

01/04/2024

# Cybersecurity.

① Networks

② Vulnerability [Hashcat - Password cracking tool]

③ Bruteforce.

④ RAT - Remote Access Trojans.

⑤ Data Securing, Safeguarding

⑥ (i) Physical Control

(ii) Administrative Control

(iii) Logical Control.

(7) Port Scanning

(8) Protocols [TCP / UDP]



Connecting - Software & Hardware

TCP - 65,535 ports

UDP - 65,535 ports

43,1070

ports - entry gate

https - 443 TCP port

http - 80

→ http Vs https

→ Blockchain

→ Exploit

→ SQL injection

→ Session hijacking without Username,  
Pass

- Phishing
- DNS poisoning
- IP address
- Cryptography
- ARP poisoning
- Cloud
- Spoofing
- Hashing (Db - username, Password)
- Metasploit
- Backdoor
- Hacking?
  - ↳ gaining unauthorized access
- Ethical Hacking

↳ gaining unauthorized access  
with written Consent.

→ Web app. penetration testing

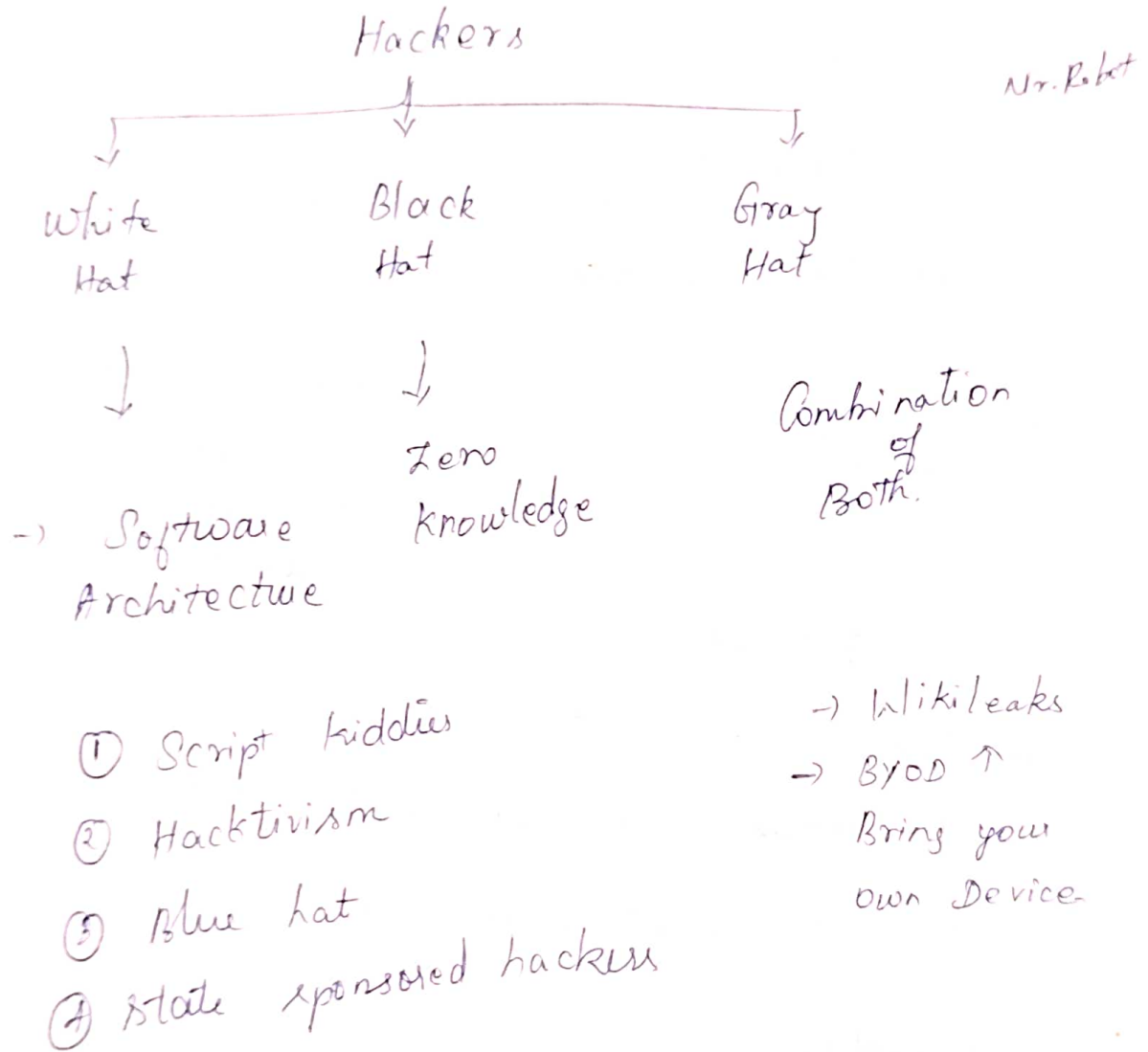
- Web page
- Website
- Webserver - which computer
- Webapplication - user interaction

→ System

→ IoT

Secure Coding.

- (1) offensive → attackers (Red)
- (2) Defensive → SOC - Security operation Center  
(Blue) Analyst.
- (3) Purple. - (Both)



CIA - ②

- ① Confidentiality
- ② Integrity
- ③ Availability

Authentication - Verifying  
Authorization } - Permission to access  
(or)  
Access Control }  
(AC)

→ Biometric, Authentication

- ① something you know
- ② something you have - Aadhaar Card, Phone
- ③ something you are

UAC Pop Up

→ 2 factor authentication

- (1) Username
- (2) Pass
- (3) ~~Secret~~ Secret

### INTEGRITY

- Honest, Originality
- No modification in transmission.
- Secured Socket Layer (SSL)

→ Encryption

\* Conversion of clear text cypher text

\* Availability

\* Web Server.

- Breach - Loss of Control
- Event -
- Error - Bug → Deviate from requirements
- Event - Observable occurrence ? { Antimalware  
→ Antivirus
- Exploit - Particular attacks.  
- Methodologies.
- Incident - which affects CIA
- Intrusion -
- Threat - Potential to cause damage likelihood
- Vulnerability - Weakness } Risk. Severity ↑
- TOE - Target of Evaluation

\_\_\_\_\_ x \_\_\_\_\_

<u>IPv4</u> 32 bits	<u>IPv6</u> 128 bits 1 Hex → 4 bits AAAA:EEFF: 16 → Hexa
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→ Decimal

\* 127.0.0.1 - localhost.

\* MySQL-3303 port number.