# ASSIGNMENT -1


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# 1. What is Footprinting ?

**Footprinting**

refers to the technique used for gathering information about computer systems and the entities they belong to. It's a crucial step in understanding the security posture of a target system. Here are some key points about footprinting:

1. **Purpose**:
   Footprinting provides valuable insights that can be used by both ethical hackers and malicious actors. It helps them understand the target system's vulnerabilities and weaknesses.
2. **Types of Footprinting**:
   - **Active Footprinting**: Involves direct interaction with the target machine. The attacker actively probes the system to gather information.
   - **Passive Footprinting**: Collects information remotely, without directly engaging with the target. This includes data from public sources and historical records.

# 2. What is Reconnaissance?

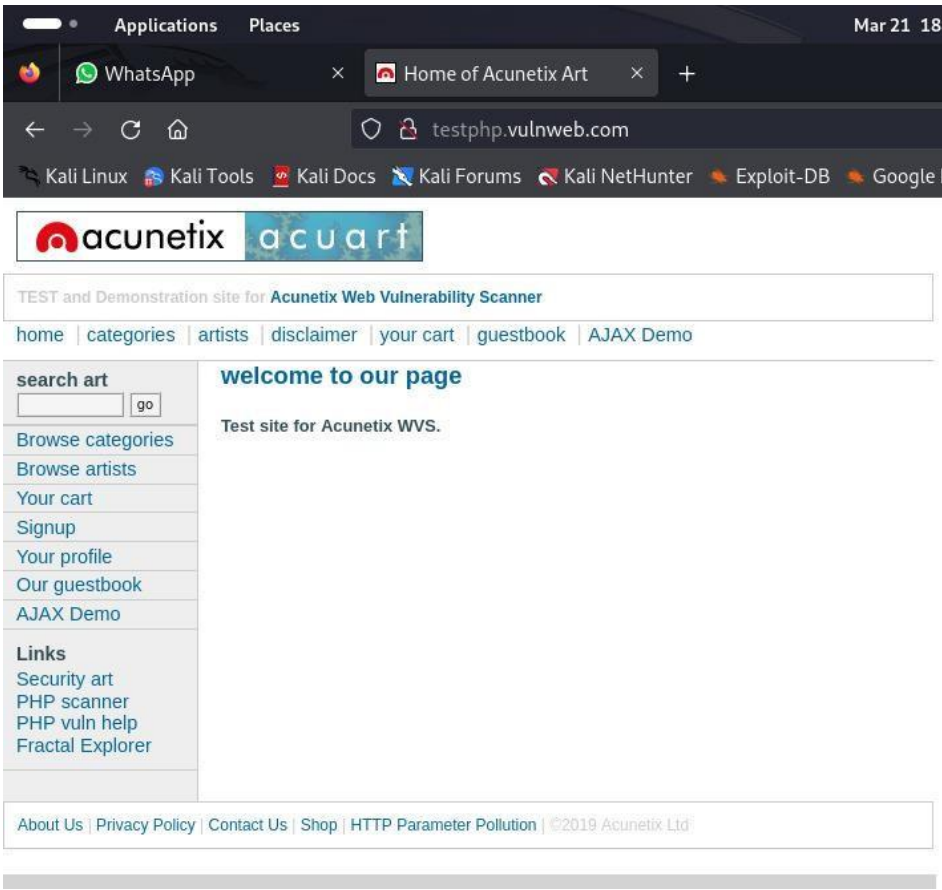
**Reconnaissance** in the realm of cybersecurity is akin to the initial fact-finding mission before a cyber attack. It involves systematically surveying or scanning systems, networks, or web applications to gather critical information about potential vulnerabilities that can be exploited

Here are some key points about **cybersecurity reconnaissance**:

1. **Purpose and Importance**:
   - **Preliminary Phase**: Reconnaissance serves as the **first step** in the cyber attack process.
   - **Information Gathering**: It aims to collect data about the target system, including its infrastructure, configuration, and potential weaknesses.
   - **Strategic Advantage**: Comprehensive reconnaissance enables threat actors to build a precise understanding or profile of their targets, which they can later exploit.

The website to perform Footprinting and Reconnaissance is –

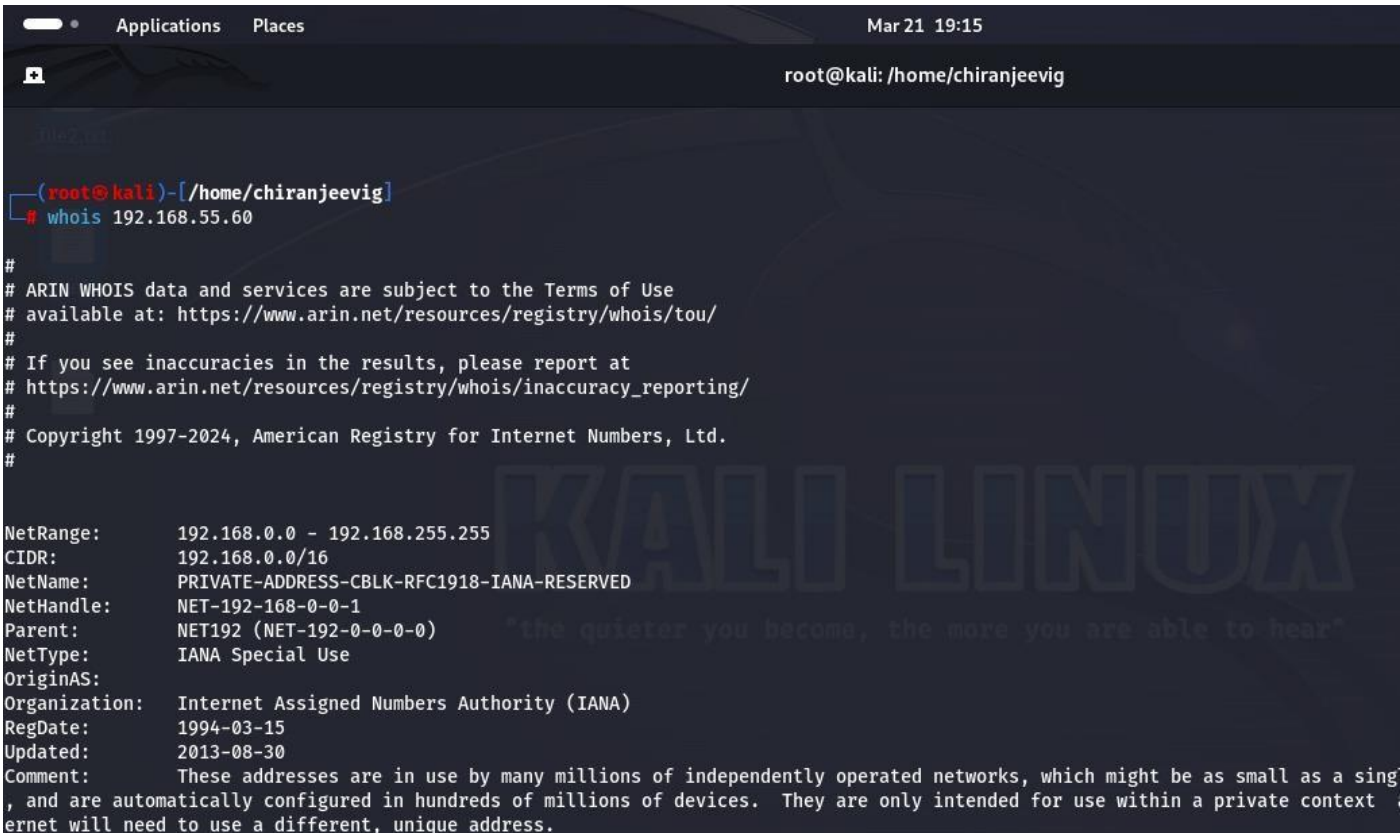
http://testphp.vulnweb.com/




Step 1: open kali linux and change to root user to perform the task and use nslookup on the target for it

We got the server IP as shown above

Step2: Now use whois command to gather information for needs



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Applications
Places
Mar 21 19:16
root@kali: /home/chiranjeevig
from ICANN or IANA. We are not the source of activity you may see on logs or in e-mail records. Please refer to http://www.ia
Comment:
Comment: These addresses were assigned by the IETF, the organization that develops Internet protocols, in the Best Curre
be found at:
Comment: http://datatracker.ietf.org/doc/rfc1918
Ref: https://rdap.arin.net/registry/ip/192.168.0.0
OrgName: Internet Assigned Numbers Authority
OrgId: IANA
Address: 12025 Waterfront Drive
Address: Suite 300
City: Los Angeles
StateProv: CA
PostalCode: 90292
Country: US
RegDate:
Updated: 2012-08-31
Ref: https://rdap.arin.net/registry/entity/IANA
OrgTechHandle: IANA-IP-ARIN
OrgTechName: ICANN
OrgTechPhone: +1-310-301-5820
OrgTechEmail: abuse@iana.org
OrgTechRef: https://rdap.arin.net/registry/entity/IANA-IP-ARIN
OrgAbuseHandle: IANA-IP-ARIN
OrgAbuseName: ICANN
OrgAbusePhone: +1-310-301-5820
OrgAbuseEmail: abuse@iana.org
OrgAbuseRef: https://rdap.arin.net/registry/entity/IANA-IP-ARIN


We have gathered enough info

Step 3: Now let use nmap command to find vulnererabilities


We have a open port 53

**PORT 53 :-** The standard port for DNS is port 53.DNS client applications use the DNS protocol to query and request information from DNS servers,and the server returns the results to the client using the same port.port 53 is used for both TCP and UDP communication.

**Vulnerability:-** An attacker may use this flow to injuct UDP packets to the remote hosts,in spite of the presence of firwall .impact while using a source port equal to 53 UDP packets may be sent by passing the remote firwall,an attacker could inject UDP packets,in spite of the presence of a firewall.