Python Programming Language

Mini Project Report on

Social Networking Sites Automation

Using Selenium

(INSTAGRAM, FACEBOOK & TWITTER)

Submitted in partial fulfilment of the requirements

Of the degree of

Bachelor of Engineering in Computer Engineering

Submitted by:

GAIKWAD PRAMOD BHIKAJI (204)

TADAVI RAHUL GULSHER (226)

UDAIPURWALA MOHAMMED HUSSAIN (228)

Under the Guidance of

Prof. VIVEK KADAM

Saraswati Education Society's
Yadavrao Tasgaonkar College
of Engineering

Department of Computer Engineering

YADAVRAO TASGAONKAR COLLEGE OF ENGINEERING &

MANAGEMENT

2020-2021

CERTIFICATE

This is to certify that the Python mini project entitled "**SOCIAL NETWOKING SITES AUTOMATION USING SELENIUM**" is a bonafide work of **PRAMOD GAIKWAD (204)**, **MOHAMMED UDAIPURWALA (210),** & **RAHUL TADAVI (218).** Submitted to the University of Mumbai in partial fulfilment of the requirement for the award of the degree of Bachelor of Engineering in Computer.

Prof. Vivek Kadam. **Prof.**

(PROJECT GUIDE) EXTERNAL

Prof. Vijay Shelake. **Prof. Raju Sairise**

(H.O.D) (PRINCIPAL)

DECLARATION

We declare that this written submission represents my ideas in me on words and where others ideas or words has been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from proper permission has not been taken when needed.

1) GAIKWAD PRAMOD BHIKAJI(204) ----------

2) UDAIPURWALA MOHHAMED HUSSAIN(228) ----

3) TADAVI RAHUL GULSHER(226) ----------

Date:

ACKNOWLEDGEMENT

No mini project is ever complete without the guidance of those expert how have already traded this past before and hence become master of it and as a result, our leader. So we would like to take this opportunity to take all those individuals how have helped us in visualizing this Python Programming Language mini project.

We would like to grab this opportunity to thank **Raju Sairase, Principal** for encouragement and support he has given for our mini project. We express our deep gratitude to **Prof. Vijay Shelake, Head of the Department** who has been the constant driving force behind the completion of this mini project. He had indeed been a lighthouse for us in this journey.

We wish to express our heartfelt appreciation and deep sense of gratitude to my mini project guide. **Prof. Vivek Kadam for** his encouragement, invaluable support, timely help, lucid suggestions and excellent guidance which helped us to understand and achieve the mini project goal. His concrete directions and critical views have greatly helped us in successful completion of this work.

We extend our sincerity appreciation to all our Professors from **YADAVRAO TASGAONKAR COLLEGE OF ENGINEERING AND MANAGEMENT** for their valuable inside and tip during the designing of this Python Programming Language mini project. Their contributions have been valuable in so many ways that we find it difficult to acknowledge of them individual. We are also thankful to all those who helped us directly or indirectly in completion of this work.

ABSTRACT

Social networking sites automation is a web base framework which we can directly login into various social sites like Instagram, Facebook and Twitter. In this mini project we used python GUI framework Tkinter and web based tool selenium library for automation which we can connects our login application to web browser through the selenium web driver. Selenium is an open-source testing tool, which means it can be downloaded from the internet without spending anything.

Selenium is a functional testing tool and also compatible with non-functional testing tools as well. First we need install selenium library and download selenium web driver from google chrome. A selenium web driver works on a bridge the gap between graphical user-interface application or various application to web browser which we enters our username and password in our page and login it, after the login the web driver reads the data and process it after the process, it opens onto the web browser like Google Chrome, Firefox and various web browsers.

After the login it will shows the message or password save notification on browser. This mini project shows new technology which we connects GUI application to open source web tools using python and various programming languages, It's helpful to learn advance concept and build our new system.

INDEX

CHAPTER – 1

INTRODUCTION

Social networking sites automation depends on four purpose: Graphical user interface, selenium web-driver, Web browser and Database Connectivity.

In this project we simply create a graphical user interface page using python programming language(Tkinter) for login and signup page which used to put our information like username and password and for signup or create new account. We simply create a facebook signup form for creating new account. In this project we simply create three login system Instagram, facebook and twitter and one signup system for facebook which it is connected to the web browser and create a database record to store the information and stored result will show on web browser.

We imported many python packages like GUI package tkinter `from tkinter import *` to import all the resources of GUI. Second we import selenium web driver package `from selenium import webdriver` to connection between graphical user interface application and web application through google chrome webdriver to show the result on google chrome and for database connection we simply used mysql package `import mysql.connector as mysql` this package is used to approach MySQL driver to connection between gui application and database and we used typecasting `from typing import cast` to convert the variable data **type** into a certain data **type** in order to the operation required to be performed by users.

Python has been around since the early 90's but its popularity has grown exponentially in the past decade, partly due to the adoption of Python by the

Data Science community and partly because it's a great language for beginners. It has a simple syntax and at its core tries to promote clean and readable code. Python has a rich library of available packages and a hugely supportive and active community, not to mention some great automation testing frameworks. It is for these reasons that Python is a great choice for automation testing.

CHATPER -2

LITERATURE SURVEY

The question asked about social media platform is that how our life goes better when we used social media platform and how you expressed yourself in millions of peoples.

The easiest answer is that communication. Communication helps you to connect the people directly in this platform when we were not connected before, we start many works, business, education related activity and most important thing is social related activity. In this platform we explore many thing that we learned and share it, we express our thoughts in people and many types of social related activities.

Social media has advanced from simply providing a platform for individuals to stay in touch with their family and friends. Now it is a place where consumers can learn more about their favorite companies and the products they sell. Marketers and retailers are utilizing these sites as another way to reach consumers and provide a new way to shop. “Technology related developments such as the rise of powerful search engines, advanced mobile devices and interfaces, peer-to-peer communication vehicles, and online social networks have extended marketers’ ability to reach shoppers through new touch points”.

The science of measuring social media is revolving. Many platform provides some level of built-in-statistics, for example, Facebook counts “friends” and “likes”. Twitter tracks “followers” and “tweets”. Instagram counts “followers”, “Many types of post”, and “Stories”. YouTube counts “Subscribers” “Likes & dislike”, and “Views” these are the system became a money making platform.

CHATPER -2

PROPOSED SYSTEM

Social networking sites allow users to share ideas, digital photos and videos, posts, and to inform others about online or real-world activities and events with people in their network. While in-person social networking – such as gathering in a village market to talk about events – has existed since the earliest development of towns,[4] the web enables people to connect with others who live in different locations, ranging from across a city to across the world. Depending on the social media platform, members may be able to contact any other member. In other cases, members can contact anyone they have a connection to, and subsequently anyone that contact has a connection to, and so on. The success of social networking services can be seen in their dominance in society today, with Facebook having a massive 2.13 billion active monthly users and an average of 1.4 billion daily active users in 2017.[5] LinkedIn, a career-oriented social-networking service, generally requires that a member personally know another member in real life before they contact them online. Some services require members to have a pre-existing connection to contact other members.

This social sites automation shows many of social sites login activities and signup activities. It is simple to enter our information like username and password and login. In this automation project we used web-driver for connection between two API's and take. This project implemented using python system. In our source code various xpath taken for every elements in the GUI applications. This source code shows automations testing using graphical user interface application.

The following headers files are imported for our projects which will helps to performing all the necessary operations.

- **from os import name**
- **from tkinter import ***
- **from tkinter import messagebox**
- **from typing import cast**
- **from selenium import webdriver**
- **import time**
- **from tkinter.messagebox import ***
- **from selenium.webdriver.remote import command**
- **from webdriver_manager import driver**
- **from webdriver_manager.chrome import ChromeDriverManager**
- **import mysql.connector as mysql**

The following header files are included using command import for example: from os import name. The complete source code is available on the my GitHub page https://github.com/pramo22 which can be downloaded easily. The peoples are keep in mind that you do not share your information or username and password to others peoples when you logged in your data saved successfully saved in database privately so do not share your username and password and avoid the mistakes.

In this project, we simply entered our username and password and login it your login page are opened in internet or different kind of web application and if you don’t have account your might be signup to create a new account, that you should fill the signup page and add your first name, last name, email id, phone number or username, your new password, date of birth and your gender. This entered information is necessary for creating your new account.

The interface should contain the following options in order to facilitate the operations: -

- Input box(Login and signup).
- Type username and password or various information in Input box.
- Submit it(Login or Signup).
- Output page.
- Entered information displayed on web browser.
- Entered information saved in database.

The following project helps you to test the automated software which you to open your user account and login an existing account. This is only based on the automation testing to automate your GUI page with web application which it is kind automatic generated information in web page when we entered first in GUI application. The added information in social sites automation which makes a database tables that directly saved our login and signup information for a future that information will saved in privately and saved your login activities with a timely manner. First there are different types windows button we created in this project for Instagram, Facebook & Twitter for login information after you click any of login system button you got a new page that you were choose. Social sites systems are available in many systems like mobile phone and your computer these are available in browsers and having a android application in google play store which having their own automation testing tools.

Selenium requires a web driver to interface with the chosen browser. Web drivers is a package to interact with a web browser. It interacts with the web browser or a remote web server through a wire protocol which is common to all. You can check out and install the web drivers of your browser choice.

CHAPTER-4

SYSTEM REQUIREMENTS AND DESIGN

Hardware Requirements:-

- Processor : Core i3
- Hard disk : 1TB
- Memory : 6GB RAM

Software Requirements:-

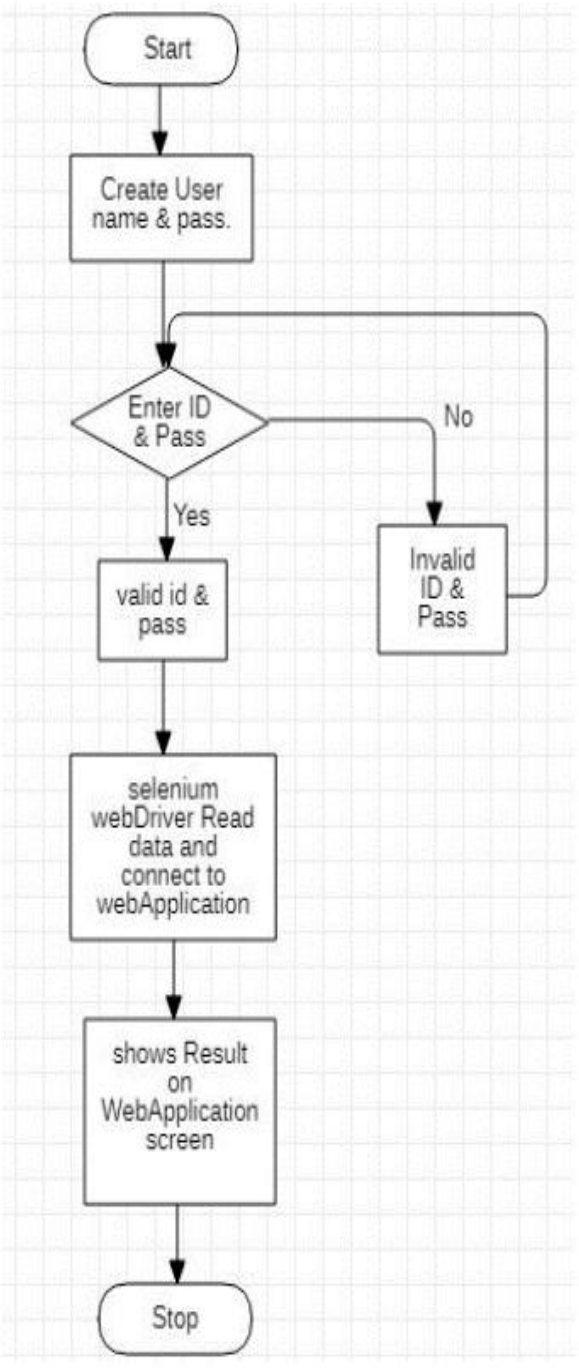
- Operating System : Windows 10 or various
- IDLE : Visual Studio Code
- Database Software : MySQL Workbench
- Web Browser : Google Chrome
- Programming Language : Python 3.7

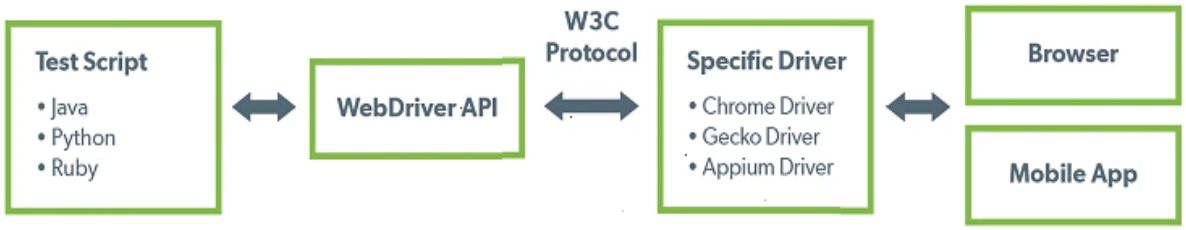
CHAPTER – 4.2

ALGORITHMS OR WORKING STEPS

- Create different GUI windows for different login pages.
- Create username and password GUI page for different sites automation.
- If username and password not entered then it will show error message in a web application.
- In other part we have to create selenium web driver for connecting GUI application and web application.
- Create path for username, password and login content.
- Enter your registered username and password on GUI page and submit it.
- The selenium web driver reads the data and connects to the web application.
- Entered Information will save on MySQL database.
- The result shows onto the web application**.**

FLOWCHART


Start
Create User name & pass.
Enter ID & Pass
No
Yes
Invalid ID & Pass
valid id & pass
selenium webDriver Read data and connect to webApplication
shows Result on WebApplication screen
Stop


Test Script
• Java
• Python
• Ruby
WebDriver API
W3C Protocol
Specific Driver
• Chrome Driver
• Gecko Driver
• Appium Driver
Browser
Mobile App

CHAPTER- 5

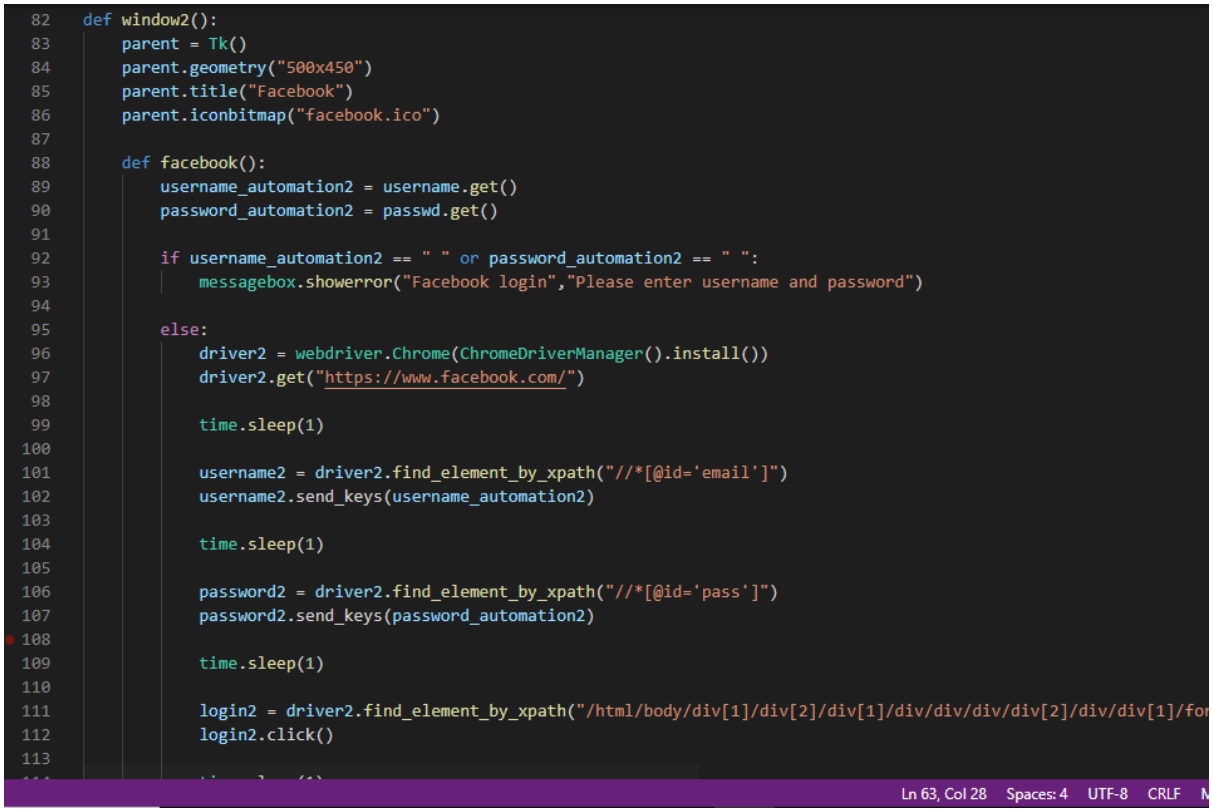
CODE DESCRIPTION

```
from os import name
from tkinter import *
from tkinter import messagebox
from typing import cast
from selenium  import webdriver
import time
from tkinter.messagebox import *
from selenium.webdriver.remote import command
from webdriver_manager import driver
from webdriver_manager.chrome import ChromeDriverManager
import mysql.connector as mysql

win=Tk()
win.geometry("300x300")
win.title("Automation")
win.iconbitmap("autoicon.ico")

```

Step 1:- Inside the project we imported the header files like selenium web driver, GUI Package tkinter and MySQL Package for database connection and type casting package to convert the a one datatype into another datatype and many header files are imported. Second we create a GUI function window for Instagram with name “win” and set the geometric like “width” and “height” size of the window and add the title and set the icon for window.

```
def instagram():
    username_automation = username.get()
    password_automation = passwd.get()

    if username_automation == " " or password_automation == " ":
        messagebox.showerror("Instagram login","Please enter username and password")

    else:
        driver1=webdriver.Chrome(ChromeDriverManager().install())
        driver1.get("https://www.instagram.com/")

        time.sleep(1)

        username1 = driver1.find_element_by_xpath("//*[@id='loginForm']/div/div[1]/div/label/input")
        username1.send_keys(username_automation)

        time.sleep(1)

        password1 = driver1.find_element_by_xpath("//*[@id='loginForm']/div/div[2]/div/label/input")
        password1.send_keys(password_automation)

        time.sleep(1)

        login = driver1.find_element_by_xpath("//*[@id='loginForm']/div/div[3]/button/div")
        login.click()

        time.sleep(1)
```

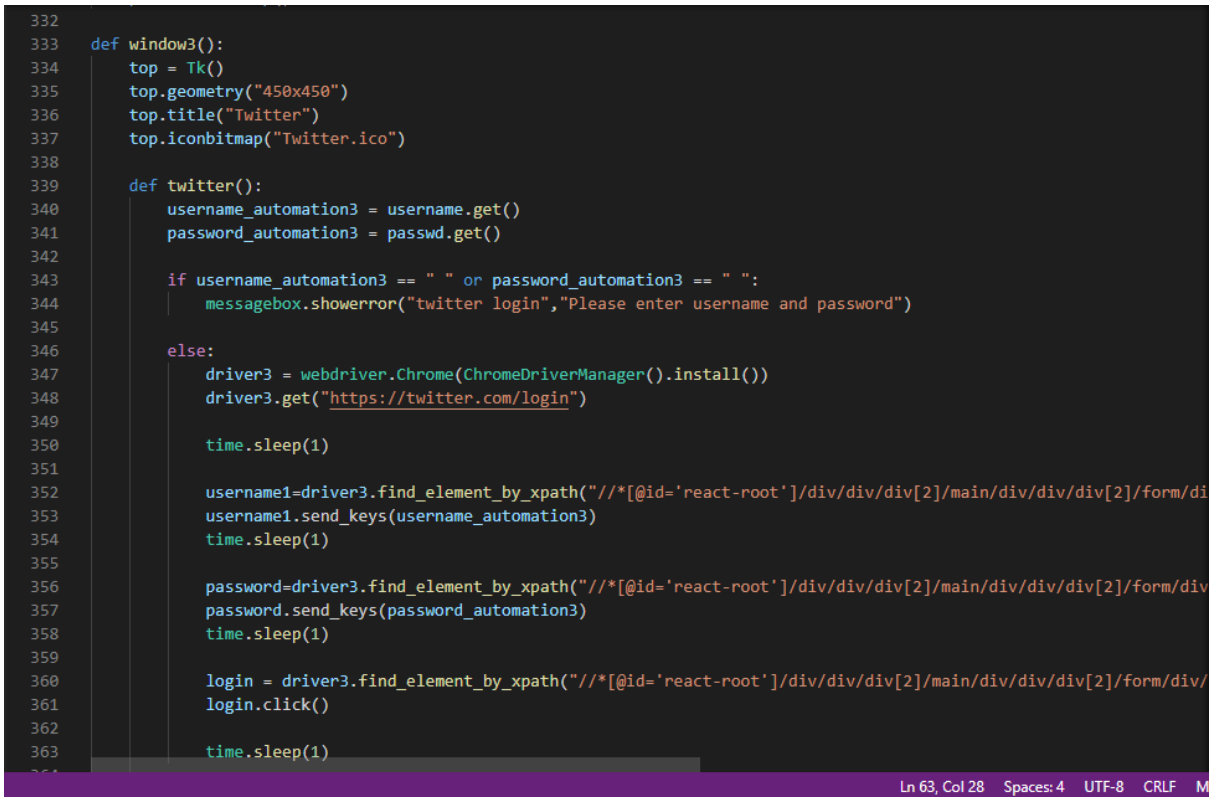
Step 2:- If else condition gives you a condition statement that we apply on a programe. In this source code we creates a function or define a function name **“**instagram**”** and second we created username and password automation fields for performing operation for instagram automation. If username and password will not be entered then it will show on error message our GUI Page and web page and other part, in else firstly we created a selnium web driver for google chrome and enter the instagram login link and added different Xpath for username, password fields and login button in a timely manner and send a instruction keys to the entered a username and password fields on GUI page, after the username and password entered the login page shows on web page and the shows a “login successfully” message shows on messagebox and entered information will added on database. We use “time.sleep(1)” function that user login into a one second and it shows a multithreading concept.



```
82  def window2():
83      parent = Tk()
84      parent.geometry("500x450")
85      parent.title("Facebook")
86      parent.iconbitmap("facebook.ico")
87
88      def facebook():
89          username_automation2 = username.get()
90          password_automation2 = passwd.get()
91
92          if username_automation2 == " " or password_automation2 == " ":
93              messagebox.showerror("Facebook login","Please enter username and password")
94
95          else:
96              driver2 = webdriver.Chrome(ChromeDriverManager().install())
97              driver2.get("https://www.facebook.com/")
98
99              time.sleep(1)
100
101             username2 = driver2.find_element_by_xpath("//*[@id='email']")
102             username2.send_keys(username_automation2)
103
104             time.sleep(1)
105
106             password2 = driver2.find_element_by_xpath("//*[@id='pass']")
107             password2.send_keys(password_automation2)
108
109             time.sleep(1)
110
111             login2 = driver2.find_element_by_xpath("/html/body/div[1]/div[2]/div[1]/div/div/div/div[2]/div/div[1]/fo
112             login2.click()
113
```

Ln 63, Col 28 Spaces: 4 UTF-8 CRLF

Step 3:- In a second part we created a Facebook automation window for Facebook login it is same as Instagram login window but in that login system we added a signup page for Facebook using Signup with Facebook. In this we use a if else condition statement for Facebook login, it shows that if username and password is null then it will shows an error message box will show and in other part, in a else condition we created a web driver for Facebook automation and add a Facebook login link to the driver. After the chromium web driver manager had been made, we added Xpath to the username and password field and same added to the signup page entry field, login and signup field with "time.sleep()" method which the login and new account created in a timely manner. In signup, after entered an information and submission a one-time password page will be show in a GUI OTP number will send on your registered mobile number or email id and after the full of process the registration process will be completed. When added enter username and password in a entry fields web driver send a keys to the entry field and result shows on web page and login successfully message box shows and entered Login and Signup information added to database.



```
332
333  def window3():
334      top = Tk()
335      top.geometry("450x450")
336      top.title("Twitter")
337      top.iconbitmap("Twitter.ico")
338
339      def twitter():
340          username_automation3 = username.get()
341          password_automation3 = passwd.get()
342
343          if username_automation3 == " " or password_automation3 == " ":
344              messagebox.showerror("twitter login","Please enter username and password")
345
346          else:
347              driver3 = webdriver.Chrome(ChromeDriverManager().install())
348              driver3.get("https://twitter.com/login")
349
350              time.sleep(1)
351
352              username1=driver3.find_element_by_xpath("//*[@id='react-root']/div/div/div[2]/main/div/div/div[2]/form/di
353              username1.send_keys(username_automation3)
354              time.sleep(1)
355
356              password=driver3.find_element_by_xpath("//*[@id='react-root']/div/div/div[2]/main/div/div/div[2]/form/div
357              password.send_keys(password_automation3)
358              time.sleep(1)
359
360              login = driver3.find_element_by_xpath("//*[@id='react-root']/div/div/div[2]/main/div/div/div[2]/form/div/
361              login.click()
362
363              time.sleep(1)
```

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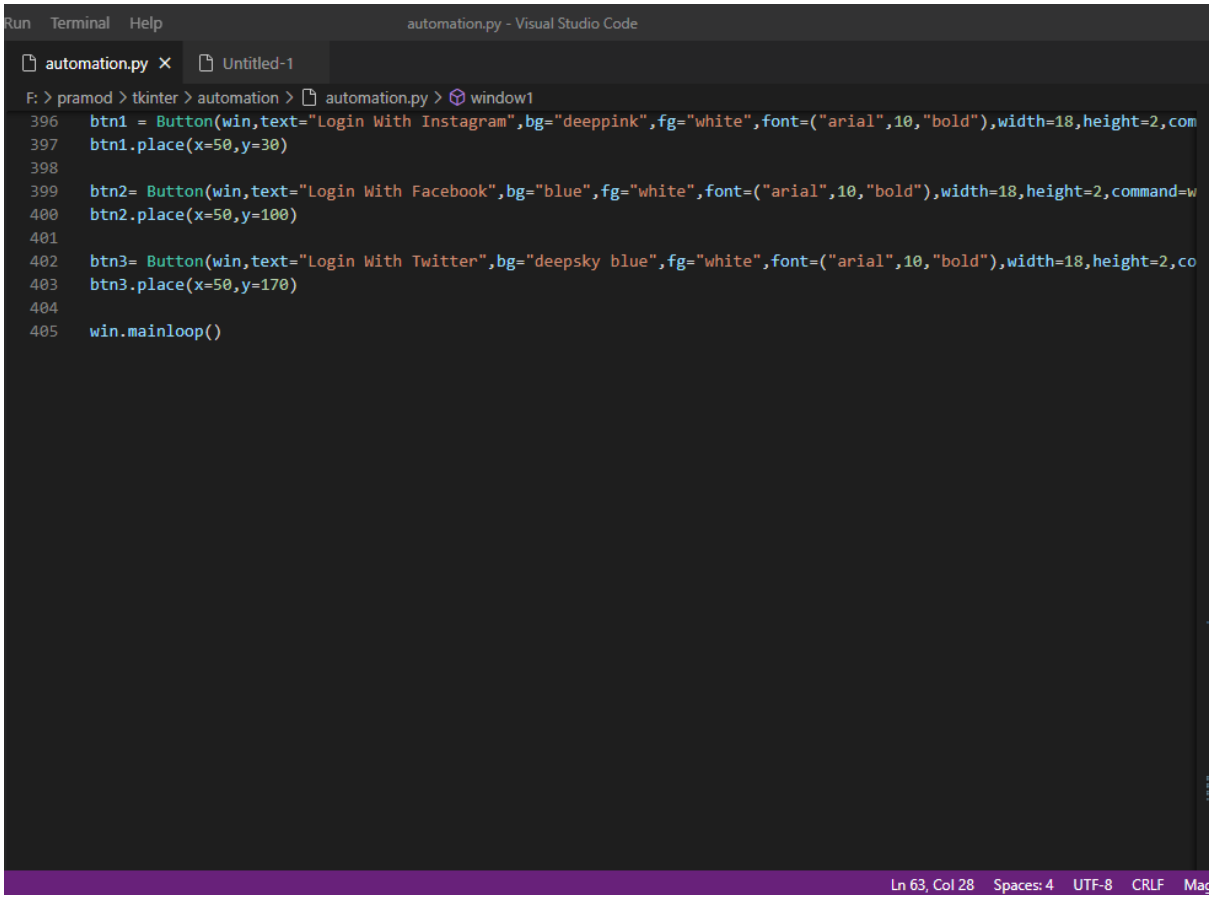
Step 4:- In this procedure, it is same as Instagram and Facebook login automation. In this process we use an if else condition statement for Twitter login, it shows that if username and password is null then it will shows an error message box will show and in other part, in a else condition we created a web driver for Facebook automation and add a Twitter login link to the driver. After the chromium web driver manager had been made, we added Xpath to the username and password field and same added to the signup page entry field, login and signup field with “time.sleep()” method which the login and new account created in a timely manner. When added enter username and password in an entry fields web driver send a keys to the entry field result shows on web page and login successfully message box shows and entered information added to database.



Step 5:- In this section we created three different login system buttons for Facebook, Instagram & Twitter login pages having a name like “Login With Instagram”, ”Login With Facebook ”, “Login With Twitter ” with given a different function defining commands. This is a first GUI Page of our automation project.

```
51
52      if username_automation == " " or password_automation == " ":
53          messagebox.showerror("Login Status","All fields are required!")
54      else:
55          conn=mysql.connect(host="localhost",user="root",passwd="p@96",database="instagram")
56          cursor=conn.cursor()
57          cursor.execute("insert into login values('"+ username_automation +"','"+ password_automation +"')")
58          cursor.execute("commit")
59          messagebox.showinfo("login status","Login has been successfull!")
60          conn.close()
```

```
115
116     if username_automation2 == " " or password_automation2 == " ":
117         messagebox.showerror("Login Status","All fields are required!")
118     else:
119         conn1=mysql.connect(host="localhost",user="root",passwd="p@96",database="facebook")
120         cursor=conn1.cursor()
121         cursor.execute("insert into login values('" + username_automation2 +"','" + password_automation2 +"')")
122         cursor.execute("commit")
123         messagebox.showinfo("Login Status","Login has been successfull!")
124         conn1.close()
```

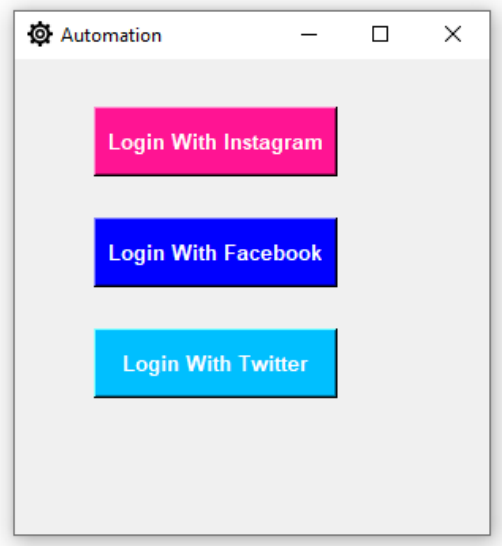
```
364
365     if username_automation3 == " " or password_automation3 == " ":
366         messagebox.showerror("Login status","All fields are required!")
367
368     else:
369         conn2=mysql.connect(host="localhost",user="root",passwd="p@96",database="twitter")
370         cursor=conn2.cursor()
371         cursor.execute("insert into login values('"+ username_automation3 +"','"+ password_automation3 +"')")
372         cursor.execute("commit")
373         messagebox.showinfo("Login Status","Login has been successfull!")
374         conn2.close()
375
```

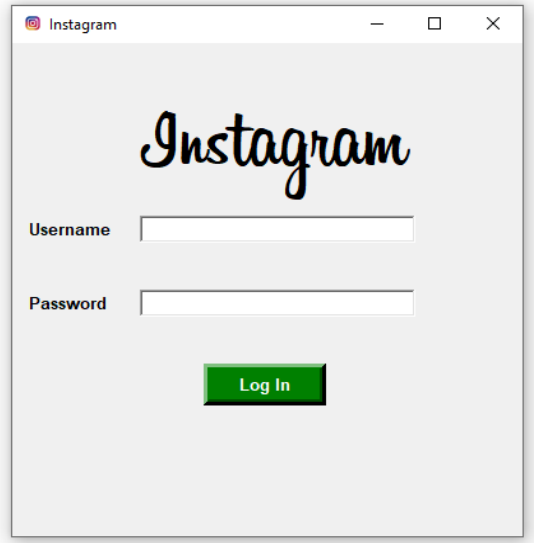
Step 6:- It shows that the database connectivity with MySQL when we entered username and password for **“Instagram”**, **“Facebook”** & **“Twitter”** and login it. These login informations will sucessfully saved into a different MySQL databases.

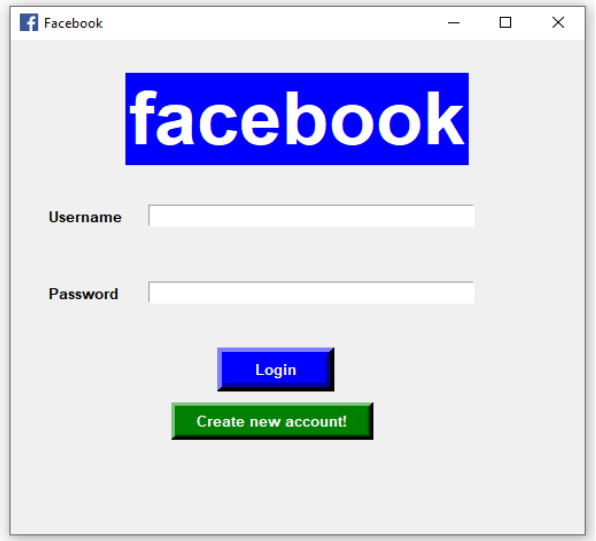
CHAPTER – 6

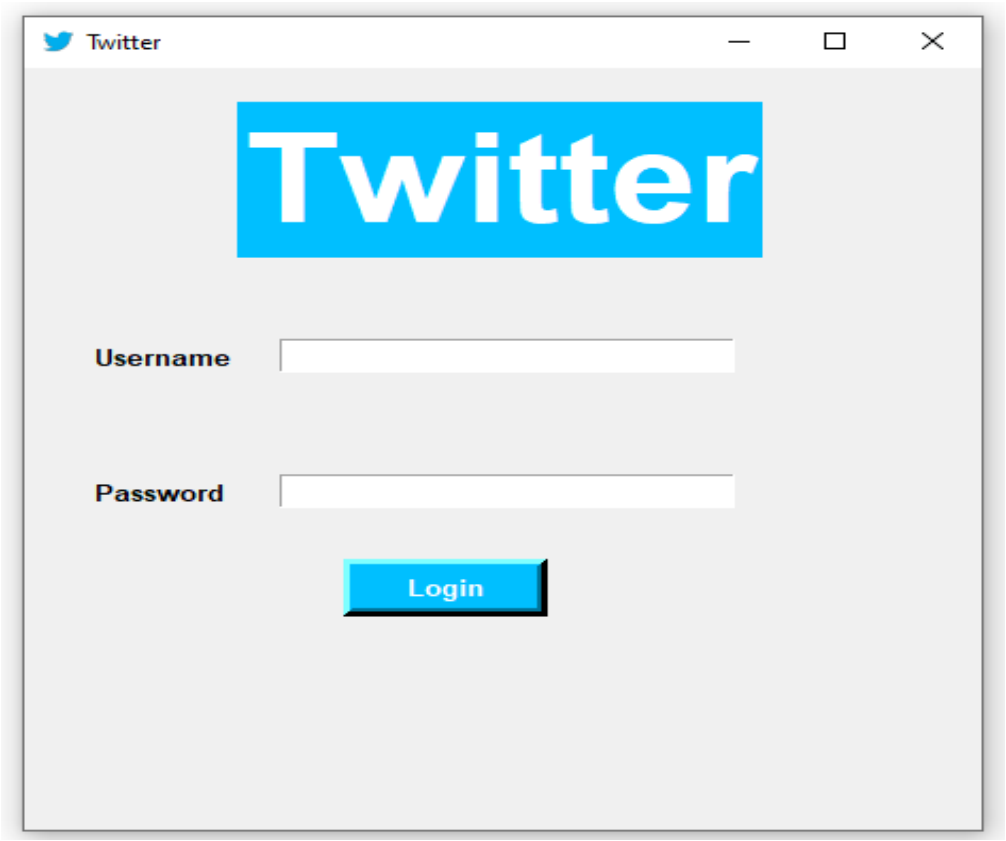
RESULT

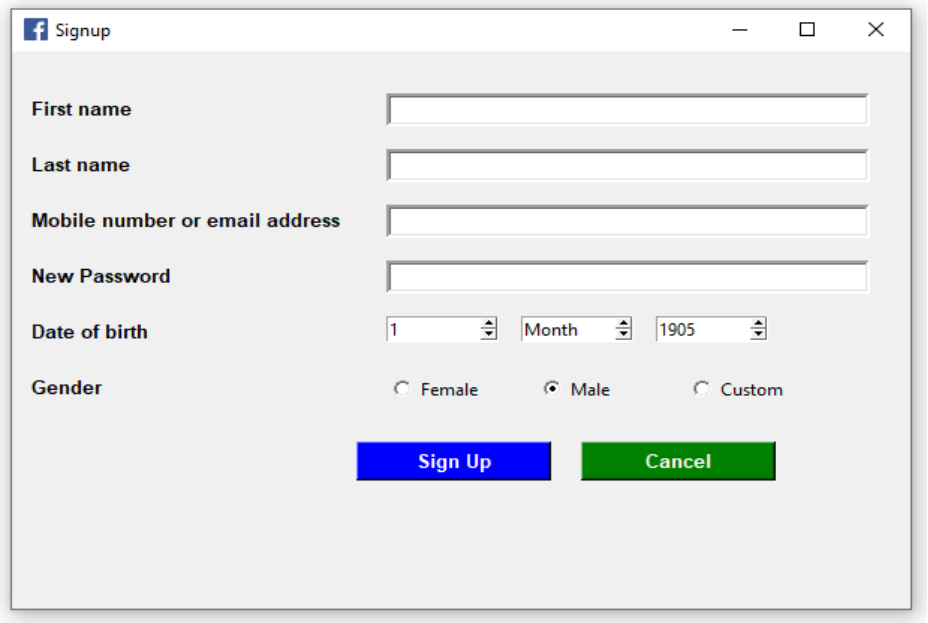
SCREENSHOTS

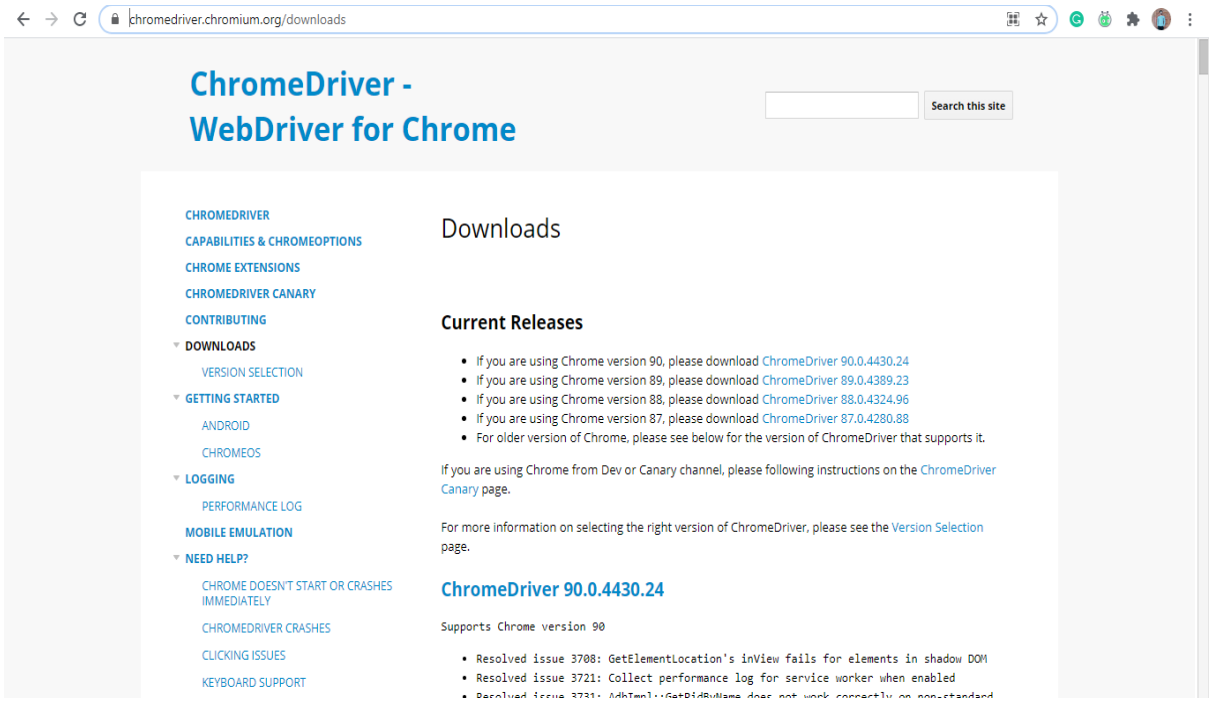


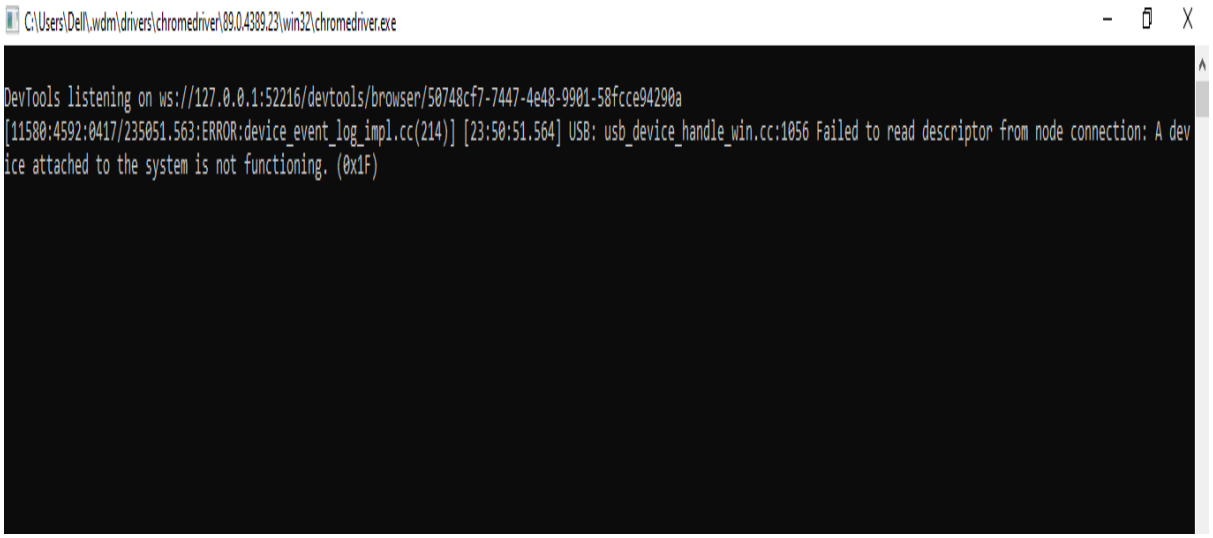


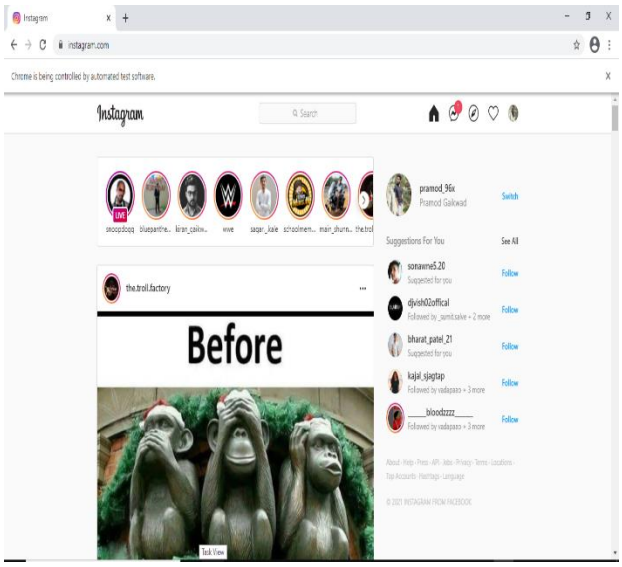


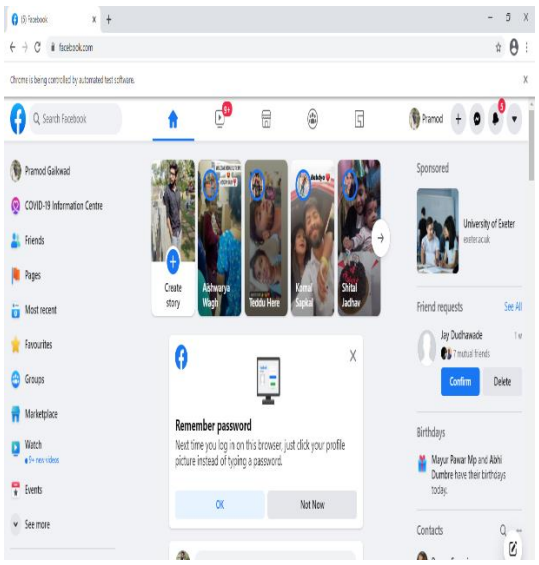

Twitter
Twitter
Username
Password
Login

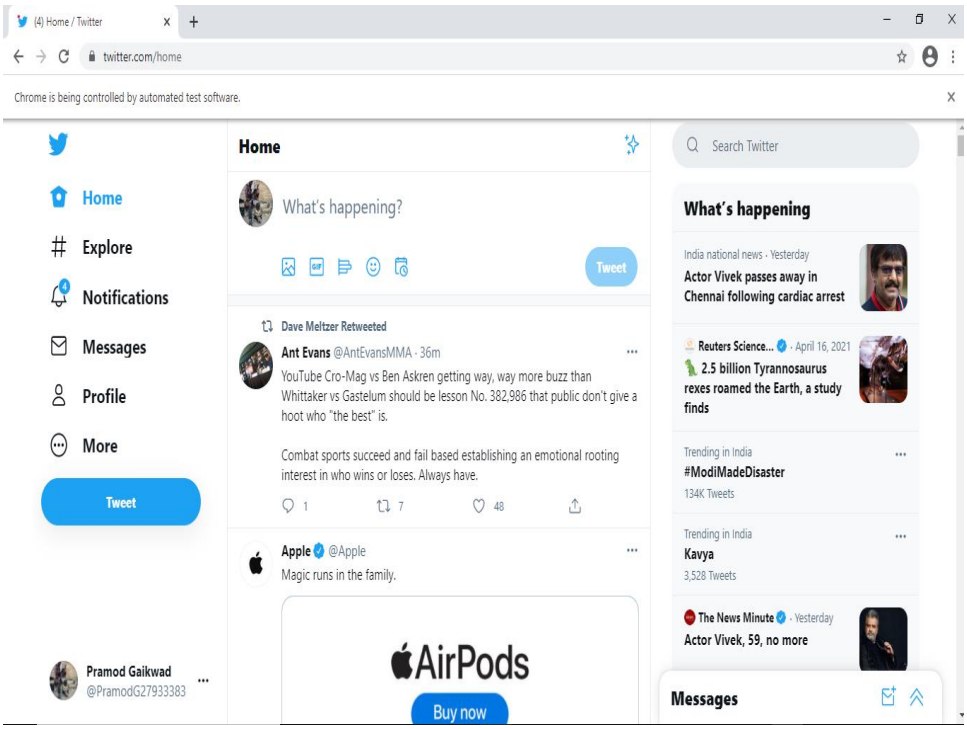

Signup
First name
Last name
Mobile number or email address
New Password
Date of birth
1
Month
1905
Gender
Female
Male
Custom
Sign Up
Cancel


chromedriver.chromium.org/downloads
ChromeDriver -
WebDriver for Chrome
Search this site
CHROMEDRIVER
CAPABILITIES & CHROMEOPTIONS
CHROME EXTENSIONS
CHROMEDRIVER CANARY
CONTRIBUTING
DOWNLOADS
VERSION SELECTION
GETTING STARTED
ANDROID
CHROMEOS
LOGGING
PERFORMANCE LOG
MOBILE EMULATION
NEED HELP?
CHROME DOESN'T START OR CRASHES IMMEDIATELY
CHROMEDRIVER CRASHES
CLICKING ISSUES
KEYBOARD SUPPORT
Downloads
Current Releases
If you are using Chrome version 90, please download ChromeDriver 90.0.4430.24
If you are using Chrome version 89, please download ChromeDriver 89.0.4389.23
If you are using Chrome version 88, please download ChromeDriver 88.0.4324.96
If you are using Chrome version 87, please download ChromeDriver 87.0.4280.88
For older version of Chrome, please see below for the version of ChromeDriver that supports it.
If you are using Chrome from Dev or Canary channel, please following instructions on the ChromeDriver Canary page.
For more information on selecting the right version of ChromeDriver, please see the Version Selection page.
ChromeDriver 90.0.4430.24
Supports Chrome version 90
Resolved issue 3708: GetElementLocation's inView fails for elements in shadow DOM
Resolved issue 3721: Collect performance log for service worker when enabled


C:\Users\Dell\.wdm\drivers\chromedriver\89.0.4389.23\win32\chromedriver.exe
DevTools listening on ws://127.0.0.1:52216/devtools/browser/50748cf7-7447-4e48-9901-58fcce94290a
[11580:4592:0417/235051.563:ERROR:device_event_log_impl.cc(214)] [23:50:51.564] USB: usb_device_handle_win.cc:1056 Failed to read descriptor from node connection: A device attached to the system is not functioning. (0x1F)


Instagram
instagram.com
Chrome is being controlled by automated test software.
Before
pramod_96x
Pramod Gaikwad
Switch
Suggestions For You
See All
sonawne5.20
djvish02offical
bharat_patel_21
kajal_sjagtap
bloodzzzz
Follow


facebook.com
Chrome is being controlled by automated test software.
Search Facebook
Pramod
Pramod Gaikwad
COVID-19 Information Centre
Friends
Pages
Most recent
Favourites
Groups
Marketplace
Watch
Events
See more
Create story
Ashwarya Wagh
Teddu Here
Kamal Sapkal
Shital Jadhav
Remember password
Next time you log in on this browser, just click your profile picture instead of typing a password.
OK
Not Now
Sponsored
University of Exeter
Friend requests
See All
Jay Dudhawade
Confirm
Delete
Birthdays
Mayur Pawar Mp and Abhi Dumbre have their birthdays today.
Contacts


(4) Home / Twitter
twitter.com/home
Chrome is being controlled by automated test software.
Home
Explore
Notifications
Messages
Profile
More
Tweet
Pramod Gaikwad
@PramodG27933383
Home
What's happening?
Tweet
Dave Meltzer Retweeted
Ant Evans @AntEvansMMA · 36m
YouTube Cro-Mag vs Ben Askren getting way, way more buzz than Whittaker vs Gastelum should be lesson No. 382,986 that public don't give a hoot who "the best" is.
Combat sports succeed and fail based establishing an emotional rooting interest in who wins or loses. Always have.
1
7
48
Apple @Apple
Magic runs in the family.
AirPods
Buy now
Search Twitter
What's happening
India national news · Yesterday
Actor Vivek passes away in Chennai following cardiac arrest
Reuters Science... · April 16, 2021
2.5 billion Tyrannosaurus rexes roamed the Earth, a study finds
Trending in India
#ModiMadeDisaster
134K Tweets
Trending in India
Kavya
3,528 Tweets
The News Minute · Yesterday
Actor Vivek, 59, no more
Messages

CHAPTER-7

CONCULSION AND FUTURE SCOPE

With the help of the appropriate driver software applications, selenium is an open-source tool which helps to interact with various browser applications. Now the selenium automation testing is leading the market. One of the evidence for the high demand for selenium in the present world of IT is the selenium frameworks that are available in the market. Using the selenium everything which can be done manually can be executed. Ensure to enhance your skills through **selenium courses** which are even available online as per your convenience.

The scope of job opportunities in selenium testing will be available at all times for skilled and training professionals. The testing automation developers will convert the written test cases into automation scripts. It requires adequate programming knowledge in languages like C, Perl, C#, and Java Python.

The testing method that could provide the same throughput as Manual Testing, but with minimal labour and cost. In addition to this, they also wanted to reduce the repetitive tasks of Manual Testing. The scope of automation or automation testing future scope is huge in the market.

Business now requires rapid output, hot deployment and even faster testing. Thus Automation Testing is a boom today. Automation with Selenium is even a better choice as it is an open source tool tester can play with.

To make testing and automation faster and efficient, the better approach will be to aim for testing and automation in the same sprint. In the future, more companies are expected to adapt in-sprint test automation and move towards a product with high automation coverage.

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

CHAPTER- 8

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