A Project report on

OPEN SOURCE INTELLIGENCE (OSINT) TOOL

A Dissertation submitted to JNTU Hyderabad in partial fulfillment of the academic requirements for the award of the degree.

Bachelor of Technology

In

Computer Science and Engineering

Submitted by

CH. Thanmay Ram	**19H51A0506**
J. Ajay Kumar	**19H51A05A3**
K. Ravi Teja	**19H51A05A5**

Under the esteemed guidance of
Mr.G.Yedu Kondalu
Assistant Professor

Department of Computer Science and Engineering

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC & JNTUH , Approved by AICTE, Permanently Affiliated to JNTUH, Accredited by NBA.)
KANDLAKOYA, MEDCHAL ROAD, HYDERABAD - 501401.

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY

KANDLAKOYA, MEDCHAL ROAD, HYDERABAD – 501401

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the report entitled **" OPEN SOURCE INTELLIGENCE(OSINT) TOOL"** being submitted by **CH.Thanmay Ram (19H51A0506), J.Ajay Kumar (19H51A05A3), K.Raviteja (19H51A05A5)** in partial fulfillment for the award of **Bachelor of Technology in Computer Science and Engineering** is a record of bonafide work carried out his/her under my guidance and supervision.

The results embody in this project report have not been submitted to any other University or Institute for the award of any Degree.

Mr. G.Yedu Kondalu
Assistant Professor
Dept. of CSE

Dr. S. Siva Skandha
Associate Professor and HOD
Dept. of CSE

Submitted for viva voice Examination held on _____

Acknowledgement

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SIGNATURE

CH.Thanmay Ram (19H51A0503)

J.Ajay Kumar (19H51A05A3)

K.Raviteja (19H51A05A5)

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ABSTRACT

Recently, open-source intelligence (OSINT) is used to gather and obtain information regarding the data of interest. The advantage of using data gathered by OSINT is that security threats arising in cyberspace can be addressed. However, if a user uses data collected by OSINT for malicious purposes, information regarding the target of an attack can be gathered, which may lead to various cybercrimes, such as hacking, malware, and a denial-of-service attack. Therefore, from a cybersecurity point of view, it is important to positively use the data gathered by OSINT in a positive manner. If exploited in a negative manner, it is important to prepare countermeasures that can minimize the damage caused by cybercrimes. Specifically, security threats and cybercrimes that may occur if data gathered by OSINT are exploited by malicious users. Furthermore, to solve this problem, security professionals use OSINT before malicious users take advantage of that data. The goal of the proposed security requirements is to minimize the damage when cybercrimes like phishing or data misuse for malicious purposes and reduces time and risk in terms of searching for large scope in terms of hunting subdomains, user's social media accounts and also for checking url redirection checker in the OSINT environment.

CHAPTER 1

INTRODUCTION

→ OSINT: Open Source Intelligence; publicly available information. i.e., information that any member of the public could lawfully obtain by request or observation, as well as other unclassified information that has limited public distribution or access.

→ OSINT represents a constant threat to any organization or mission, and can account for up to 80% of actionable intelligence, which is generally not protected and not classified. In most cases, it's legal to obtain information in this way.

→ This means that despite the high potential for harm, this critical information may be obtained at little or no risk to the intruder.

→ Especially, OSINT is used in different ways and in different perspectives either it is used to target a person, assets, etc which can be used to protect by enumerating vulnerabilities to secure or attack a particular target with bad intentions to cause damage.

PROJECT SCOPE

- Open source intelligence (OSINT) is the process of identifying, harvesting, processing, analyzing, and reporting data obtained from publicly available sources for intelligence purposes. Gathering information from different social media accounts and finding subdomains or hidden domains and also tracing IP address location and pointing on the map to trace down the ISP is a difficult task and consumes lots of time and also it's impossible to check manually without missing a thing.
- open-source intelligence (OSINT) is used to gather and obtain information regarding the data of interest and gathering information from multiple sources which are publicly available and also which is legal to use.
- Information gathering about the targets used to read and understand and know all the things, activities, and sensitive information which can become harmful by misusing those data.

CHAPTER 2
BACKGROUND WORK

2.1 BACKGROUND OF PROJECT

Many of the the OSINT tools like:

- Maltego,
- metagoofil
- shodan
- intelligence X
- Osintgram
- infosint
- looking-Glass

are of paid and few are of free tools which are mostly used to gather information of persons or assets.

2.2 EXISTING SYSTEM

1)Mobile Number Tracker:

Mobile number location is calculated based on the first four digits of your mobile number. Mobile Number Series: 9xxx | 8xxx | 7xxx

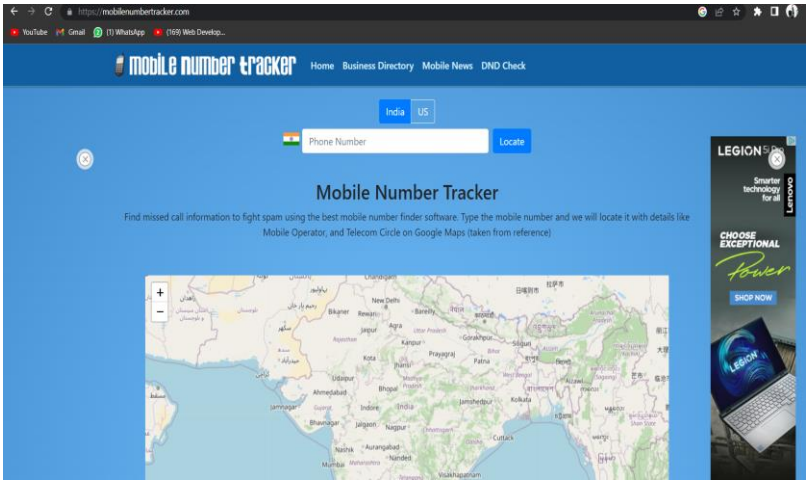


Fig2.2.1 Mobile Number Tracker

2) URL-checker

URL checker is a free tool to detect malicious URLs including malware, scam and phishing links. Safe link checker scan URLs for malware, viruses, scam and phishing links. Website checker verifies whether or not a website is legit, phishing or a scam.

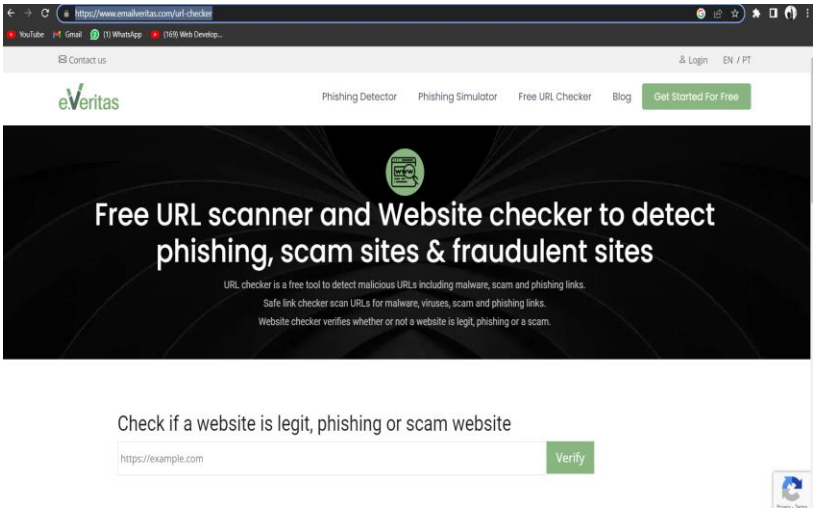


Fig2.2.2 URL Checker

3) namechk.com

There are 351 million registered domain names and counting. Every day, thousands more are registered. Since domain names can only be used by one company or person at a time, it can be hard to not only come up with a domain name that makes sense but also find one that's available.

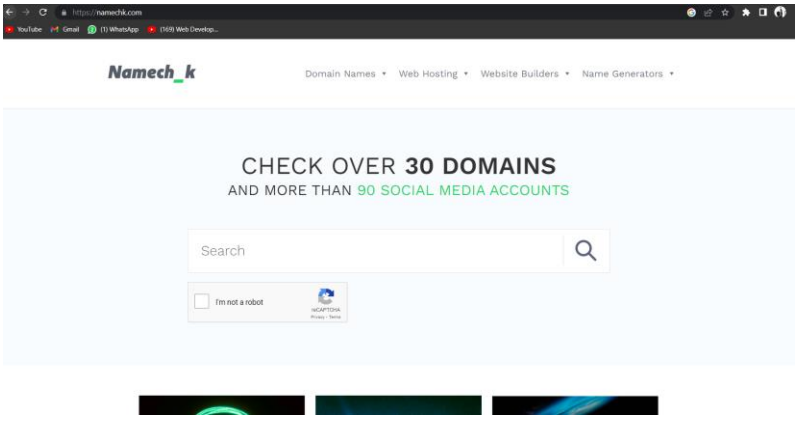


Fig2.2.3 Namechk.com

4) IP Tracker

URL checker is a free tool to detect malicious URLs including malware, scam and phishing links.Safe link checker scan URLs for malware, viruses, scam and phishing links.Website checker verifies whether or not a website is legit, phishing or a scam.

Fig2.2.4 IP Tracker

Disadvantages in the existing system

- Many of the tools are providing only limited searches and few of them are paid tools.
- Most of the tools focus on extracting information only on individual points like i.e., IP's, Usernames, Social media accounts, phone numbers, address, extraction of metadata, etc.
- Need to use more than one tool for searching each time.
- And it consumes lots of time to gather all the required data from multiple source each time by using multiple tools which is a difficult task.

CHAPTER 3

PROPOSED SYSTEM

The proposed tool 635OSINT is built completely by using python programming language which is used to automate a few tasks like hunting down social media accounts from different social media sites by using username as an input and provides found accounts links as output which is of name Looking-User.

- Our tool reduces the workload and time for hunting social media accounts by using the username as an input.
- Checks whether the URL is a legitimate link or a phishing ling by redirecting.
- By entering a single IP our tool locates that IP address like carrier name, location, city/ region and country.

SOFTWARE SPECIFICATIONS

Python & it's Libraries:

Python is one of the most mention-worthy programming languages in today's world. It ranks among the fastest-growing programming language in the world. It is versatile, flexible, extremely effective, easy to use and develop. It has a very active community as well. This means that the best minds in the field will provide enough support to adopt this new language. It is used in numerous organizations due to its multiple programming paradigm support and its performance of automatic memory management. Due to its comprehensive standard library, Python is also often referred to as a battery-included language.

ADVANTAGES OF Python:

Easy to use and learn: For beginners, Python is straightforward to use. It is a high-level programming language, and its syntax is like the English language. These reasons make the language easy to learn and adapt to. Compared to Java and C, in Python, the same task can be performed using fewer lines of code. As a result of its easy learning, the principles in Python can be executed faster compared to other languages.

Extensive library: Python provides the user with a vast library. Python's standard just about every function one needs to perform is available in its library. This is because it has a hugely supportive community and corporate sponsorship. External libraries are not used by users while working with Python.

Flexibility: This language is very flexible, and hence it allows the user to try new things. The users can develop new sorts of the application using Python programming language. The language does not restrict the user from trying something different. Other programming languages do not provide this type of flexibility and freedom, and hence Python is more preferred in these matters.

3.6 Software Requirements

1.Python3, PyCharm.

2.Libraries : Zoneinfo, url, ip locator, web scrape, number, requests, webbrowser, datetime, phone numbers, pycountry, time.

CHAPTER 4

DESIGNING

4.1 BLOCK DIAGRAM

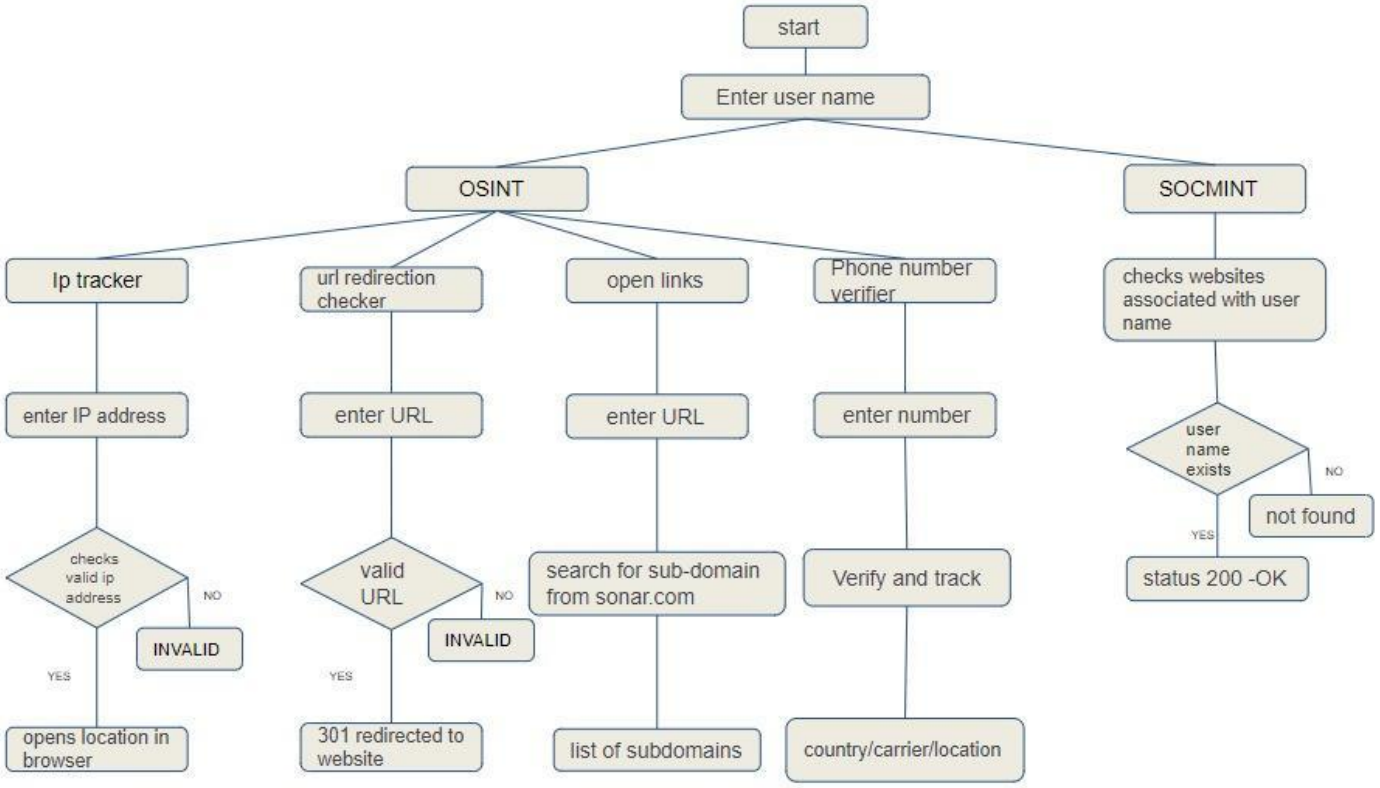


Fig4.1.1 Block Diagram

CHAPTER 5
RESULT AND DISCUSSION

5.1 IMPLEMENTATION

Main code:

```
from socialrecon import reconinput
from socmint import banner
from socmint import search
cyan="\033[1;36;40m"
green="\033[1;32;40m"
red="\033[1;31;40m"
Y = '\033[1;33;40m'
def Main(a):
    if(a==1):
        reconinput()
    elif(a==2):
        banner()
        search()
if __name__=="__main__":
    print(cyan+"""

|$$$$$$\$$$$$$$\  $$$$$$\                        $$\           $$\
|$$ __/ \____$$ |$$  __/                        \__|          $$ |
|$$|_        $$/ $$ \__    $$$$$$\   $$$$$$$\$$\$$$$$$$\$$$$$$\
|$$$$$$\/$$$$$$| $$$$$$\   $$  _$$\$$  _____$$ $$  __$$\_$$  _|
|$$/ $$ \____ $$\      $$ | $$ /  $$ \$$$$$$\ $$ $$ |  $$ |$$ |
|$$\_$$|      $$ |     $$  \$$ |  $$ |\____$$\$$ $$ |  $$ |$$ |$$\
|$$$$$$\$$$$$$$/ $$$$$$/   \$$$$$$  $$$$$$$  $$ $$ |  $$  |\$$$$  |
\_______/\_______/\_________/\_______/\_______/\__\__|  \__|  \____/
    """)
```

```
print(Y+"                          Created By : Chetti Thanmay Ram")
print(Y+"                          Created By : Jala Ajay Kumar ")
print(Y + "                        Created By : Raviteja Karumanchi ")
print(green+"""
            Available Modules


       1.OSNIT,
       2.SOCMINT
""")
print(Y+"Note : In OSNIT type 'tools' to find tools.")
print(Y+"Note : In SOCMINT type user name.")
a=int(input("Module >> "))
Main(a)
```

infosint.py

socialrecon.py

```
from url import urlinfo
from iplocator import iplocate
from webscrap import Links
from number import number
R = '\033[1;31;40m'
G = '\033[1;32;40m'
C = '\033[1;36;40m'
Y = '\033[1;33;40m'
def reconinput():
    inp=input("Info>> ")
    if (inp=='1'):
        iplocate()
    elif(inp =='2'):
        urlinfo()
    elif(inp=='3'):
        Links()
    elif (inp=='4'):
        number()
    elif(inp=='exit'):
        exit()
    elif(inp=='tools'):
        print(G+"""Tools available

            1.Trace Single IP
            2.URL redirection checker
            3.Open Links
            4.Phonenumber verifier


            usage : type exit to stop
            """)
    else:
        print(R+"Enter an valid option")
    while True:
        reconinput()

if __name__=="__main__":
   reconinput()
```

socialrecon.py

```
import requests
import webbrowser

cyan="\033[1;36;40m"
green="\033[1;32;40m"
red="\033[1;31;40m"
Y = '\033[1;33;40m'
def iplocate():
    ipinfo={}
    ip=input("Ip address >> ")
    url="http://ip-api.com/json/"+ip
    r=requests.get(url)
    ipinfo=r.json()
    if ipinfo['status'] == 'success':
        lat=ipinfo['lat']
        lon=ipinfo['lon']
        print(green+"Ip location Found !!")
        print('Country     : '+ipinfo['country'])
        print('Region Name : '+ipinfo['regionName'])
        print('City        : '+ipinfo['city'])
        print('Time zone   : '+ipinfo['timezone'])
        print('ISP         : '+ipinfo['isp'])
        print(cyan+'Opening Location in browser')
        mapurl = "https://maps.google.com/maps?q=%s,+%s" % (lat, lon)
        webbrowser.open(mapurl, new=2)
```

```
        webbrowser.open(mapurl, new=2)
        print('')
    else:
        print(red+"Ip location Not Found !!")


if __name__=="__main__":
    iplocate()
```

iplocator.py

```python
import requests
import time
from datetime import datetime

cyan="\033[1;36;40m"
green="\033[1;32;40m"
red="\033[1;31;40m"
Y = '\033[1;33;40m'

def urlinfo():
    print(Y+"Note : URL = http://example.com")
    url=input("URL >> ")
    print("-"*50)
    print(cyan+"          Trace Results        ")
    print("-"*50)
    try:
        r = requests.get(url)
        print()
        current_datetime = datetime.now()
        print("[+]Traced Date and Time :",current_datetime)
        print(green+"[-]"+"301 Redirected")
        print(cyan+"[-]"+r.url)
    except Exception as e:
        print(red+"Error Occured :"+e)
```

```python
        print(red+"Error Occured :"+e)

if __name__=="__main__":
    urlinfo()
```

urlredirection.py

```python
import phonenumbers
from phonenumbers import carrier
from phonenumbers import geocoder
from phonenumbers.phonenumberutil import region_code_for_country_code
from phonenumbers.phonenumberutil import region_code_for_number
import pycountry
cyan="\033[1;36;40m"
green="\033[1;32;40m"
red="\033[1;31;40m"
Y = '\033[1;33;40m'
def number():
    phonenum = input("Enter Mobile Number with country code >> ")
    pn = phonenumbers.parse(phonenum)
    country = pycountry.countries.get(alpha_2=region_code_for_number(pn))
    print('')
    print(cyan+"Country : "+str(country.name))
    print(cyan+"Location : "+(geocoder.description_for_number(pn,"en")))
    print(cyan+"Carrier : "+carrier.name_for_number(pn,"en"))

if __name__=="__main__":
    number()
```

number.py

```python
import requests
import time

''' INPUT USERNMAE '''
username = input('\033[92m{+} Enter username : ')

# INSTAGRAM
instagram = f'https://www.instagram.com/{username}'

# FACEBOOK
facebook = f'https://www.facebook.com/{username}'

#TWITTER
twitter = f'https://www.twitter.com/{username}'

# YOUTUBE
youtube = f'https://www.youtube.com/{username}'

# BLOGGER
blogger = f'https://{username}.blogspot.com'

# GOOGLE+
google_plus = f'https://plus.google.com/s/{username}/top'
```

```
# REDDIT
reddit = f'https://www.reddit.com/user/{username}'

# WORDPRESS
wordpress = f'https://{username}.wordpress.com'

# PINTEREST
pinterest = f'https://www.pinterest.com/{username}'

# GITHUB
github = f'https://www.github.com/{username}'

# TUMBLR
tumblr = f'https://{username}.tumblr.com'

# FLICKR
flickr = f'https://www.flickr.com/people/{username}'

# STEAM
steam = f'https://steamcommunity.com/id/{username}'

# VIMEO
vimeo = f'https://vimeo.com/{username}'
```

```
# SOUNDCLOUD
soundcloud = f'https://soundcloud.com/{username}'

# DISQUS
disqus = f'https://disqus.com/by/{username}'

# MEDIUM
medium = f'https://medium.com/@{username}'

# DEVIANTART
deviantart = f'https://{username}.deviantart.com'

# VK
vk = f'https://vk.com/{username}'

# ABOUT.ME
aboutme = f'https://about.me/{username}'

# IMGUR
imgur = f'https://imgur.com/user/{username}'

# FLIPBOARD
flipboard = f'https://flipboard.com/@{username}'
```

```
# SLIDESHARE
slideshare = f'https://slideshare.net/{username}'

# FOTOLOG
fotolog = f'https://fotolog.com/{username}'

# SPOTIFY
spotify = f'https://open.spotify.com/user/{username}'

# MIXCLOUD
mixcloud = f'https://www.mixcloud.com/{username}'

# SCRIBD
scribd = f'https://www.scribd.com/{username}'

# BADOO
badoo = f'https://www.badoo.com/en/{username}'

# PATREON
patreon = f'https://www.patreon.com/{username}'

# BITBUCKET
bitbucket = f'https://bitbucket.org/{username}'
```

```
# DAILYMOTION
dailymotion = f'https://www.dailymotion.com/{username}'

# ETSY
etsy = f'https://www.etsy.com/shop/{username}'

# CASHME
cashme = f'https://cash.me/{username}'

# BEHANCE
behance = f'https://www.behance.net/{username}'

# GOODREADS
goodreads = f'https://www.goodreads.com/{username}'

# INSTRUCTABLES
instructables = f'https://www.instructables.com/member/{username}'

# KEYBASE
keybase = f'https://keybase.io/{username}'

# KONGREGATE
kongregate = f'https://kongregate.com/accounts/{username}'
```

```
# BUZZFEED
buzzfeed = f'https://buzzfeed.com/{username}'

# TRIPADVISOR
tripadvisor = f'https://tripadvisor.com/members/{username}'

# HUBPAGES
hubpages = f'https://{username}.hubpages.com'

# CONTENTLY
contently = f'https://{username}.contently.com'

# HOUZZ
houzz = f'https://houzz.com/user/{username}'

#BLIP.FM
blipfm = f'https://blip.fm/{username}'

# WIKIPEDIA
wikipedia = f'https://www.wikipedia.org/wiki/User:{username}'

# HACKERNEWS
hackernews = f'https://news.ycombinator.com/user?id={username}'
```

```
# CODEMENTOR
codementor = f'https://www.codementor.io/{username}'

# REVERBNATION
reverb_nation = f'https://www.reverbnation.com/{username}'

# DESIGNSPIRATION
designspiration = f'https://www.designspiration.net/{username}'

# BANDCAMP
bandcamp = f'https://www.bandcamp.com/{username}'

# COLOURLOVERS
colourlovers = f'https://www.colourlovers.com/love/{username}'

# IFTTT
ifttt = f'https://www.ifttt.com/p/{username}'

# EBAY
ebay = f'https://www.ebay.com/usr/{username}'

# SLACK
slack = f'https://{username}.slack.com'
```

```
# OKCUPID
okcupid = f'https://www.okcupid.com/profile/{username}'

# TRIP
trip = f'https://www.trip.skyscanner.com/user/{username}'

# ELLO
ello = f'https://ello.co/{username}'

# TRACKY
tracky = f'https://tracky.com/user/~{username}'

# BASECAMP
basecamp = f'https://{username}.basecamphq.com/login'
```

```python
WEBSITES = [
intelligencex, instagram, facebook, twitter, youtube, blogger, google_plus, reddit,
wordpress, pinterest, github, tumblr, flickr, steam, vimeo, soundcloud, disqus,
medium, deviantart, vk, aboutme, imgur, flipboard, slideshare, fotolog, spotify,
mixcloud, scribd, badoo, patreon, bitbucket, dailymotion, etsy, cashme, behance,
goodreads, instructables, keybase, kongregate, livejournal, angellist, last_fm,
dribbble, codecademy, gravatar, pastebin, foursquare, roblox, gumroad, newsground,
wattpad, canva, creative_market, trakt, five_hundred_px, buzzfeed, tripadvisor, hubpages,
contently, houzz, blipfm, wikipedia, hackernews, reverb_nation, designspiration,
bandcamp, colourlovers, ifttt, ebay, slack, okcupid, trip, ello, tracky, basecamp,
]


''' COLOUR PRINTING FUNCTION '''
def outer_func(colour):
    def inner_function(msg):
        print(f'{colour}{msg}')
    return inner_function
```

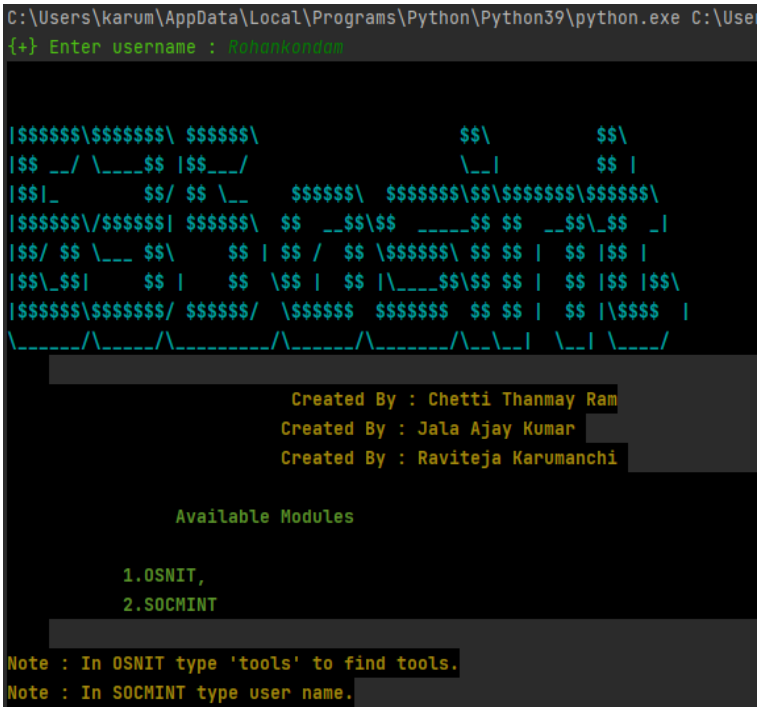
```python
''' COLOUR PRINTS '''
GREEN = outer_func('\033[92m')
YELLOW = outer_func('\033[93m')
RED = outer_func('\033[91m')


''' BANNER '''
def banner():
    YELLOW(r'''
  _                  _    _
 | |                | |  (_)
 | |     ___   ___  | | ___ _ __   __ _  ______
 | |    / _ \ / _ \ | |/ / | '_ \ / _` | |______|
 | |___| (_) | (_) ||   <| | | | | (_| |
 |______\___/ \___/|_|\_\_|_| |_|\__, |
                                  __/ |
                                 |___/


   _     _
  | |   | | ___  ___  ____
  | |   | |/ __// __\|   _|
  | |__| |\__ \| , _|  /
  |______||___|\___/|_|
  ''')
```

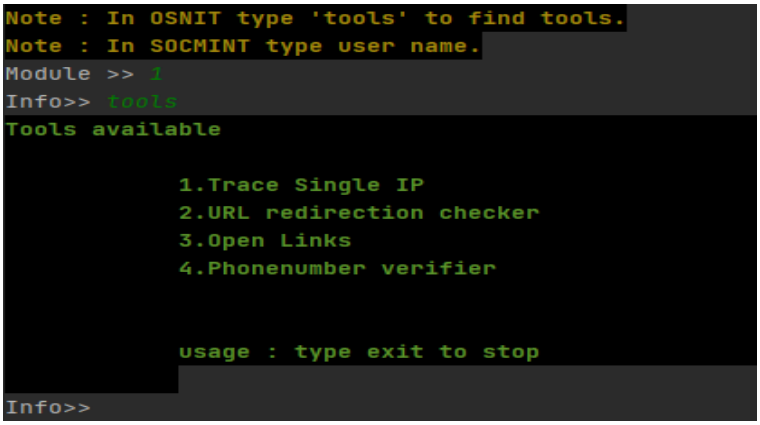
```
def search():
    GREEN(f'[+] Searching for username:{username}')
    time.sleep(0.5)
    print('.......')
    time.sleep(0.5)
    print('.......\n')
    time.sleep(0.5)

    GREEN(f'[+] Looking-User is working\n')
    time.sleep(0.5)
    print('.......')
    time.sleep(0.5)
    print('.......\n')
    time.sleep(0.5)

    time.sleep(1)

    count = 0
    match = True
    for url in WEBSITES:
        r = requests.get(url)

        if r.status_code == 200:
            if match == True:
                GREEN('[+] FOUND MATCHES')
```

```
    for url in WEBSITES:
        r = requests.get(url)

        if r.status_code == 200:
            if match == True:
                GREEN('[+] FOUND MATCHES')
                match = False
            YELLOW(f'\n{url} - {r.status_code} - OK')
            if username in r.text:
                GREEN(f'POSITIVE MATCH: Username:{username} - text has been detected in url.')
            else:
                GREEN(f'POSITIVE MATCH: Username:{username} - \033[91mtext has NOT been detected in url, could be a FALSE POSITIVE.')#
        count += 1

    total = len(WEBSITES)
    GREEN(f'FINISHED: A total of {count} MATCHES found out of {total} websites.')



if __name__=='__main__':
    banner()
    search()
```

socmint.py

5.2 Results:


C:\Users\karum\AppData\Local\Programs\Python\Python39\python.exe C:\Use
{+} Enter username : Rohankondam
Created By : Chetti Thanmay Ram
Created By : Jala Ajay Kumar
Created By : Raviteja Karumanchi
Available Modules
1.OSNIT,
2.SOCMINT
Note : In OSNIT type 'tools' to find tools.
Note : In SOCMINT type user name.

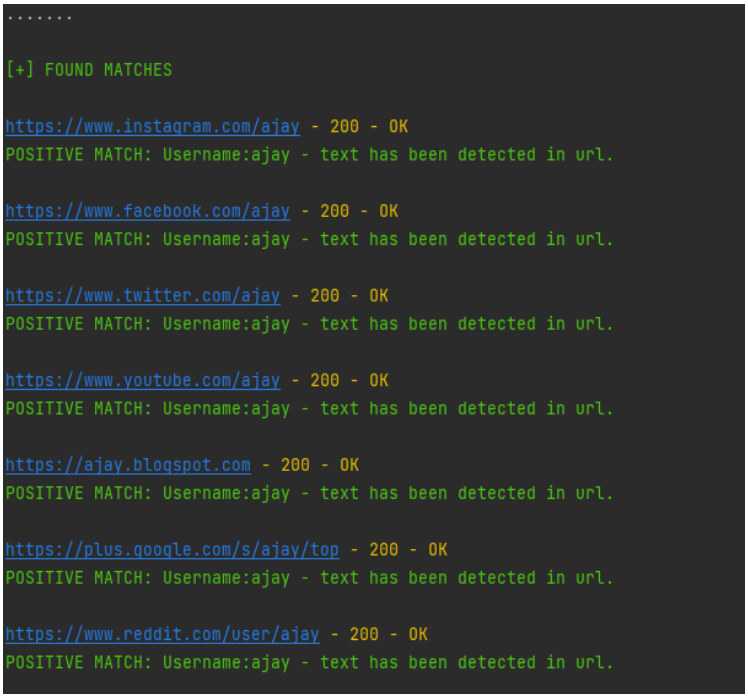

Note : In OSNIT type 'tools' to find tools.
Note : In SOCMINT type user name.
Module >> 1
Info>> tools
Tools available
1.Trace Single IP
2.URL redirection checker
3.Open Links
4.Phonenumber verifier
usage : type exit to stop
Info>>

```
Ip address >> 49.205.110.118
Ip location Found !!
Country      :  India
Region Name  :  Telangana
City         :  Hyderabad
Time zone    :  Asia/Kolkata
ISP          :  ACT Fibernet
Opening Location in browser
```

```
Info>> 2
Note : URL = http://example.com
URL >> http://google.com
------------------------------------------------
          Trace Results
------------------------------------------------

[+]Traced Date and Time : 2022-10-28 16:50:03.851244
[-]301 Redirected
[-]http://www.google.com/
```

```
Enter Mobile Number with country code >> +919666736015

Country : India
Location : India
Carrier : Idea
Info>> 4
Enter Mobile Number with country code >> +916302541232

Country : India
Location : India
Carrier : Reliance Jio
```


Module >> 2
[+] Searching for username:ajay
....
....
[+] Looking-User is working
....
....


....
[+] FOUND MATCHES
https://www.instagram.com/ajay - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.
https://www.facebook.com/ajay - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.
https://www.twitter.com/ajay - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.
https://www.youtube.com/ajay - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.
https://ajay.blogspot.com - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.
https://plus.google.com/s/ajay/top - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.
https://www.reddit.com/user/ajay - 200 - OK
POSITIVE MATCH: Username:ajay - text has been detected in url.

CHAPTER 6

6.1 CONCLUSION

- **635OSINT** is an Open source intelligence tool which is used to gather information about a person using a single input like name or an ip address.
- This tool is a Python OSINT (Open-Source Intelligence Tool) for finding information on people that you do not know, but have only a social media/site username of the target.
- Tells whether the Phone number is present or not and tells the carrier of the number.
- It tells whether the user name is found in any of the social media.
- It extracts all the links found in the web pages i.e., subdomain links which are hidden or unknown.
- It tells whether the url is Legitimate or contains any malicious content.
- It shows the location of the Internet service provider's of the ip address and shows info about an IP address.
- It maps the multiple IP and provides it as a Map called Heatmap.

6.2 FUTURE WORK

This tool can be further developed in the future by adding the following features:

- By adding image recon used to find the image in social media which is publicly available.
- It maps the multiple IP and provide as a Map called Heatmap
- Extraction of metadata from photos like: location, place, date and time etc.
- **PDF analysis** It shows the author of the document and creation date and modified date and software which it used to create the pdf.
- Hunting details in detailed from social media accounts like: date of birth, place, job or experience details, phone number, mail Id, skills, family and assets details.

CHAPTER 7

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