

Information Gathering Tool - Cyber Security Project

Objective:

Create a Python script to fetch IP address and location info of any website using sockets and ipinfo.io API.

Modules Used:

- sys
- socket
- requests
- json

Sample Command:

```
python infotool.py google.com
```

Output:

```
kali@kali: ~  
$ python3 infotool.py google.com  
[+] Fetching IP for google.com...  
[+] IP Address: 142.250.71.110  
[+] Fetching info from ipinfo.io for IP: 142.250.71.110...  
[+] Information gathered:  
  
{  
  "ip": "142.250.71.110",  
  "hostname": "pnbomb-ad-in-f14.1e100.net",  
  "city": "Mumbai",  
  "region": "Maharashtra",  
  "country": "IN",  
  "loc": "19.0728,72.8826",  
  "org": "AS15169 Google LLC",  
  "postal": "400017",  
  "timezone": "Asia/Kolkata",  
  "readme": "https://ipinfo.io/missingauth"  
}  
  
kali@kali: ~  
$
```

```
*infotool.py - Mousepad  
File Edit Search View Document Help  
1 import sys  
2 import socket  
3 import requests  
4 import json  
5  
6 def get_ip(domain):  
7     try:  
8         ip = socket.gethostbyname(domain)  
9         return ip  
10    except socket.gaierror:  
11        print("[!] Error: Invalid domain or no internet connection.")  
12        sys.exit()  
13  
14 def get_info(ip):  
15     try:  
16         url = f"https://ipinfo.io/{ip}/json"  
17         response = requests.get(url)  
18         if response.status_code == 200:  
19             data = response.json()  
20             return data  
21         else:  
22             print("[!] Error fetching data from ipinfo.io")  
23             sys.exit()  
24    except requests.RequestException:  
25        print("[!] Network error while connecting to ipinfo.io")  
26        sys.exit()  
27  
28 def main():  
29     if len(sys.argv) != 2:  
30         print(f"Usage: python infotool.py <websiteurl>")  
31         sys.exit()  
32  
33     domain = sys.argv[1]  
34     print(f"[+] Fetching IP for {domain}...")  
35     ip = get_ip(domain)  
36     print(f"[+] IP Address: {ip}")  
37  
38     print(f"[+] Fetching info from ipinfo.io for IP: {ip}...")  
39     info = get_info(ip)  
40  
41     print(f"[+] Information gathered:\n")  
42     print(json.dumps(info, indent=2))  
43  
44 if __name__ == "__main__":  
45     main()  
46
```

The tool successfully fetches the IP address and geolocation info in JSON format, meeting the project requirements.