
- **Mouse** : Optical Mouse.
- **Ram** : 512 Mb.

SOFTWARE REQUIREMENTS:

- **Operating system** : Windows 7 Ultimate.
- **Coding Language** : Python.
- **Front-End** : Python.
- **Designing** : Html, CSS, JavaScript.
- **Data Base** : MySQL.

5.3 SYSTEM ARCHITECTURE:

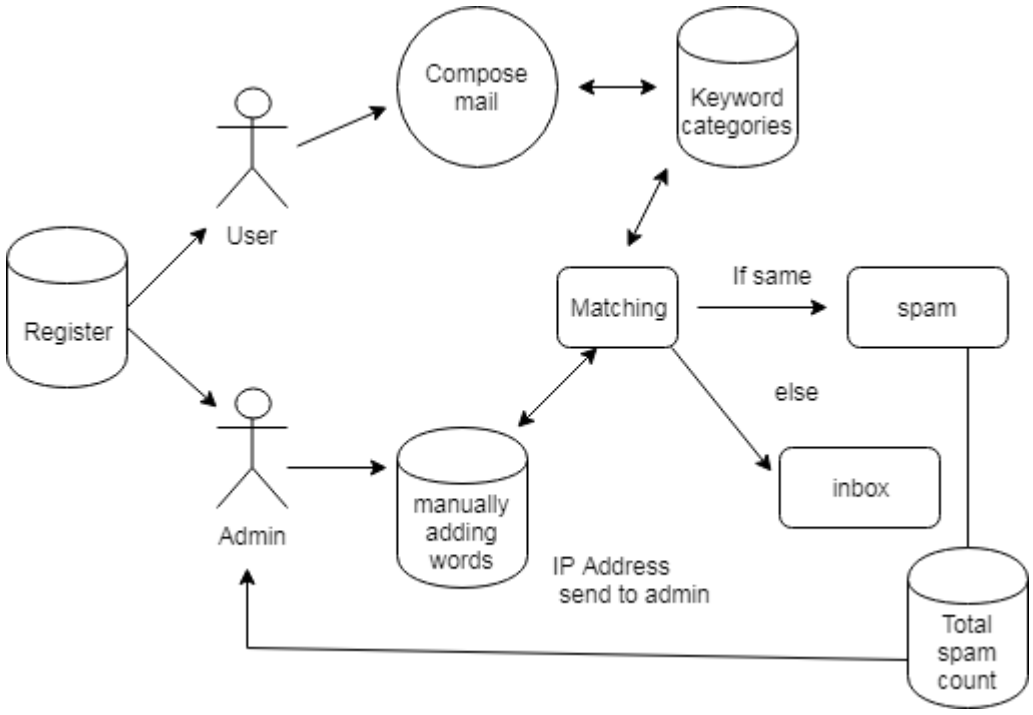

Fig 5.22 System Architecture

5.4 UML DIAGRAMS:

5.4.1 USE CASE DIAGRAM:

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor. Roles of the actors in the system can be depicted.

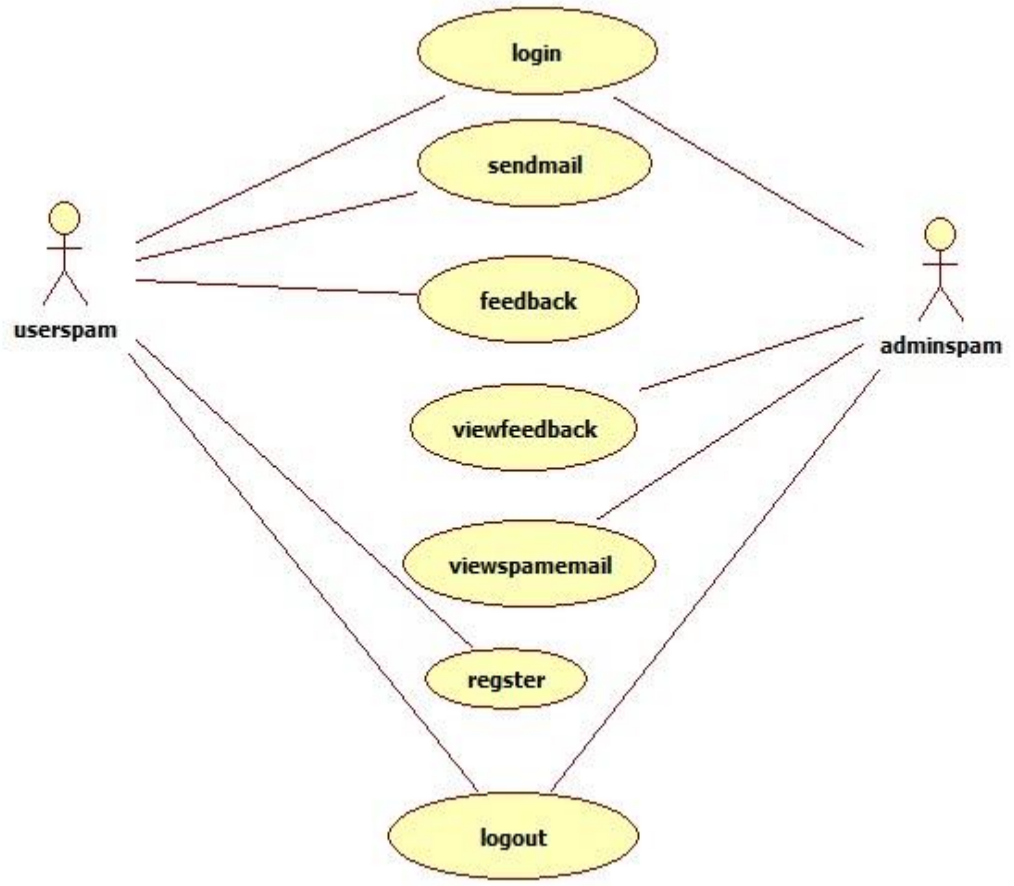

Fig 5.23 Use Case Diagram

5.4.2 CLASS DIAGRAM:

In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among the classes. It explains which class contains information.

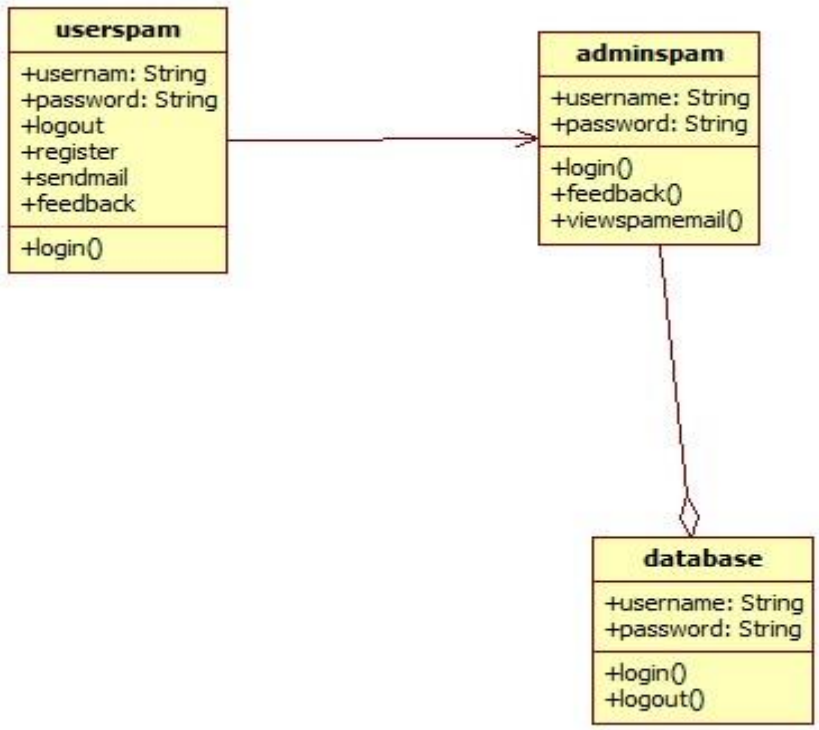

Fig 5.24 Class Diagram

5.4.3 SEQUENCE DIAGRAM:

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. Sequence diagrams are sometimes called event diagrams, event scenarios, and timing diagrams.

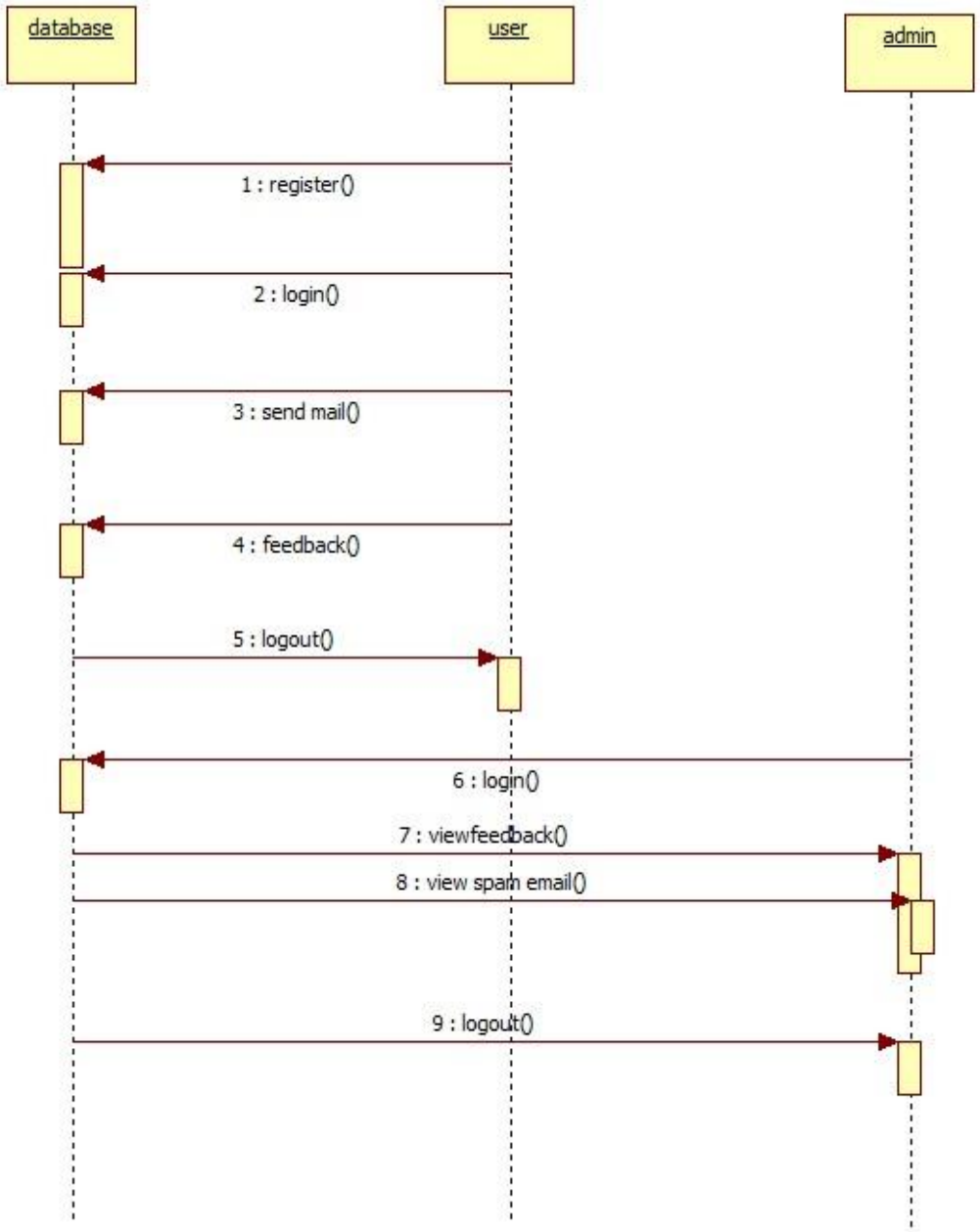

Fig 5.25 Sequence Diagram

5.4.4 ACTIVITY DIAGRAM:

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control.

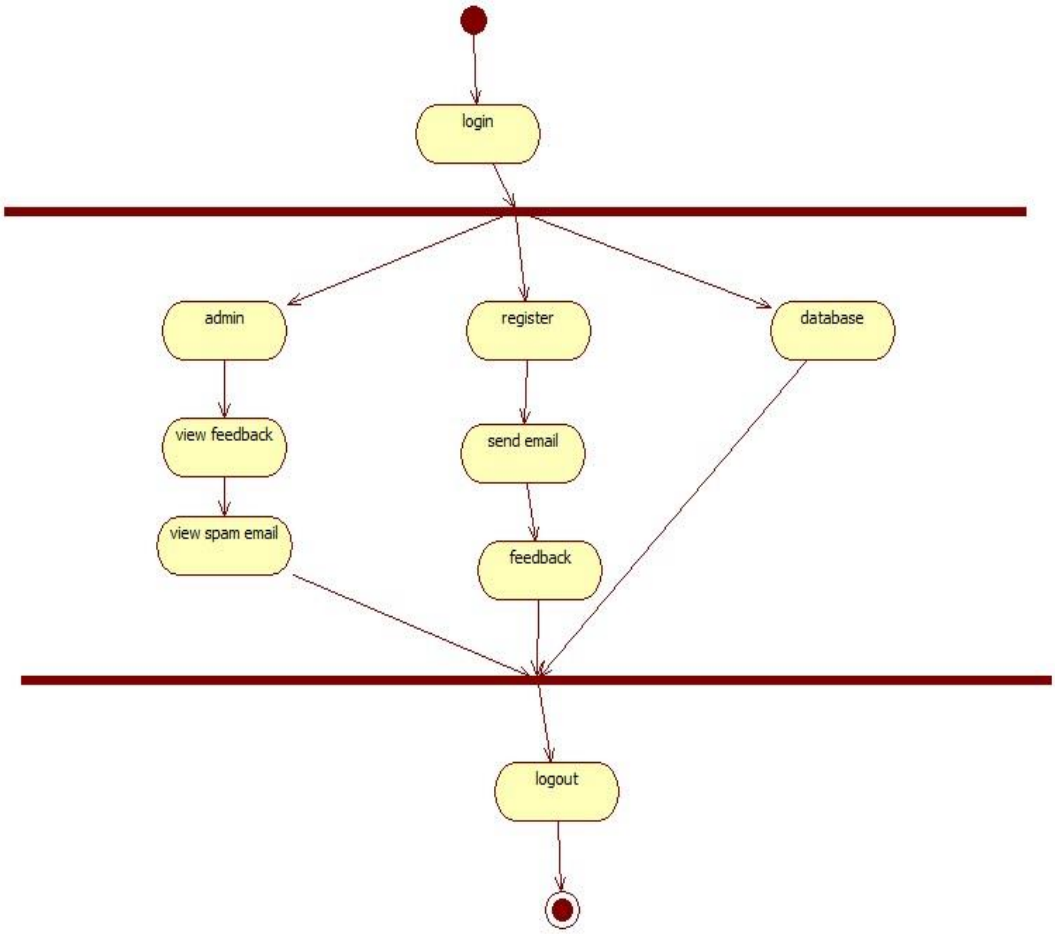

Fig 5.26 Activity Diagram

5.5 IMPLEMENTATION

```
import operator

import re

from heapq import nlargest

from django.db.models.query import QuerySet

from django.shortcuts import render, redirect, get_object_or_404


# Create your views here.

from email_admin.models import SpamModel

from user.forms import RegisterForms

from user.models import RegisterModel, SendmailModel, FeedbackModel

def index(request):

    if request.method=="POST":

        usid=request.POST.get('username')

        pswd = request.POST.get('password')

        try:

            check = RegisterModel.objects.get(userid=usid,password=pswd)

            request.session['userid']=check.id

            return redirect('userpage')

        except:

            pass

    return render(request,'user/index.html')
```

```
def register(request):
    if request.method=="POST":
        forms=RegisterForms(request.POST)
        if forms.is_valid():
            forms.save()
            return redirect('index')
    else:
        forms=RegisterForms()
    return render(request,'user/register.html',{'form':forms})
def userpage(request):
    uid = request.session['userid']
    request_obj = RegisterModel.objects.get(id=uid)
    se=''
    pos = []
    neg=[]
    oth =[]
    mm=''
    sa=''
    ro=0
    cat=''
    ss=''
    cos=[]
```

```
    sos=[]
    tos=[]
    vos=[]

    edcount, bcount, scount, fcount, acount, ecount, hcount,ocount = 0, 0, 0, 0, 0, 0, 0,0
    edw, bw, sw, fw, aw, ew, hw,oth = [], [], [], [], [], [], [],[]
    if request.method=="POST":
        to1=request.POST.get('to')
        sub = request.POST.get('subject')
        cht = request.POST.get('chat')
        to_mail = request_obj.email
        c = (re.findall(r"[\w']+", str(cht)))
        for f in c:

            if f in ('agitate','argue','clamor','combat','contend','contest','dispute','feud','oppugn',
                    'skirmish','strive','tug','wrestle','clamor','contest','dispute','feud','oppugn',
                    'skirmish','agitate','argue','clamor','combat','contend','carnage','purge','slaughter',
'argue','battle','brawl','buckcombat','conflict','contend','crosswords','differ','disagree',
'encounter','feud','fret','gall','grapple','grate','quarrel','wrangle','buck','clash','contend',
                    'contest','cope','defy','dispute','battle','
duel','engage','fight','oppose','repel','bom','attack',):
```

```
            pos.append(f)

        elif f in ('weapon','doomsday ','machine','mininuke','mirv','nuke','H-
bomb','nuke','Dagger','Falchion','Katana','Knife','Longsword','Shortsword','Ulfberht','Estoc','R
apier','Club','Flail','Mace','Pernach','Shestophor','Maul','Quarterstaff','Bludgeon','Ahlspiess','B
ardiche','Bill','Glaive','Guisarme','Lance','hammer','Partisan','Pike','Ranseur','Sovnya','Spetum',
'Swordstaff','Voulge','War-
scythe','hammer','Bow','Longbow','Crossbow','Arbalest','Ballista','crossbow','Sling','weapons','
Chakram','Francisca','Kunai','Spear','Shuriken','Culverin','cannon','Arquebus','Musket','Range
d',):



            neg.append(f)

        elif f in (

        'brutal', 'crazy', 'cruel', 'fierce', 'homicidal', 'hysterical', 'murderous', 'passionate',
'potent',

        'powerful', 'savage', 'uncontrollable', 'vicious', 'agitated', 'aroused', 'berserk',
'bloodthirsty',

        'coercive', 'demoniac', 'desperate', 'distraught', 'disturbed', 'enraged', 'fiery', 'forceful',
'forcible',

        'frantic', 'fuming', 'furious', 'great', 'headstrong', 'hotheaded', 'impassioned',
'impetuous', 'inflamed',

        'intemperate', 'mad', 'maddened', 'maniacal', 'mighty', 'raging', 'riotous', 'rough',
'strong',

        'ungovernable', 'unrestrained', 'urgent', 'vehement', 'wild', 'acute', 'cutting', 'distressing',

        'excruciating', 'exquisite', 'fierce', 'keen', 'overpowering', 'overwhelming', 'piercing',
'poignant',

        'powerful', 'racking', 'severe', 'sharp', 'shooting', 'stabbing', 'sudden', 'violent',
'agonizing',
```

```
        'disturbing', 'excruciating', 'extreme', 'fierce', 'harrowing', 'intense', 'racking',
'struggling',
        'tearing', 'tormenting', 'tortuous', 'torturing', 'vehement',):
            cos.append(f)
        elif f in (
            'threateningly', 'threateners', 'threatening', 'threatener', 'threatened', 'threating',
'threatens',
            'threaten', 'threated', 'threats', 'counterthreat', 'blackmail', 'hazard', 'intimidation',
'menace',
            'peril', 'risk', 'bluff', 'commination', 'fix', 'foreboding', 'foreshadowing',
'fulmination',
            'impendence', 'omen', 'portent', 'presage', 'thunder', 'bugbear', 'apprehension',
'bogey', 'bogy',
            'boogeyman', 'bugaboo', 'dread', 'fear', 'goblin', 'gremlin', 'hobgoblin', 'loup-
garou', 'ogre',
            'problem', 'scare', 'specter', 'terror', 'threat', 'wraith', 'dare', 'defiance', 'demanding',
            'demur', 'ultimatum', 'remonstrance', 'summons to contest', 'coercion',
'browbeating',):
            sos.append(f)
        elif f in (
        'corrupt', 'deplorable', 'illegal', 'illegitimate', 'illicit', 'immoral', 'scandalous', 'senseless',
        'unlawful', 'vicious', 'bent', 'heavy', 'racket', 'wildcat', 'wrong', 'caught', 'crooked',
'culpable',
        'dirty', 'hung up', 'indictable', 'iniquitous', 'nefarious', 'peccant', 'shady', 'unrighteous',
        'villainous', 'wicked', 'banned', 'criminal', 'illicit', 'unconstitutional', 'unlawful', 'base',
'corrupt',
```

```
        'criminal', 'delinquent', 'evil', 'iniquitous', 'mean', 'reprobate', 'sinful', 'vicious', 'vile',
        'villainous', 'wicked', 'wrong', 'brigand', 'criminal', 'crook', 'desperado', 'forager',
'gangster',
        'gunperson', 'highwayperson',):
            tos.append(f)
        elif f in (
            'smuggling', 'rum-running', 'stealing', 'prostitution', 'slavery', 'bootlegging',
'counterfeiting',
             'dealing', 'goods', 'moonshine', 'piracy', 'plunder', 'poaching', 'rum-running',
            'smuggling', 'stuff', 'swag', 'theft', 'trafficking', 'violation', 'wetbacking',
            'hijacking"infringement', 'plagiarism', 'theft', 'bootlegging', 'buccaneering',
'rapine',
            'stealing', 'swashbuckling', 'commandeering', 'freebooting', 'marauding', 'pirating',
'bootlegging',
            'counterfeiting', 'moonshine', 'piracy', 'plunder', 'poaching', 'rum-running',
'smuggling',
            'stuff', 'swag', 'theft', 'trafficking', 'violation', 'wetbacking', 'carjack',
'commandeer',
            'kidnap', 'steal', 'shanghai', 'skyjack', 'annex', 'borrow', 'clap', 'confiscate', 'cop',
            'embezzle', 'filch', 'grab', 'hijack', 'liberate', 'lift', 'misappropriate', 'pilfer',):
           vos.append(f)


    if len(pos)>len(neg) and len(pos)>len(cos) and len(pos)>len(sos) and len(pos)>len(tos)
and len(pos)>len(vos):
        cat="war"
```

```
    elif len(neg)>len(pos) and len(neg)>len(cos) and len(neg)>len(sos) and
len(neg)>len(tos) and len(neg)>len(vos):

        cat="Weapon"

    elif len(cos)>len(pos) and len(cos)>len(neg) and len(cos)>len(sos) and len(cos)>len(tos)
and len(cos)>len(vos):

        cat="Violence"

    elif len(sos)>len(pos) and len(sos)>len(neg) and len(sos)>len(cos) and len(sos)>len(tos)
and len(sos)>len(vos):

        cat="Threat"

    elif len(tos)>len(pos) and len(tos) > len(neg) and len(tos) > len(cos) and len(tos) >
len(sos) and len(tos) > len(vos):

        cat = "Crime"

    elif len(vos)>len(pos) and len(vos) > len(neg) and len(vos) > len(cos) and len(vos) >
len(sos) and len(vos) > len(tos):

        cat = "trafficking"

    else:

        cat="other"

    ss=len(pos)


  if (len(pos)>0):

    sa='spam'

  elif(len(neg)>0):

    sa='spam'

  elif(len(cos)>0):
```

```
        sa='spam'
    elif (len(sos) > 0):
        sa = 'spam'
    elif (len(tos) > 0):
        sa = 'spam'
    elif (len(vos) > 0):
        sa = 'spam'
    else:
        sa='inbox'
    if request.method=="POST":
        to1=request.POST.get('to')
        sub = request.POST.get('subject')
        cht = request.POST.get('chat')
        to_mail = request_obj.email
        SendmailModel.objects.create(sendermail=to_mail, to=to1, subject=sub, chat=cht,
spam=sa, category=cat)
    return render(request,'user/userpage.html',{'obj':ss,'a':cat,'ji':sa,})
def viewmailpage(request):
    uid = request.session['userid']
    request_obj = RegisterModel.objects.get(id=uid)
    to_mail = request_obj.email
    obj=SendmailModel.objects.filter(to=to_mail,spam='inbox')
    return render(request,'user/viewmailpage.html',{'form':obj})
```

```
def spampage(request):
    uid = request.session['userid']
    request_obj = RegisterModel.objects.get(id=uid)
    to_mail = request_obj.email
    obj = SendmailModel.objects.filter(to=to_mail, spam='spam')
    return render(request,'user/spampage.html',{'objects':obj})


def logout(request):
    return redirect('index')


def deleteobj(request,pk):
    obj = get_object_or_404(SendmailModel, pk=pk)
    obj.delete()
    return redirect('viewmailpage')
def spamdeleteobj(request,pk):
    obj = get_object_or_404(SendmailModel, pk=pk)
    obj.delete()
    return redirect('spampage')


def mydetails(request):
    usid=request.session['userid']
    us_id=RegisterModel.objects.get(id=usid)
    return render(request,'user/mydetails.html',{'obje':us_id})
```

```
def updatemydetails(request):
    userid = request.session['userid']
    objec = RegisterModel.objects.get(id=userid)
    if request.method == "POST":
        FirstName = request.POST.get('FirstName', '')
        LastName = request.POST.get('LastName', '')
        UserId = request.POST.get('UserId', '')
        Password = request.POST.get('Password', '')
        MobileNumber = request.POST.get('MobileNumber', '')
        EmailId = request.POST.get('EmailId', '')
        Gender = request.POST.get('Gender', '')

        obj = get_object_or_404(RegisterModel, id=userid)
        obj.firstname = FirstName
        obj.lastname = LastName
        obj.userid = UserId
        obj.password = Password
        obj.mblenum = MobileNumber
        obj.email = EmailId
        obj.gender = Gender

        obj.save(update_fields=["firstname", "lastname", "userid", "password", "mblenum",
"email",
```

```
                        "gender", ])
        return redirect('mydetails')


    return render(request,'user/updatemydetails.html',{'obj': objec})


def feedback(request):
    uid = request.session['userid']
    objec = RegisterModel.objects.get(id=uid)
    if request.method == "POST":
        feed = request.POST.get('feedback')
        FeedbackModel.objects.create(username=objec, feedback=feed)
    return render(request,'user/feedback.html')
```

6. RESULT ANALYSIS

6.1 TESTING:

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies, assemblies and/or a finished product It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

6.2 TYPES OF TESTS:

6.2.1 UNIT TESTING:

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

6.2.2 INTEGRATION TESTING:

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

6.2.3 FUNCTIONAL TEST:

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals. Functional testing is centered on the following items:

Valid Input: identified classes of valid input must be accepted.

Invalid Input: identified classes of invalid input must be rejected.

Functions: identified functions must be exercised.

Output: identified classes of application outputs must be exercised.

Systems/Procedures: interfacing systems or procedures must be invoked.

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Business process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

6.2.4 SYSTEM TEST:

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration-oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

6.2.5 WHITE BOX TESTING:

White Box Testing is a testing in which in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is purpose. It is used to test areas that cannot be reached from a black box level.

6.2.6 BLACK BOX TESTING:

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software

under test is treated, as a black box. You cannot "see" into it. The test provides inputs and responds to outputs without considering how the software works.

6.2.7 UNIT TESTING:

Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit testing to be conducted as two distinct phases.

6.2.8 ACCEPTANCE TESTING:

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements.

6.3 TEST STRATEGY AND APPROACH

Field testing will be performed manually and functional tests will be written in detail.

6.3.1 TEST OBJECTIVES

- All field entries must work properly.
- Pages must be activated from the identified link.
- The entry screen, messages and responses must not be delayed.

6.3.2 FEATURES TO BE TESTED

- Verify that the entries are of the correct format
- No duplicate entries should be allowed
- All links should take the user to the correct page.

6.4 TEST RESULTS:

All the test cases mentioned above passed successfully. No defects encountered.

TEST CASES:

S.no	Summary	Field	Input type	Example	Expected result	Actual result	Status
1	Registration	Username	Siva	Siva	Accepted	Accepted	Pass
2	Registration	Password	123	123	Accepted	Accepted	Pass
3	Registration	Address	Hyderabad	Hyderabad	Accepted	Accepted	Pass
4	Registration	Phone	9589452187	9589452187	Accepted	Accepted	Pass
5	Registration	Email	siva12@gmail.com	siva12@gmail.com	Accepted	Accepted	Pass
1	User Login	Username	Rams	Rams	Accepted	Accepted	Pass
2	User Login	Password	123	123	Accepted	Accepted	Pass
1	Admin Login	Username	Rams	Rams	Accepted	Accepted	Pass
2	Admin Login	Password	123	123	Accepted	Accepted	Pass
1	Compose mail	Receiver email	sanjai12@gmail.com	sanjai12@gmail.com	Accepted	Accepted	Pass
2	Compose mail	Subject	Request Project Approval	Request Project Approval	Accepted	Accepted	Pass
3	Compose mail	Message	Dear Sir, Waiting for your approval.	Dear Sir, Waiting for your approval.	Accepted	Accepted	Pass
1	User view mail	Mail id	sanjai12@gmail.com	sanjai12@gmail.com	Accepted	Accepted	Pass
2	User view mail	Subject	Project Design	Project Design	Accepted	Accepted	Pass
3	User view mail	Message	Approve the Design	Approve the Design	Accepted	Accepted	Pass
4	User view mail	Input	Delete	Delete	Accepted	Accepted	Pass

1	User feed back	Message	good	Good	Accepted	Accepted	Pass
1	User info	Username	Rams	Rams	Accepted	Accepted	Pass
2	User info	Password	123	123	Accepted	Accepted	Pass
3	User info	Address	Hyderabad	Hyderabad	Accepted	Accepted	Pass
4	User info	Phone	9589452187	9589452187	Accepted	Accepted	Pass
5	User info	Email	siva12@gmail.com	siva12@gmail.com	Accepted	Accepted	Pass
1	User info update	Username	Rams	Rams	Accepted	Accepted	Pass
2	User info update	Password	123@	123@	Accepted	Accepted	Pass
3	User info update	Address	Hyderabad	Hyderabad	Accepted	Accepted	Pass
4	User info update	Phone	9589452187	9589452187	Accepted	Accepted	Pass
5	User info update	Email	siva12@gmail.com	siva12@gmail.com	Accepted	Accepted	Pass
1	Admin Users detail	Users details	Information	Information	Accepted	Accepted	Pass
1	Admin Analysis	Receiver	sanjai12@gmail.com	sanjai12@gmail.com	Accepted	Accepted	Pass
2	Admin Analysis	Subject	Project Design	Project Design	Accepted	Accepted	Pass
3	Admin Analysis	Message	Approve the Design	Approve the Design	Accepted	Accepted	Pass
4	Admin Analysis	Delete	Input	Input	Accepted	Accepted	Pass
1	Admin Analysis	Category	Input	Input	Accepted	Accepted	Pass
1	Chart	Bar Chart	Input	Input	Accepted	Accepted	Pass
2	Chart	Pie	Input	Input	Accepted	Accepted	Pass
3	Chart	Column	Input	Input	Accepted	Accepted	Pass

Table 6.1 Test Cases for Application

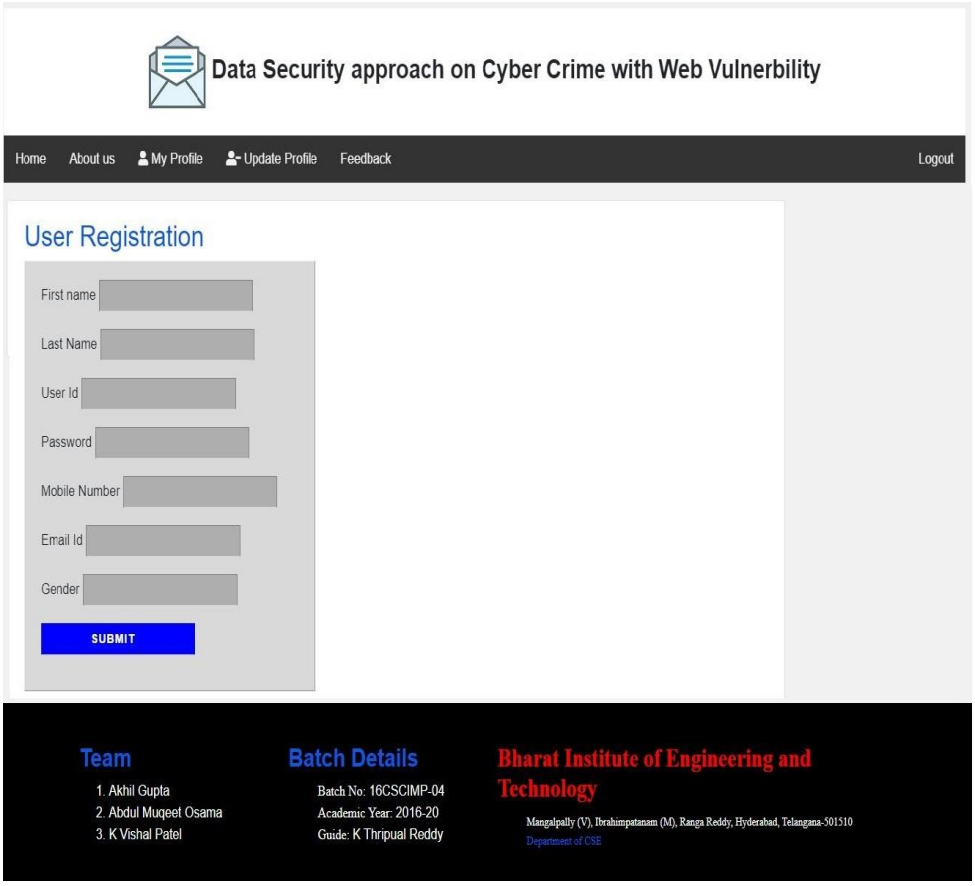

Fig 6.1 User Registration

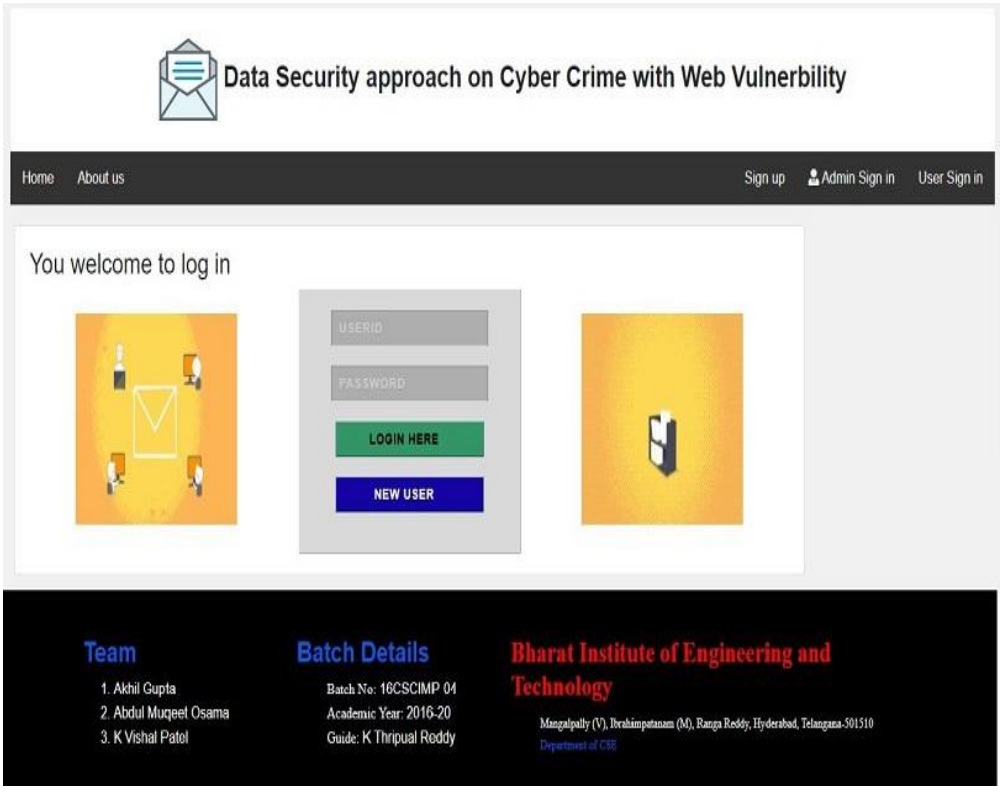

Fig 6.2 User Login

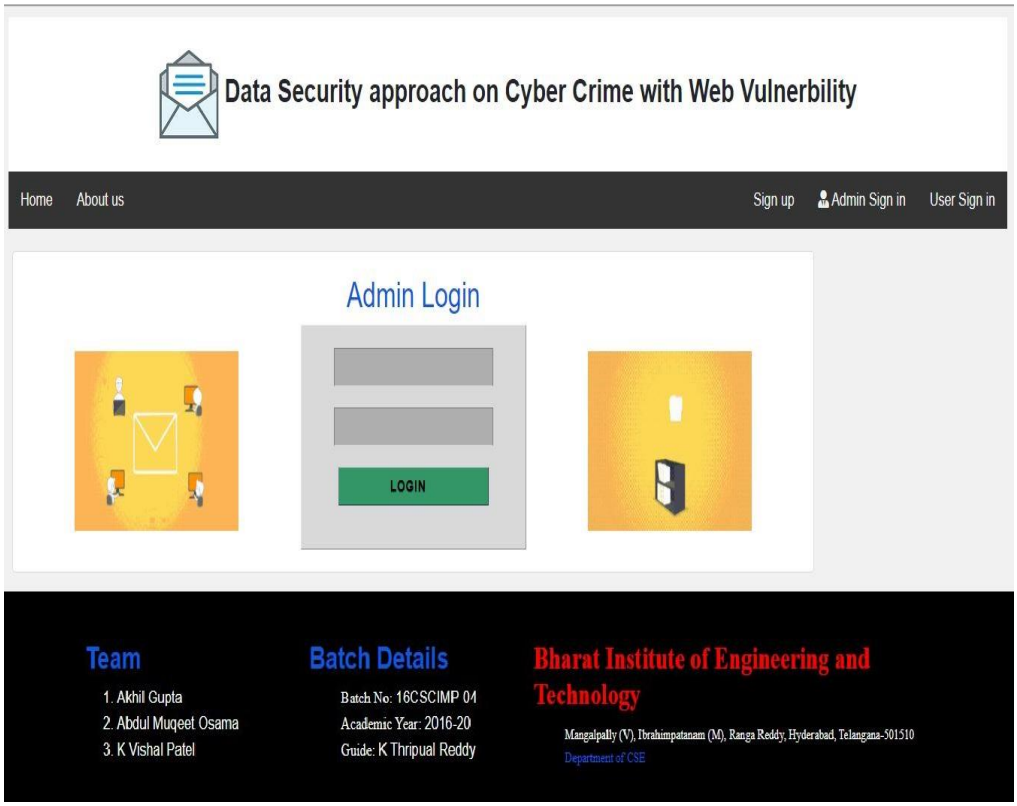

Fig 6.3 Admin Login

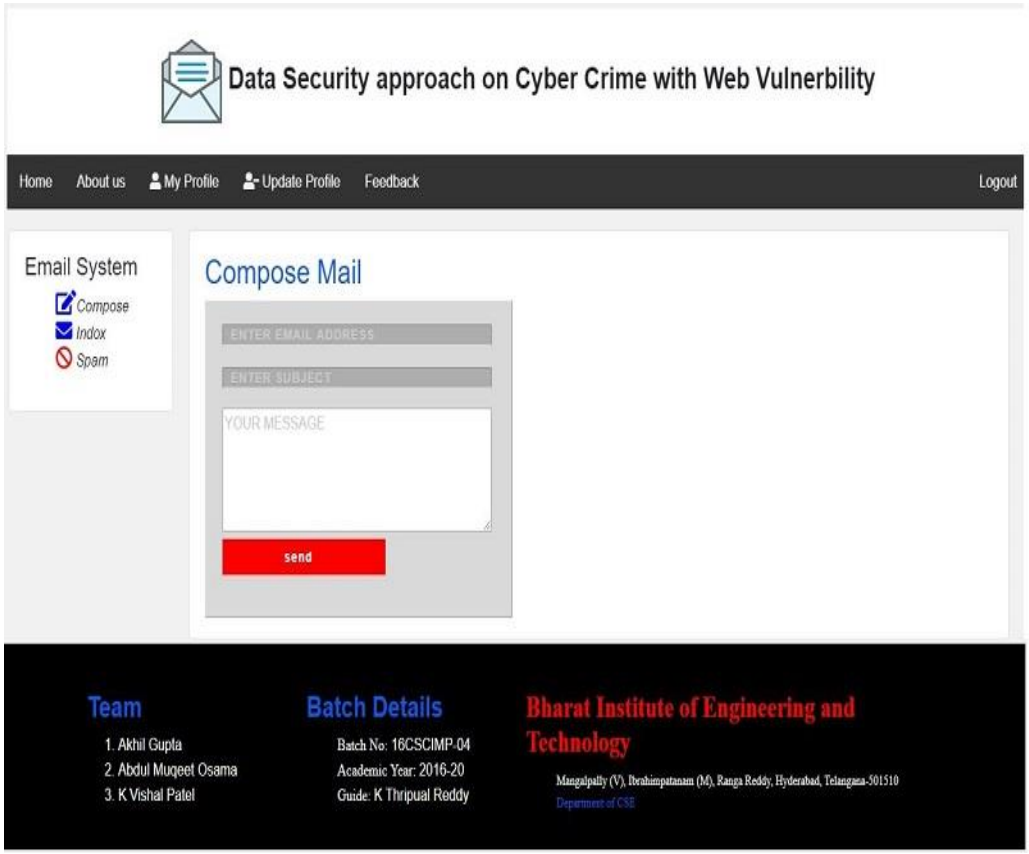

Fig 6.4 Compose mail

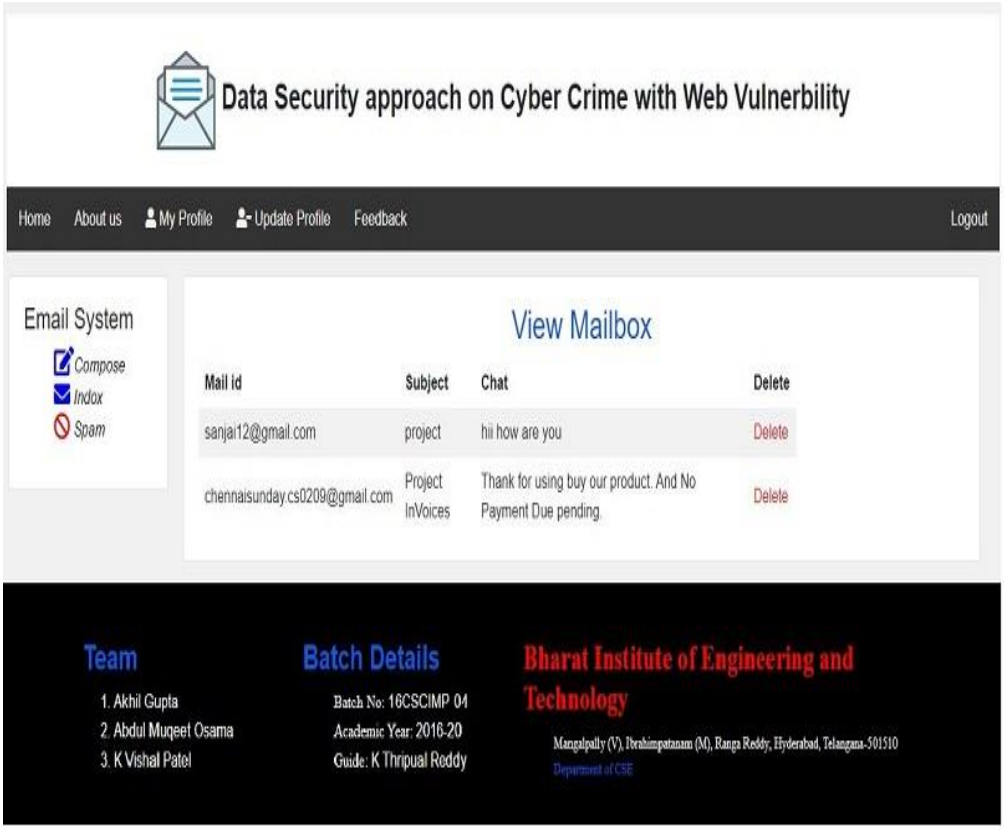

Fig 6.5 User Inbox

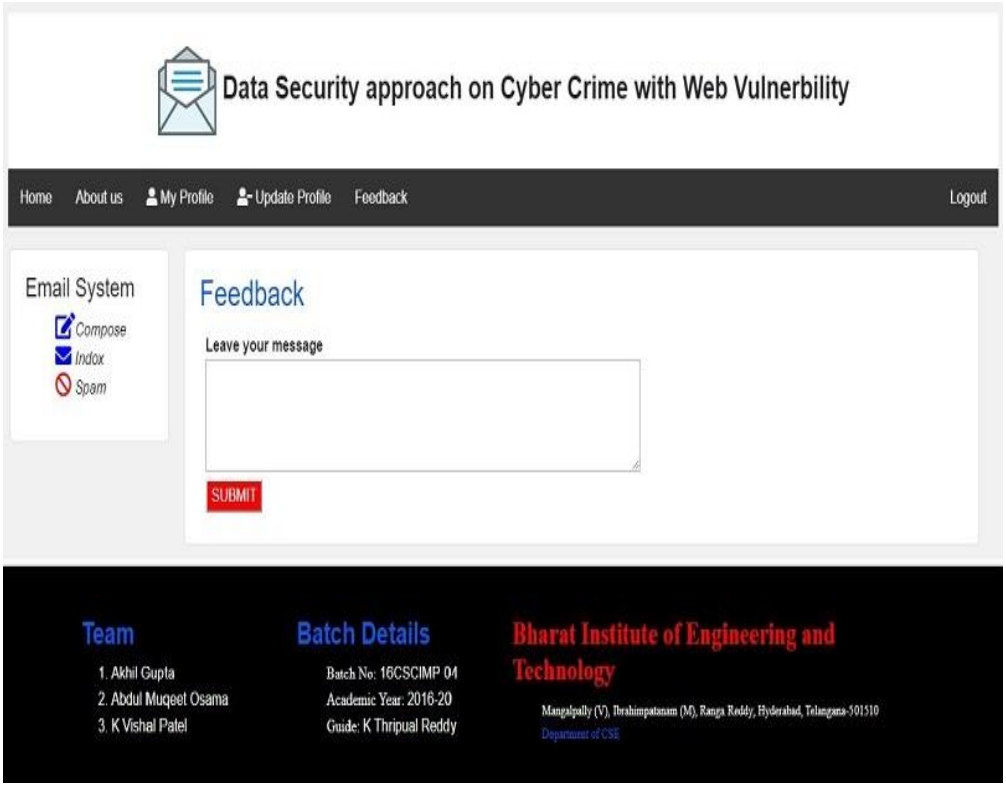

Fig 6.6 User Feedback

Fig 6.7 User Profile

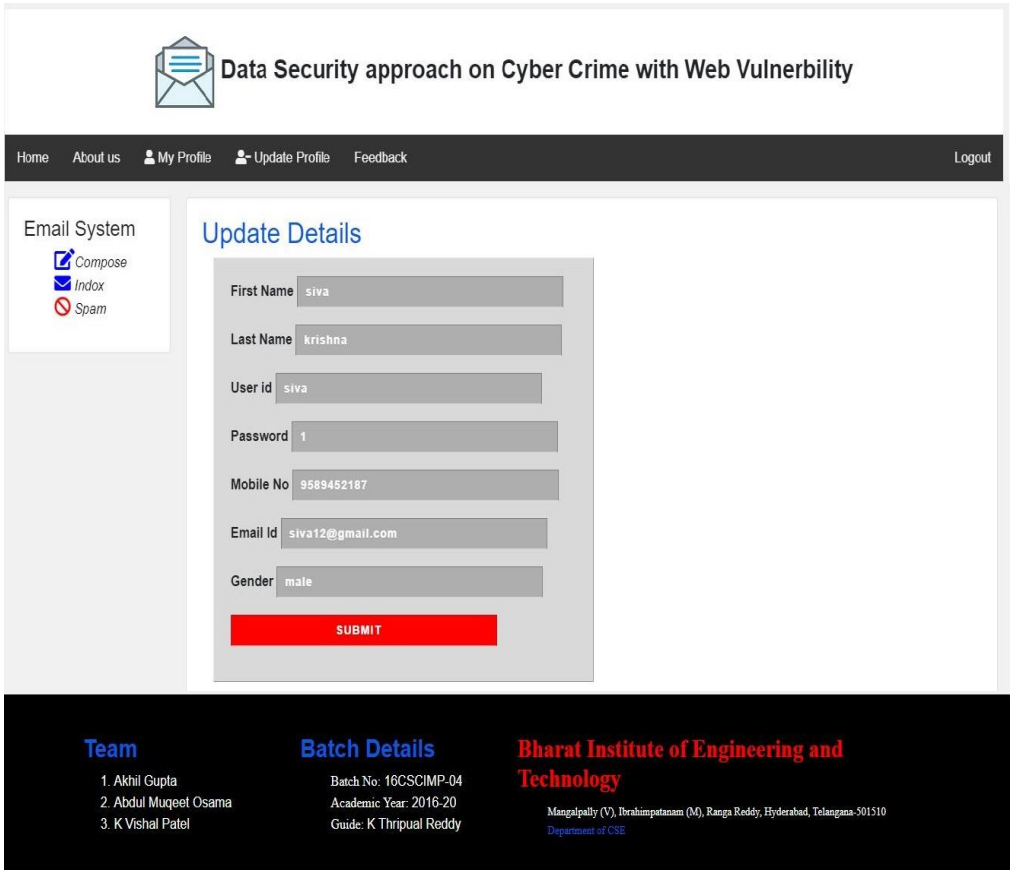

Fig 6.8 User Profile Update

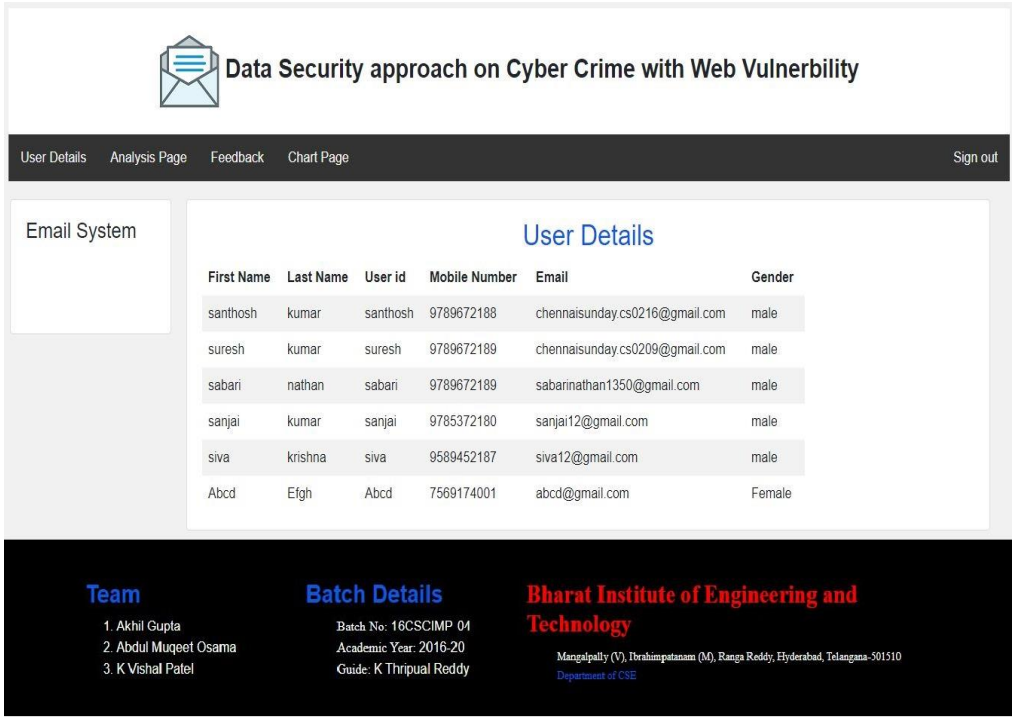

Fig 6.9 Admin User's Details

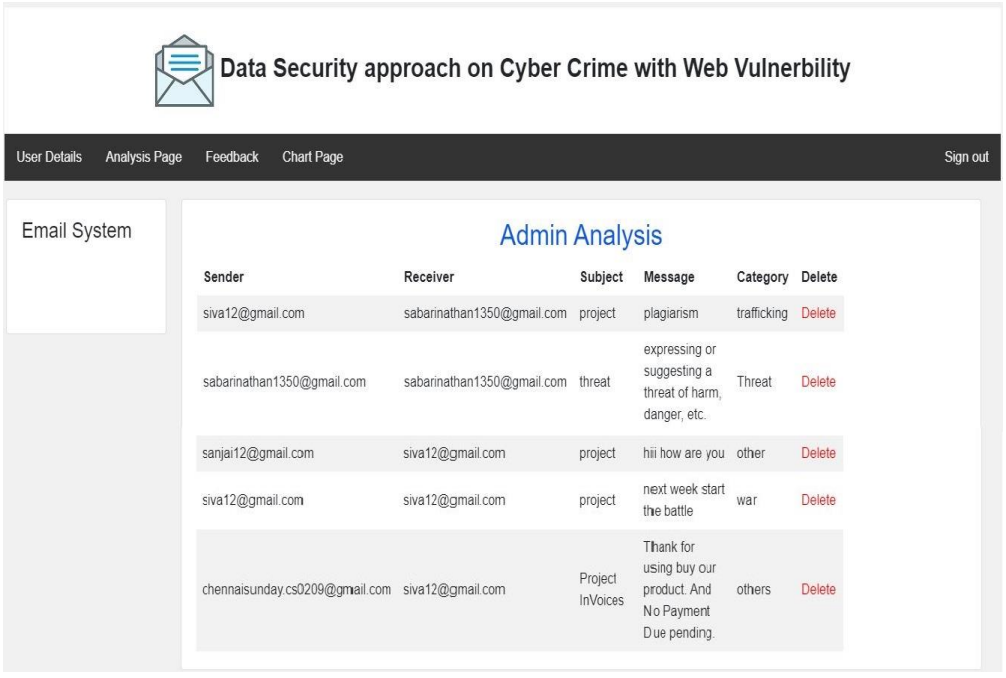

Fig 6.10 Admin Analysis

Fig 6.11 (a) Crime Analysis – Bar Chart

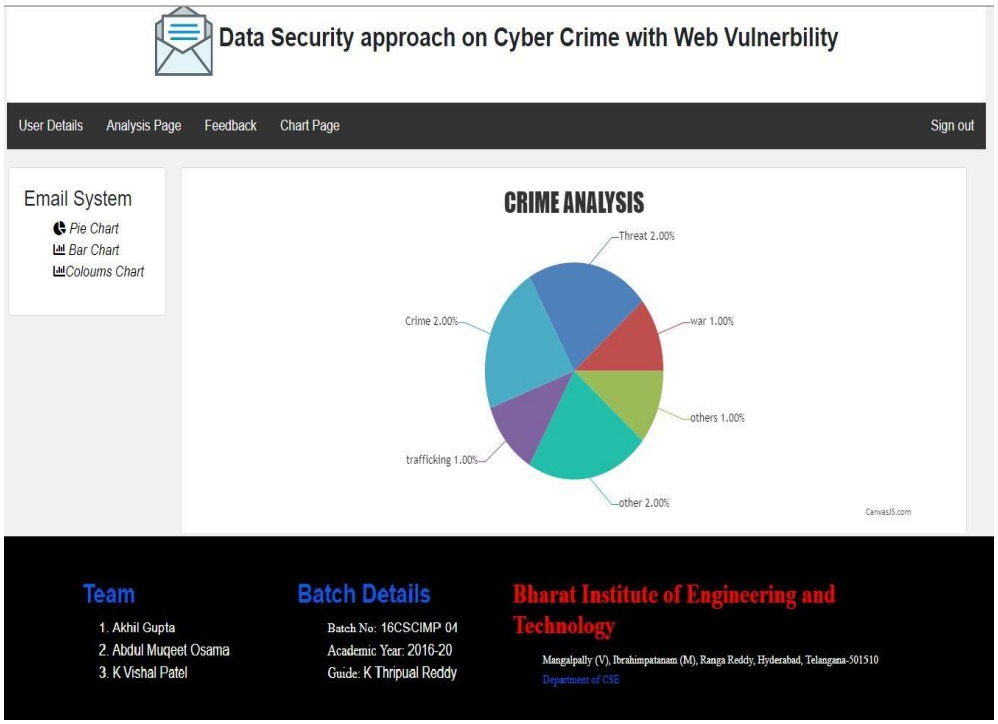

Fig 6.11(b) Crime Analysis – Pie Chart

Fig 6.11(c) Crime Analysis – Columns Chart

7. CONCLUSION AND FUTURE WORK

7.1 CONCLUSION

To curb and destroy the terrorism and spreading of their activities through online social media through unwanted messages and images to cover the helpless people, we need to use the powerful method or system. That system should be useful to the cops for easily give awareness to common people and find the person who are spreading the harmful words as well as who are all involved in terrorism.

This Project Work addressed the Program Outcomes (POs): PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12 and Program Specific Outcomes (PSOs): PSO1, POS2 & POS3.These Program Outcomes (POs) and Program Specific Outcomes (PSOs) are attained by demonstrating the working model of the project.

7.2 FUTURE WORK

These Web Application can also be integrated into various other application where people can send messages to other people so that person who are spreading the harmful words as well as involved in terrorism can be detected not only in email but also in other social media platforms like what's app, telegram, etc.

To track the encrypted mails and documents should be tracked by system. If required any undesirable content found in the document need to be forwarded directly to the admin as alert message with the sender details. And tracking and tracing of Digital Evidence against the culprit for illegal activities.

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