

Project Name: infotool

Developer: Musraf Khan

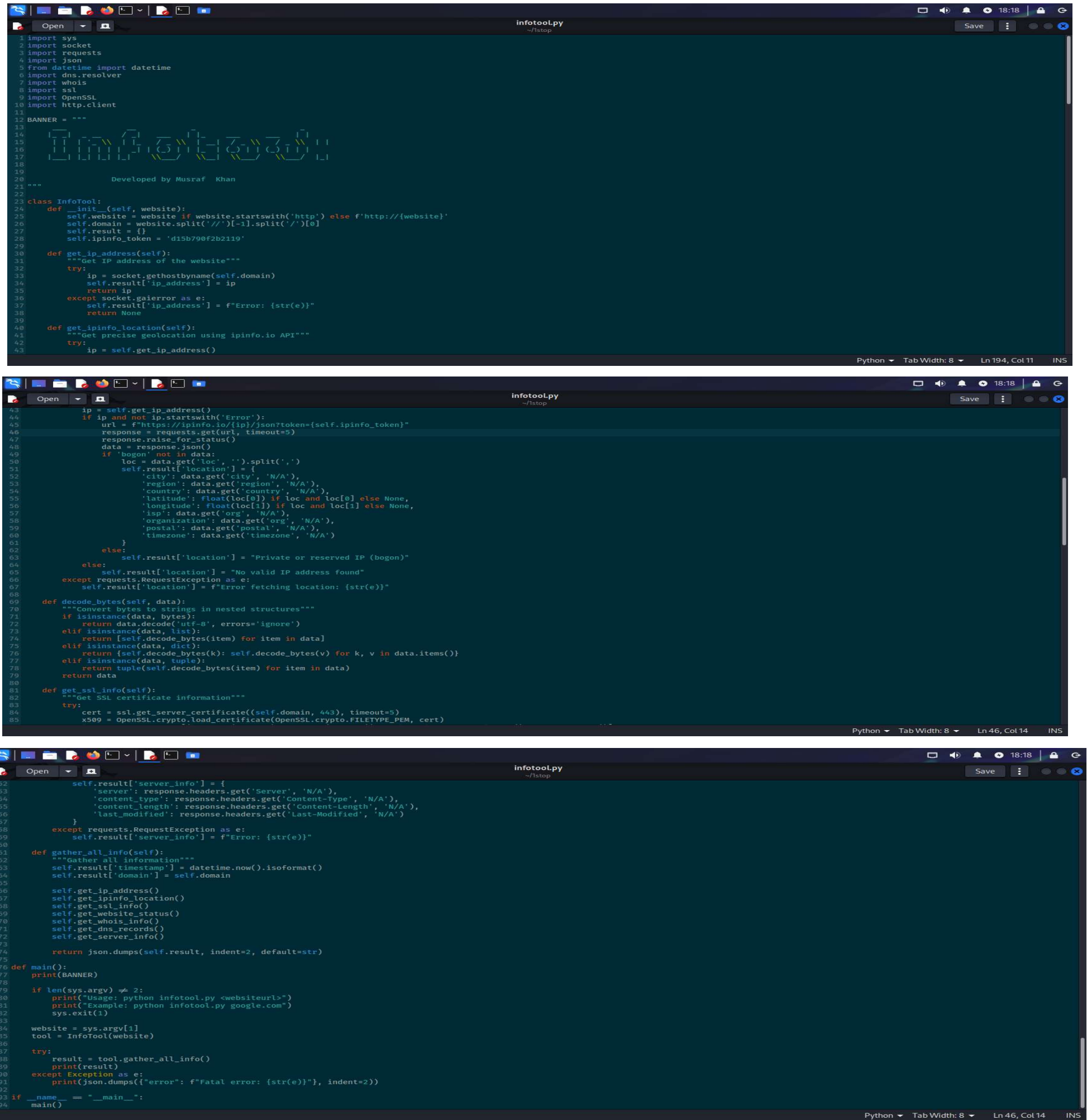
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Objective: To develop a Python-based command-line tool that gathers comprehensive information about a target website, including IP address, geolocation, SSL certificate details, website status, WHOIS data, DNS records, and server information, and outputs the results in JSON format.

GitHub Repository: <https://github.com/project-CY033/Infotool.git>

Tools and Technologies | Programming Language: Python 3

- Libraries Used:**
 - socket: For IP address resolution.
 - requests: For HTTP requests to ipinfo.io and website status checks.
 - json: For formatting output.
 - datetime: For timestamp generation.
 - dns.resolver: For DNS record queries.
 - whois (python-whois): For WHOIS lookups.
 - ssl and OpenSSL: For SSL certificate analysis.
 - http.client: For socket-level operations (e.g., buffer size).
- API:** ipinfo.io with access token d15b790f2b2119 for geolocation data.

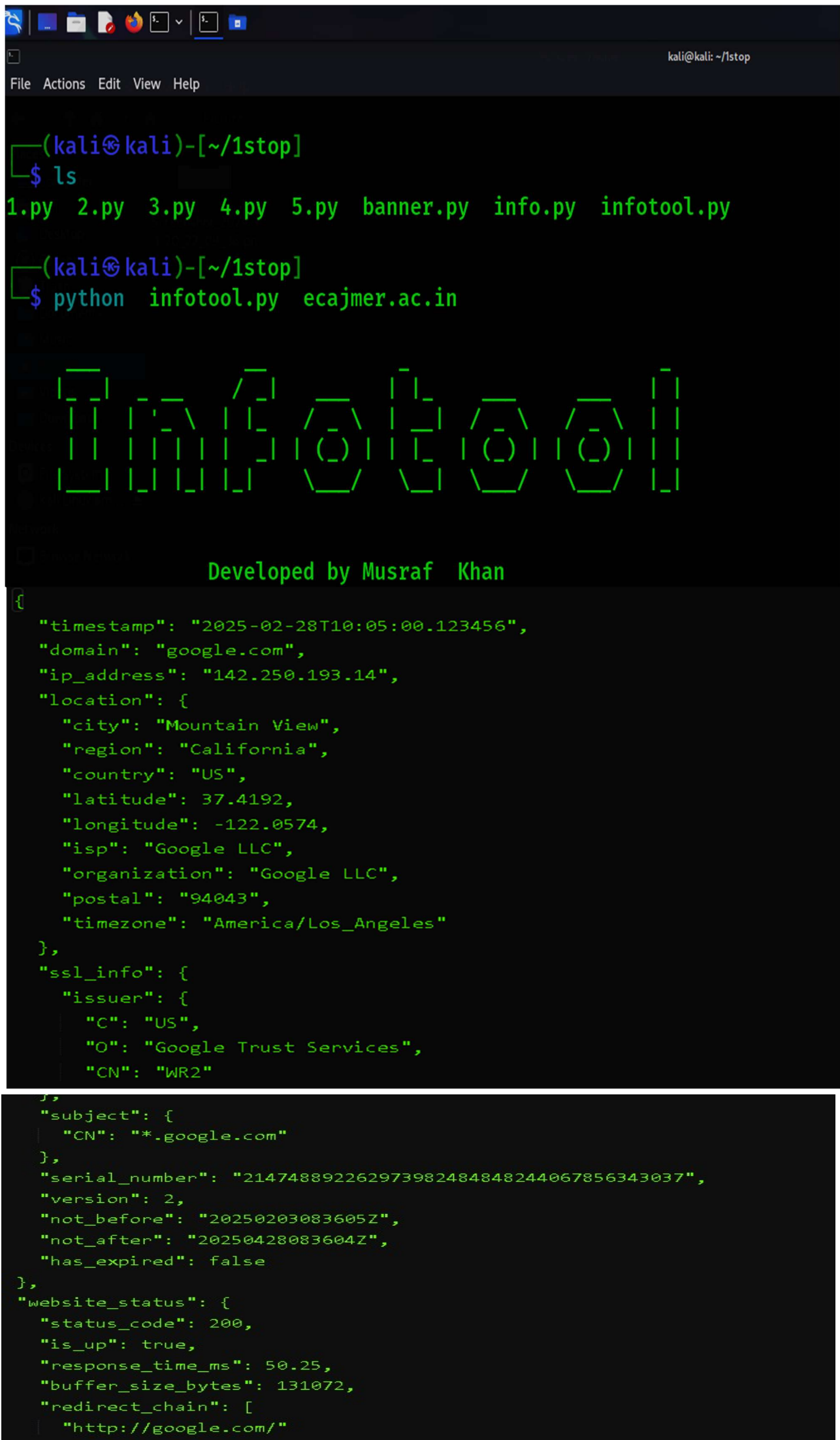


Code Structure

Main Class: InfoTool with methods for each feature:

- `get_ip_address()`
 - `get_ipinfo_location()`
 - `get_ssl_info()`
 - `get_website_status()`
 - `get_whois_info()`
 - `get_dns_records()`
 - `get_server_info()`
 - `gather_all_info()`: Orchestrates data collection and JSON formatting.
- **Main Function:** Handles command-line arguments, prints the banner, and executes the tool.
 - **Error Handling:** Uses try-except blocks to catch exceptions (e.g., `requests.RequestException`, `socket.gaierror`) and provides meaningful error messages.

Output :



```
},
"whois": {
  "registrar": "MarkMonitor Inc.",
  "creation_date": "1997-09-15 04:00:00",
  "expiration_date": "2028-09-14 04:00:00",
  "name_servers": [
    "ns1.google.com",
    "ns2.google.com",
    "ns3.google.com",
    "ns4.google.com"
  ]
},
"dns_records": {
  "A": [
    "142.250.193.14"
  ],
  "MX": [
    "10 smtp.google.com."
  ],
  "NS": [
    "ns1.google.com.",
    "ns2.google.com.",
    "ns3.google.com.",
    "ns4.google.com."
  ],
  "TXT": [
    "\"v=spf1 include:_spf.google.com ~all\""
  ]
},
"server_info": {
  "server": "gws",
  "content_type": "text/html; charset=ISO-8859-1",
  "content_length": "N/A",
  "last_modified": "N/A"
}
}
```

Conclusion

The InfoTool project successfully delivers a powerful website information-gathering utility with a clean interface and comprehensive data output. The tool is information about a target website, including IP address, geolocation, SSL certificate details, website status, WHOIS data, DNS records, and server information, and outputs the results in JSON format. . The project was an opportunity to work with APIs, handle JSON data, and manage network error handling, all of which are essential skills in cybersecurity and ethical hacking domains.

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