

Stack Overflow Error Automation Tool

Date: October 21, 2021

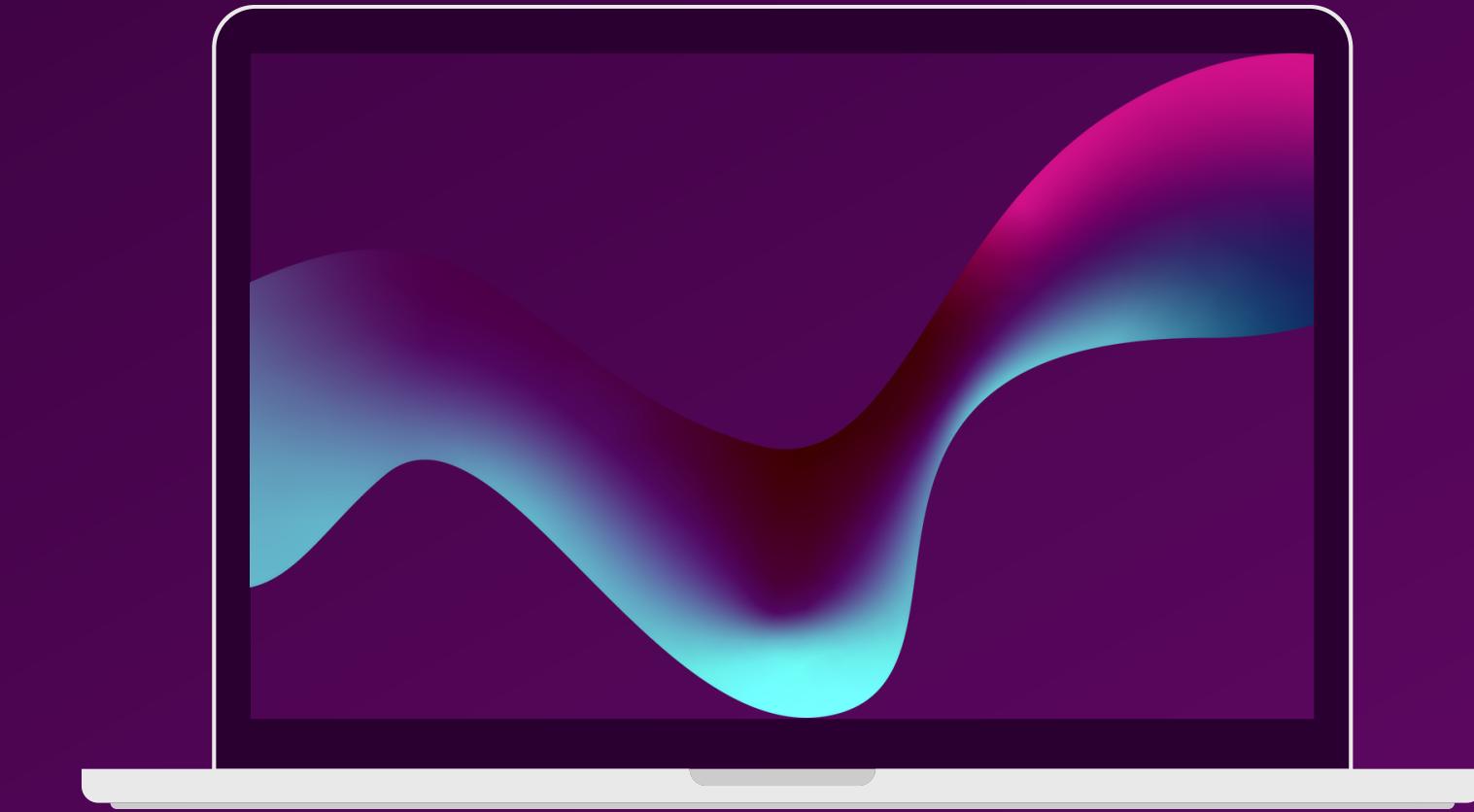
OBJECTIVE



In this project I am going to create a tool (Python script) that will check my Python program for errors by executing it and on encountering any errors, it will search for it on Stack Overflow.

INTRODUCTION

Ever faced great difficulty in copying the error you're stuck with, opening the browser, pasting it, and opening the right Stack Overflow Answer? Worry Not, Here's the solution!



Stack Overflow

The background of the main content area features abstract, rounded, organic shapes in shades of purple, blue, and pink, which overlap and flow across the slide.

Stack Overflow is a source of helpful information for software development related queries.

FEASIBILITY STUDY



TECHNICAL FEASIBILITY

- Technical: Hardware and software
- Existing or new technology
- Manpower
- Site analysis
- Transportation

FINANCIAL FEASIBILITY

- Initial investment
- Resources to procure capital: Banks, investors, venture capitalists
- Return on investment

MARKET FEASIBILITY

- Type of industry
- Prevailing market
- Future market growth
- Competitors and potential customers
- Projection of sales

LITERATURE REVIEW

References

- Subprocess management
- How to use subprocess popen Python
- Python Traceback
- GET and POST requests using Python
- webbrowser Convenient Web-browser controller

EXPECTED OUTCOME

To come up with a Python script that executes my test Python program. In case errors pop up, it should be able to extract the error type and the error message.

TECHNOLOGY USED

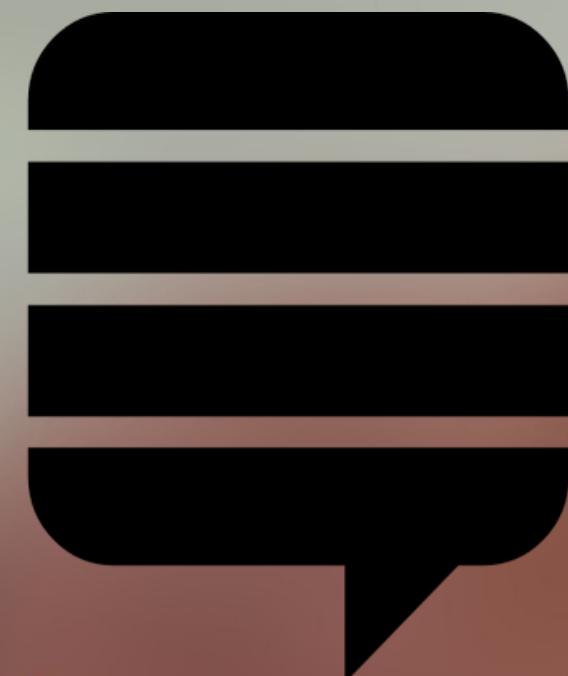
- PYTHON
- REST
- HTTP
- STACK OVERFLOW API



To use the Stack Exchange API's search feature and open up a few Stack Overflow threads that relate to the error.



stack
overflow



api.stackexchange.com



VISUAL STUDIO CODE

Visual Studio Code is a code editor redefined and optimized for building and debugging modern web and cloud applications.



PYTHON

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```

```
self.logger.setLevel(logging.DEBUG)
self.debug = debug
self.logger = logging.getLogger(__name__)
if path:
    self.file = open(os.path.join(path, "request.log"), "w")
    self.file.seek(0)
    self.fingerprints.update(self.request)
@classmethod
def from_settings(cls, settings):
    debug = settings.getbool("DEBUG", False)
    return cls(job_dir(settings), debug)
def request_seen(self, request):
    fp = self.request_fingerprint(request)
    if fp in self.fingerprints:
        return True
    self.fingerprints.add(fp)
    if self.file:
        self.file.write(fp + os.linesep)
    self.request_fingerprint(self, request)
```

- Create a wrapper Python script, that will run the test Python code, to check for errors. It'll simply print "No errors found", in case there are no syntactic or runtime errors.
- On encountering an error, it'll extract the required error type and the error message.

```
• test.py    • main.py X  • sample.py  • golden-string.py
```

```
• main.py > ⌂ get_urls
1  from subprocess import Popen , PIPE
2  import requests
3  import webbrowser
4
5  def execute_return(cmd):
6      args= cmd.split()
7      proc= Popen(args , stdout=PIPE , stderr=PIPE)
8      out, err= proc.communicate()
9      return out,err
10
11 def make_req(error):
12     print("searching for: "+error)
13     response=requests.get("https://api.stackexchange.com/"+"/2.3/search?order=desc&sort=activity&tagged=python&intitle={}")
14     return response.json()
15
16 def get_urls(json_dict):
17     url_list=[]
18     count=0
19     for i in json_dict["items"]:
20         if i["is_answered"]:
21             url_list.append(i["link"])
22             count+=1
23             if(count==3 or count==len(i)):
24                 break
25
26     for i in url_list:
27         webbrowser.open(i)
```

Script

Windows PowerShell

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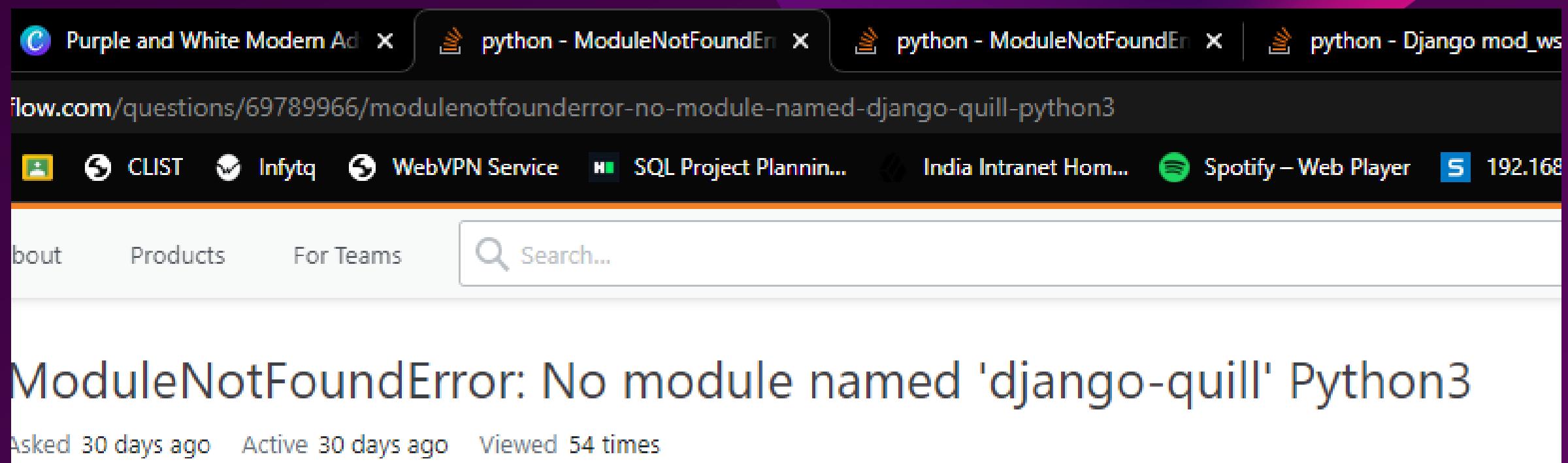
Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS D:\User~Tushar\Python progs> python -u "d:\User~Tushar\Python progs\main.py"
Drop the file you're working on: test.py
ERROR-> ModuleNotFoundError: No module named 'django'
searching for: ModuleNotFoundError
searching for: No module named 'django'
searching for: ModuleNotFoundError: No module named 'django'
PS D:\User~Tushar\Python progs> |
```

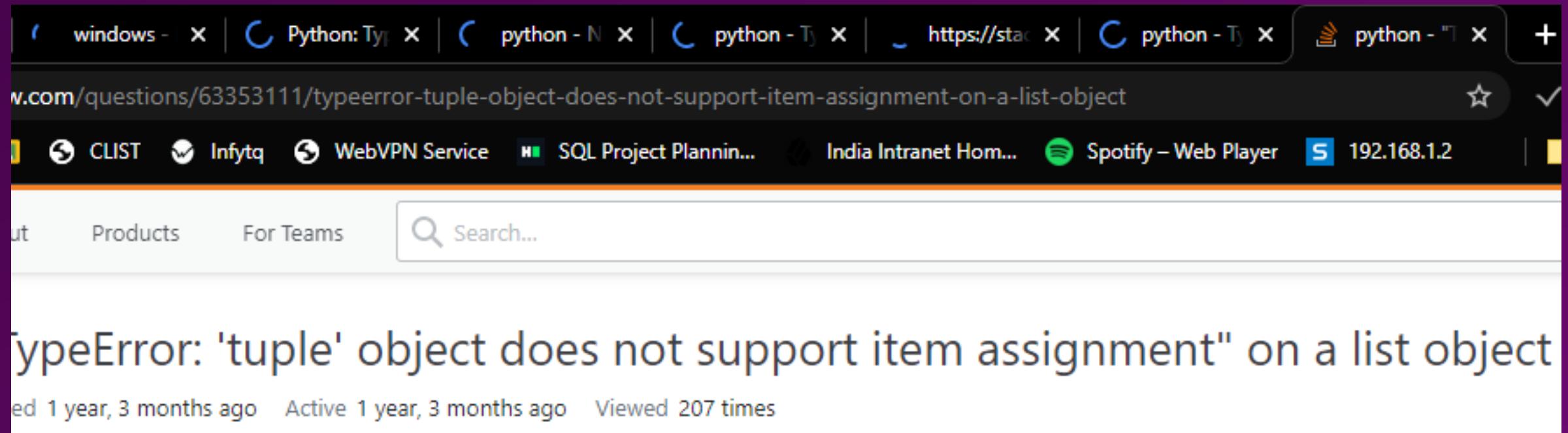
Terminal

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Output 1



Output 2



HARDWARE/SOFTWARE REQUIRED



WINDOWS 7

- VS CODE
- PYTHON 3+
- BROWSER



LIBRARIES & SOURCES

- `api.stackexchange.com`
- `subprocess python library`
- `REST api`



HARDWARE

- i3 processor
- 2 gb ram

- To upgrade it so as to extract errors in other languages as well.
- To create a browser extension.
- For Mac ios , Linux and other Operating Systems.
- Desktop Version to make it browser free.

FUTURE SCOPE

THANK YOU!



TUSHAR GUPTA

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