

IT314 Software Engineering

Lab 5 - Static Analysis

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Repo link : [Link](#)

Static analysis tool : MyPy

```
1  '''
2  GoTo sender's Gmail account first and turn_On/Allow the toggle of "Access of Less Secure Apps" using this link-
3  https://www.google.com/settings/security/lesssecureapps so that SMTP server can login to sender's gmail account without
4  security errors.
5  '''
6  import smtplib
7  from email.mime.multipart import MIMEMultipart
8  from email.mime.text import MIMEText
9
10 msg = MIMEMultipart()
11 msg['From'] = 'Your_email@gmail.com'
12 msg['To'] = 'To_email@gmail.com'
13 msg['Subject'] = 'simple email in python 3'
14 message = 'here is the email hello sir'
15 msg.attach(MIMEText(message))
16
17
18 def SendEmail(From, to, content):
19     try:
20         server = smtplib.SMTP('smtp.gmail.com', 587)
21         server.ehlo() # identify ourselves to smtp gmail client
22         server.starttls() # secure our email with tls encryption
23         server.login(From, 'Your_email_password') # Update your Email password here!
24         server.sendmail(From, to, content)
25         print("Mail Sent Successfully!")
26     except:
27         print("Error occurred while sending mail")
28
29
30 SendEmail(msg['From'], msg['To'], msg.as_string())
31
32 ### End of Code ###
```

Succeeded!! (3300 ms)

Success: no issues found in 1 source file

This one runs perfectly.

```

1  ...
2  ...
3  GoTo Command Prompt and install speedtest package using command 'pip install speedtest-cli'
4  After that run the below code to get the internet speed on your console.
5  ...
6
7
8  import os
9  os.system('cmd /c "speedtest-cli"') # Here we are running the console command 'speedtest-cli' using python code
10 # The above line of code is enough for getting the internet speed.. There's no Long Coding is needed for this!
11
12 ### End of Code ###
13
14 ...
15 The output will be like-
16
17 Retrieving speedtest.net configuration...
18 Testing from Airtel (223.187.156.60)...
19 Retrieving speedtest.net server list...
20 Selecting best server based on ping...
21 Hosted by NANDBALAJI CONNECTING ZONE PVT. LTD (Godda) [52.57 km]: 133.118 ms
22 Testing download speed.....
23 Download: 12.68 Mbit/s
24 Testing upload speed.....
25 Upload: 11.69 Mbit/s
26
27 Process finished with exit code 0
28
29 ...

```

Succeeded!! (3325 ms)

Success: no issues found in 1 source file

This one runs perfectly.

mypy Playground

Run

Gist

mypy latest (1.0.0) ▾

Python 3.11 ▾

Options

```
40     print("No results Found or Network Connection Error!")
41
42
43
44 def takecommand():
45     r = sr.Recognizer()
46     with sr.Microphone() as source:
47         print("Listening...")
48         r.pause_threshold = 1
49         audio = r.listen(source)
50
51     try:
52         print("Recognizing.....")
53         query = r.recognize_google(audio, language= 'en-in')
54         tt.sleep(2)
55         print((f"You Said:{query}\n"))
56         speak((f"You Said:{query}\n"))
57
58     except Exception as e:
59         print(e)
60         print("Say That Again....")
61         speak("Say That Again....")
62         return "None"
63     return query
64
65 takecommand() # use this function and speak something which Asistant will repeat
66 #wiki() # Use this function if you want to search something on wikipedia using Assistant
67 #time() #use this function if you want assistant to speak the current time
68
69
70 ### End of Code ###
71
```

Failed (exit code: 1) (3208 ms)

main.py:9: error: Cannot find implementation or library stub for module named "speech_recognition" [import]
main.py:9: note: See https://mypy.readthedocs.io/en/stable/running_mypy.html#missing-imports
main.py:12: error: Cannot find implementation or library stub for module named "pytttsx3" [import]
main.py:12: error: Cannot find implementation or library stub for module named "wikipedia" [import]
Found 3 errors in 1 file (checked 1 source file)

This is a Python code that uses the pytttsx3, SpeechRecognition, and wikipedia packages to create a voice-based virtual assistant. The code allows the user to speak into a microphone and have their input recognized and repeated by the assistant. Additionally, the code provides the current time and can search for information on Wikipedia.

```

25 # ----- Update Link and Views Count Below -----
26
27 link = "https://www.kaggle.com/carlmcbrideellis/jane-street-eda-of-day-0-and-feature-importance" # Change the Kaggle Notebook Link Here.
28 limit = 20 # Update how many views you want on your post.
29
30 # -----
31
32 driver = webdriver.Chrome()
33 wait = WebDriverWait(driver, 30)
34 wait1 = WebDriverWait(driver, 7)
35 driver.get(link)
36 driver.maximize_window()
37 time.sleep(5)
38
39 for i in range(0, limit):
40     chrome_options = webdriver.ChromeOptions()
41     chrome_options.add_argument("--incognito")
42     chrome_options.add_experimental_option("detach", True)
43     driver1 = webdriver.Chrome(options=chrome_options)
44     wait_incognito = WebDriverWait(driver1, 30)
45     driver1.maximize_window()
46     driver1.get(link)
47     time.sleep(10)
48     wait_incognito.until(EC.element_to_be_clickable((By.XPATH, '//*[@title = "Input"])[1]'))).click()
49     time.sleep(10)
50     wait_incognito.until(EC.element_to_be_clickable((By.XPATH, '//*[@title = "Comments"])[1]'))).click()
51     time.sleep(10)
52     driver1.close()
53     print("Completed "+str(i+1) + " Click!!")
54
55 end_time = time.time() - start_time
56 print("Total execution time: ", format_timespan(end_time))

```

Failed (exit code: 1) (3374 ms)

```

main.py:11: error: Cannot find implementation or library stub for module named "selenium" [import]
main.py:12: error: Cannot find implementation or library stub for module named "selenium.webdriver.support.ui" [import]
main.py:12: note: See https://mypy.readthedocs.io/en/stable/running_mypy.html#missing-imports
main.py:13: error: Cannot find implementation or library stub for module named "selenium.common.exceptions" [import]
main.py:14: error: Cannot find implementation or library stub for module named "selenium.webdriver.support" [import]
main.py:15: error: Cannot find implementation or library stub for module named "selenium.webdriver.common.by" [import]
main.py:19: error: Cannot find implementation or library stub for module named "humanfriendly" [import]
main.py:20: error: Cannot find implementation or library stub for module named "selenium.webdriver.common.keys" [import]
main.py:21: error: Cannot find implementation or library stub for module named "selenium.webdriver.common.action_chains" [import]
Found 8 errors in 1 file (checked 1 source file)

```

This code uses the Selenium web driver and humanfriendly package to simulate views on a Kaggle notebook. After installing the necessary packages and updating the link and number of views, the code opens an incognito Chrome window and repeatedly clicks on the notebook to increase the view count. The execution time is printed at the end of the code. However, the code is currently producing errors due to missing module implementations or library stubs.

mypy Playground

Run

Gist

mypy latest (1.0.0) ▾

Python 3.11 ▾

Options

```
1 '''
2
3 minimize the ScreenRecorder popup window that opens after running the program so that it ca
4 giving any multiple window popups recording.
5
6 '''
7
8 import cv2
9 import numpy as np
10 from PIL import ImageGrab
11 import time
12
13 def screenRecorder():
14     time.sleep(5)
15     fourcc = cv2.VideoWriter_fourcc(*'XVID')
16     out = cv2.VideoWriter("output.avi", fourcc, 5.0, (1366, 768))
17     # Here 5.0 is the frame rate and 1366,768 is the screen size
18
19     while (1):
20         img = ImageGrab.grab()
21         img_np = np.array(img)
22         frame = cv2.cvtColor(img_np, cv2.COLOR_BGR2RGB)
23         cv2.imshow("Screen Recorder", frame)
24         out.write(frame)
25
26         if cv2.waitKey(1) == 27:
27             break
28     out.release()
29     cv2.destroyAllWindows()
30 screenRecorder()
31
32 ### End of Code ###
```

Failed (exit code: 1) (3237 ms)

main.py:8: error: Cannot find implementation or library stub for module named "cv2" [import]
main.py:8: note: See https://mypy.readthedocs.io/en/stable/running_mypy.html#missing-imports
main.py:9: error: Cannot find implementation or library stub for module named "numpy" [import]
main.py:10: error: Cannot find implementation or library stub for module named "PIL" [import]
Found 3 errors in 1 file (checked 1 source file)

The code is for recording the screen using Python. It captures the screen using the ImageGrab module and converts the image to a numpy array using the numpy module. It then uses the cv2 module to convert the color space of the image and displays it on a window. Finally, it writes the recorded video to an output file using cv2.VideoWriter. However, the code is giving errors because the required modules are not installed.

mypy Playground

Run

Gist

mypy latest (1.0.0) ▾

Python 3.11 ▾

Options

```
4
5
6 ▾ def screenshot():
7     name = int(round(time.time() * 1000))
8     name = 'C:/Users/gsc-30431/PycharmProjects/test1.py/Screenshot_App/{}.png'.format(name)
9     # Update the Directory path above where the screenshots will be saved.
10
11     img = pyautogui.screenshot(name)
12     img.show()
13
14
15 root = tk.Tk()
16 frame = tk.Frame(root)
17 frame.pack()
18
19 button = tk.Button(
20     frame,
21     text="Take Screenshot",
22     command=screenshot)
23
24 button.pack(side=tk.LEFT)
25 close = tk.Button(
26     frame,
27     text="Quit",
28     command=quit)
29
30 close.pack(side=tk.LEFT)
31
32 root.mainloop()
33
34
35 ### End of Code ###
```

Failed (exit code: 1) (3874 ms)

main.py:2: error: Cannot find implementation or library stub for module named "pyautogui" [import]
main.py:2: note: See https://mypy.readthedocs.io/en/stable/running_mypy.html#missing-imports
Found 1 error in 1 file (checked 1 source file)

The error message indicates that there is a missing implementation or library stub for the `pyautogui` module, which is being imported in the second line of the code. This means that the module is not installed or is not recognized by the Python interpreter. To fix this error, the `pyautogui` package needs to be installed using the `pip` command in the Command Prompt or Terminal.

This is a Python code that uses the pyttsx3 library to convert user-specified text into speech. The code prompts the user to enter the text they want to convert, initializes the pyttsx3 engine, and uses the say and runAndWait methods to convert the text to speech.

However, when running the code, an error message appears indicating that the implementation or library stub for the "pyttsx3" module cannot be found. This error suggests that pyttsx3 may not be installed or configured correctly on the user's system. The code can be fixed by installing the pyttsx3 library using the command `pip install pyttsx3==2.71` and the pywin32 library using the command `pip install pywin32`.

mypy Playground

Run

Gist

mypy latest (1.0.0) ▾

Python 3.11 ▾

Options

```
1 '''
2 step1. GoTo Command Prompt and install package pyttsx3==2.71 using command 'pip install pyttsx3
3 step2. install package pywin32 using command pip install pywin32
4
5 After that run the below code
6 '''
7
8 import pyttsx3
9
10 data = input("Enter text which you want to convert to Speech:\n")
11
12 engine = pyttsx3.init()
13 engine.say(data)
14 engine.runAndWait()
15
16 ### End of Code ###
```

Failed (exit code: 1) (3104 ms)

main.py:8: error: Cannot find implementation or library stub for module named "pyttsx3" [import]
main.py:8: note: See https://mypy.readthedocs.io/en/stable/running_mypy.html#missing-imports
Found 1 error in 1 file (checked 1 source file)

This is a Python code that uses the pyshorteners library to shorten a user-specified URL. The code prompts the user to enter a long URL and then uses the tinyurl method from the pyshorteners.Shortener() class to generate a shortened URL, which is printed to the console.

However, when running the code, an error message appears indicating that the implementation or library stub for the "pyshorteners" module cannot be found. This error suggests that pyshorteners may not be installed or configured correctly on the user's system.


```
1  '''
2  step1. GoTo Command Prompt and install pyshorteners package using command 'pip install pyshorteners'
3  After that run the below code
4  '''
5
6
7  import pyshorteners
8
9  url = input("Enter URL which you want to Shorten : \n")
10
11 print("URL After Shortening :- ", pyshorteners.Shortener().tinyurl.short(url))
12 # This above line print the Shorten url of your Entred Long URL.
13
14
15 ### End of Code ###
16
```

Failed (exit code: 1) (3264 ms)

```
main.py:7: error: Cannot find implementation or library stub for module named "pyshorteners" [import]
main.py:7: note: See https://mypy.readthedocs.io/en/stable/running\_mypy.html#missing-imports
Found 1 error in 1 file (checked 1 source file)
```

This is a Python code that captures an image from the user's default camera and saves it as a JPEG file named "test.jpg" in the same directory where the Python file is located.

The code uses the OpenCV library, which is installed by running "pip install opencv-python" in the command prompt. However, when running the code, an error message appears indicating that the implementation or library stub for the "cv2" module cannot be found. This error suggests that OpenCV may not be installed or configured correctly on the user's system.

```
1  '''
2  step1. GoTo Command Prompt and install package opencv using command 'pip install opencv-python'
3
4  after running the code
5  note: image will be saved in the same directory where this python file is located.
6  image will directly be captured without opening any preview of camera.
7  '''
8
9
10 import cv2
11
12 imgcapture = cv2.VideoCapture(0)
13 result = True
14
15 while(result):
16     ret, frame = imgcapture.read()
17     cv2.imwrite("test.jpg", frame)
18     result = False
19     print("Image Captured...")
20
21 imgcapture.release()
22
23 ### End of Code ###
```

Failed (exit code: 1) (3244 ms)

```
main.py:10: error: Cannot find implementation or library stub for module named "cv2" [import]
main.py:10: note: See https://mypy.readthedocs.io/en/stable/running_mypy.html#missing-imports
Found 1 error in 1 file (checked 1 source file)
```