CYBERSECURITY DAILY DIARY

DAY-06
DATE- 28 June, 2025

Topics Covered:

- Subnetting practice: subnet a /24 into smaller blocks (/26, /28)
- Calculate ranges and broadcast addresses.

What did I learn:

Today I practiced **subnetting a /24 network** into smaller blocks like `/26` and `/28`. This exercise sharpened my ability to design efficient IP layouts for virtual labs and secure network zones.

🔹 **Starting Block: `/24` → `192.168.1.0/24`**

- Total IPs: 256
- Usable hosts: 254
- Range: `192.168.1.0` to `192.168.1.255`
- Broadcast: `192.168.1.255`

🔸 **Subnetting into `/26` blocks**

- Each `/26` has 64 IPs → 62 usable hosts
- Number of subnets: 4
- Subnet ranges:
  1. `192.168.1.0/26` → Hosts: `192.168.1.1`–`192.168.1.62`, Broadcast: `192.168.1.63`
  2. `192.168.1.64/26` → Hosts: `192.168.1.65`–`192.168.1.126`, Broadcast: `192.168.1.127`
  3. `192.168.1.128/26` → Hosts: `192.168.1.129`–`192.168.1.190`, Broadcast: `192.168.1.191`
  4. `192.168.1.192/26` → Hosts: `192.168.1.193`–`192.168.1.254`, Broadcast: `192.168.1.255`

🔸 **Subnetting into `/28` blocks**

- Each `/28` has 16 IPs → 14 usable hosts
- Number of subnets: 16
- Example ranges:

- `192.168.1.0/28` → Hosts: `192.168.1.1`–`192.168.1.14`, Broadcast: `192.168.1.15`
- `192.168.1.16/28` → Hosts: `192.168.1.17`–`192.168.1.30`, Broadcast: `192.168.1.31`
- …and so on up to `192.168.1.240/28`

This practice helped me visualize how IP blocks can be sliced for different lab segments—like isolating attacker VMs, victim machines, and monitoring tools. It also prepares me for configuring firewalls, routing rules, and DHCP scopes in my cybersecurity training.