CERTIFICATE

This dissertation report entitled "Twitter Bot" by Mrs. Akshata Laddha is approved for the degree of Master of Engineering in Computer Engineering for academic year 2022 – 2023.

Examiners/External: _____

Supervisor / Guide: _____

Head of the Department: _____

Date: _____

SUBMISSION

We, students of fourth semester of second year degree in computer engineering humbly submit that we have completed the mini project work as prescribed in this report by own skill and study in academic session 2022–23, as per the instruction and guidance of Mrs. Akshata Laddha.

The work carried out in the project is our and not copied the report on any appreciable part from any other literature in contravention of the academic ethics.

The teacher has approved our contribution. The students associated in the mini-project are:

Name of Student   Guide Sign

1) Sarvesh Kadam   _____

2) Atharva Shelke

3) Omkar Udage

4) Anuja Khade

Date: _____

ACKNOWLEDGEMENT

We wish to avail this opportunity to acknowledge our profounding indebtedness and extend our deep sense of gratitude of our profound Mrs.Akshata Laddha for her valuable guidance, advice and encouragement that has been feel to successful completion of this mini-project.

We hereby express our deep gratitude to our H.O.D. and Honorable Principal for his cooperation and help and the other staff members of the department.

We would like to place on record my sincere thanks to all people directly or indirectly helped us in completion of this work.

Team Members:

Sarvesh Kadam

Atharva Shelke

Omkar Udage

Anuja Khade

TABLE OF CONTENTS

Sr No.	Topic Name	Remark
1	Acknowledgement	
2	Action Plan	
3	Introduction	
4	Resources Required & System Requirement	
5	Languages used & Supported Operating System	
6	Source code & Output Screenshots & Explanation	
7	Conclusion	

ACTION PLAN

Sr No	Details of the activity	Planned Start date	Planned Finish date	Name of Responsible Team Members
1	Project Survey & Presentation	01/03/23	20/03/23	Sarvesh Kadam
2	Gathering Information	20/03/23	30/03/23	Anuja Khade
3	Code Executed	01/04/23	10/04/23	Atharva Shelke
4	Report File	10/04/23	15/04/23	Omkar Udage

INTRODUCTION

- What is a Twitter bot?

A Twitter bot is an automated account on the social media platform Twitter that is programmed to perform various tasks and actions without human intervention. These bots can be created by developers or individuals with programming skills and can be designed to perform a wide range of functions. Twitter bots can be simple or complex, and their actions can include automatically posting tweets, retweeting specific content, liking tweets, following, or unfollowing accounts, replying to tweets, and more. They can be programmed to operate 24/7, continuously performing their designated tasks based on their programming.

- Advantages of a Twitter bot

Twitter bots can operate 24/7 without the need for constant human monitoring or intervention. This allows for scalability, as bots can perform tasks consistently and efficiently, even during off-hours, which may not be feasible for human operators. Twitter bots can be programmed to retrieve and summarize information from tweets or user profiles, such as news updates, weather forecasts, or other data. This can be useful for automated news updates, data tracking, or information retrieval purposes. Twitter bots can be used for marketing and promotional purposes, such as automatically sharing updates about products, services, or events. They can

help to promote content, engage with users, and increase visibility for a brand or campaign. The follow bots help to increase your audience so that when you tweet, you have a larger audience every time leading to more replies, likes or retweets.

- Is a Twitter bot safe?

The safety of a Twitter bot depends on how it is designed, implemented, and used. While Twitter bots can offer advantages in terms of automation and efficiency, it is important to consider several factors to ensure their safety and responsible use. Twitter has guidelines and rules in place that govern the use of bots on its platform. It is crucial to comply with Twitter's terms of service and guidelines to avoid violations, such as spamming, impersonation, or manipulation of trends, which could result in suspension or termination of the bot's account. Twitter bots should be designed with appropriate error handling mechanisms to avoid unintended actions or behaviors. This includes handling cases such as encountering errors in API requests, handling unexpected user interactions, and avoiding repetitive or excessive actions.

Regular testing and monitoring of the Twitter bot's actions and behaviors are essential to ensure its proper functioning and safety. Regularly review and update the bot's programming, and monitor its actions to identify and address any potential issues or risks.

We have built a twitter bot with python that automatically logs in to your existing twitter account and searches for the tweets more specifically keywords or hashtags that we want and like them every second or in a certain time period that we have set for which will result in getting interaction with others and as well help us in gaining some followers.

So before getting started we must download the latest version of python along with the Firefox browser and gecko driver.

RESOURCE REQUIRED

Sr No.	Name of Resource / Material	Specification	Quantity	Remarks
1	Hardware: Computer System	Computer (inteli3, 11th GEN), RAM 8GB, SS 256GB	1	
2	Operating System	Windows 7,10 and 11 (Any)	1	
3	Software	VS code	1	
4	Gecko driver	WebDriver	1	

Languages/Technologies used –

1) Python: Most of the project work is done by python language.

2) JavaScript: It is used for automatically scrolling down the twitter page to like the content.

3) Firefox browser: To open our twitter page on.

4) Gecko driver: WebDriver.

Supported Operating Systems –

1) Windows: This project can be easily configured on windowsoperating system. For running this project on Windows system.

2) Linux: We can run this project on all versions of Linux Operating system

3) Mac: We can as well easily configure this project on Mac Operating system

GECKO DRIVER

Gecko Driver is a proxy for using W3C WebDriver - compatible clients, such as Selenium, to interact with web browsers that use the Gecko layout engine. It is specifically designed for automating web testing with the Firefox web browser. Gecko Driver acts as a communication bridge between the WebDriver client and the Firefox browser, enabling automated interactions with web pages, such as navigating to URLs, interacting with form fields, clicking buttons, and extracting data. It is an essential component in the Selenium testing framework for automating web testing tasks in Firefox. Gecko Driver is developed and maintained by Mozilla, the organization behind the Firefox web browser, and it is available as a standalone executable that needs to be downloaded and configured in order to use it with Selenium for web automation.

Gecko Driver can be used as a tool in combination with other libraries or frameworks to build a Twitter bot for automating tasks on the Twitter platform. A Twitter bot is an automated program that can perform various actions on Twitter, such as posting tweets, retweeting, liking, following, and unfollowing users. It is important to note that when building a Twitter bot or any other automated tool, it's essential to adhere to Twitter's terms of service and API usage policies to ensure that your bot operates within the allowed limits and

guidelines. Additionally, always consider the ethical implications of automating interactions on social media platforms and respect the privacy and rights of other users.

SELENIUM

Selenium is an open-source software suite of browser automation tools that allows developers and testers to automate interactions with web browsers. Selenium provides a set of APIs (Application Programming Interfaces) and libraries for different programming languages, including Java, Python, C#, and others, to write automated scripts that can simulate user interactions with web pages. Selenium is widely used for web testing and web scraping, and it is commonly used in software development and quality assurance (QA) processes to automate repetitive tasks, perform functional testing, and validate web application behavior across different browsers and platforms. Selenium supports various web browsers, including Chrome, Firefox, Safari, Edge, and others, and allows users to write test scripts that can interact with web elements such as buttons, text fields, checkboxes, and perform actions such as clicking, typing, submitting forms, and more.

Selenium can be used as a tool for building a Twitter bot to automate interactions with the Twitter platform. Selenium provides APIs that allow developers to write scripts in programming languages like Python, Java, C#, and others, to automate actions on Twitter, such as posting tweets, retweeting, liking, following , and unfollowing users .

PROCESS

We must create the class that implements the selenium interface. We are going to import key web driver from selenium and then we are going to import common and then we are going to import keys. With this we can add two inputs, enter, and log in, and things of all sort. We are going create a Twitter bot, so we are going to create a class, initialize it, and then add the name, age, username, and password to the Twitter bot. Timed out sleep is very important here as it will pause your app for two or three seconds to wait for the web page to load up depending on your internet connection. We can test this out by creating an instance of Twitter Bot and passing in our username and password. You can customize it, add more to it, and see what works for you, and then fill out the forms. To do this, press F12, grab the arrow icon, put it in your username and password slot, wait three seconds or what your sleep time is and then create an email variable. We must get it to automatically scroll down the twitter page for tweets or content to appear to like it, for that we are going to use java script. We can let it scroll down multiple times by creating a loop. We can scroll down once, wait for a bit for the content to load, then scroll down again. We can search for each tweet by the class name, and then get the link for each one by searching for the data permalink path, which has the person tweeting's name, status, and the actual number. We can search for the elements in the tweets and get their data permalink path and then print the links. So, the final scene is, it searches for the hashtag we want, waits

for couple of seconds we have set and it looks after it. Now, coming to the part where we must like every tweet appearing so we must put a function where it clicks on a heart animation on the tweets to like it. We must give it a timeout as well, certainly for at least ten seconds to be on the safer side depending on your internet speed. We will add an exception as well just in case we had an error.

So, python app.py file opens on the browser, adds the email and password, and then logs in. Then it searches for the keywords or hashtags and then it searches for all the individual tweets, it is going to scroll down a bit and then it leaves a like on tweet and then it stops or pauses for ten seconds as per you gave it the timeout sleep and then it will go on next one dropping like on it. You can leave it running for however long you want.

SOURCE CODE

```python
from selenium import webdriver
from selenium.webdriver.common.by import By
from selenium.webdriver.common.keys import Keys
import time


class TwitterBot:
    def _init_(self,username,password):
        self.username = username
        self.password = password
        self.bot = webdriver.Firefox()

    def login(self):
        bot = self.bot
        bot.get('https://twitter.com/i/flow/login')
        time.sleep(5)
        email = bot.find_element(By.NAME, 'text')
        email.send_keys(self.username)
        email.send_keys(Keys.RETURN)
        time.sleep(3)
        password = bot.find_element(By.NAME, 'password')
```
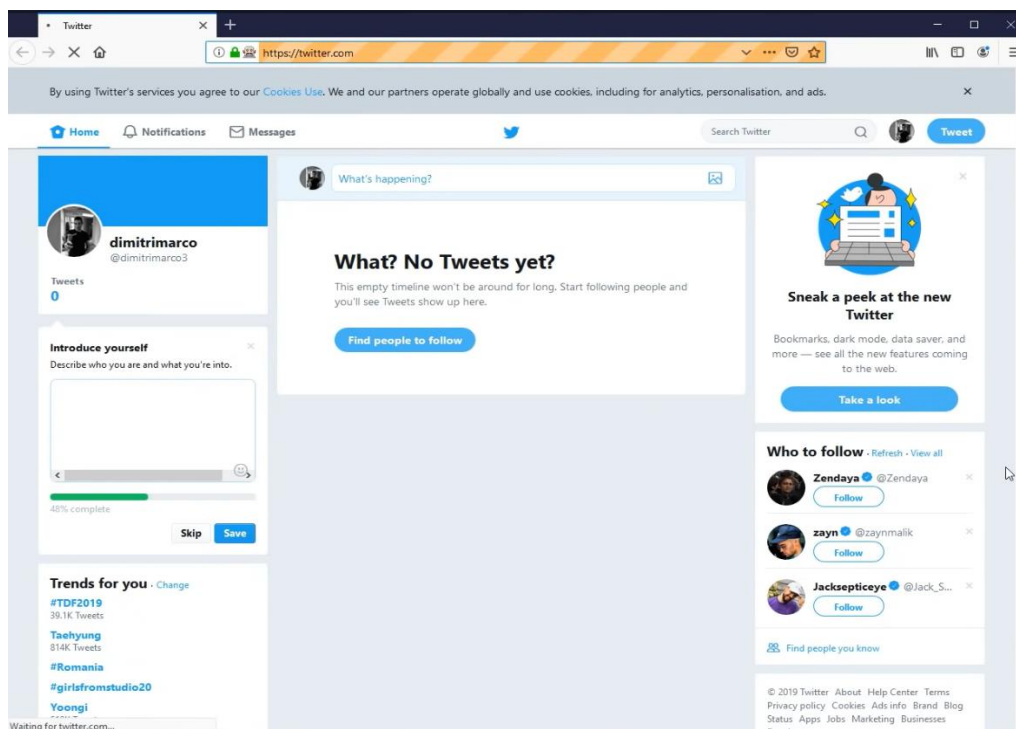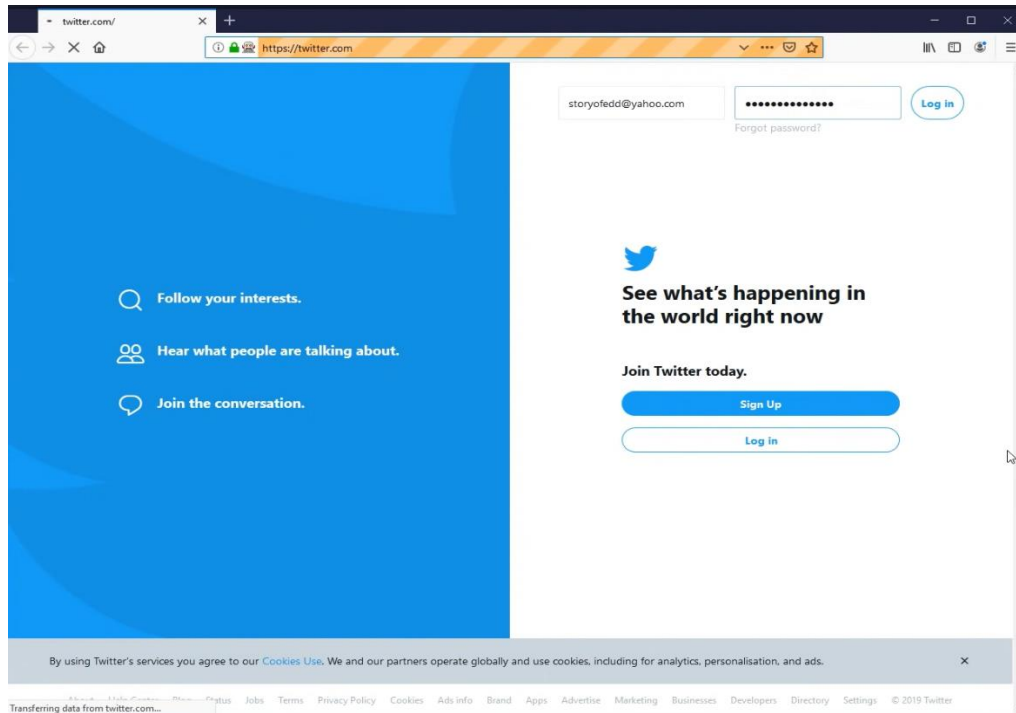
```python
        password.send_keys(self.password)
        password.send_keys(Keys.RETURN)
        time.sleep(3)


ed = TwitterBot('', '')
ed.login()
```

REFERENCE LINKS

- https://www.youtube.com/watch?v=7ovFudqFB0Q
- https://www.mozilla.org/en-US/firefox/new/
- https://www.python.org/downloads/
- https://github.com/mozilla/geckodriver/

CONCLUSION

Hence, we have successfully done with the " Twitter bot " execution with the use of python and code run / executed using VS code.

We have made this to make easy to login with individual twitter handles of specific user. This is very useful because it just has your information like your username, password already filled / it will auto - fill your required information. And once done with that it will open the " Firefox " Browser and login. And then you can see the twitter logged interface on your pc / laptop screen.