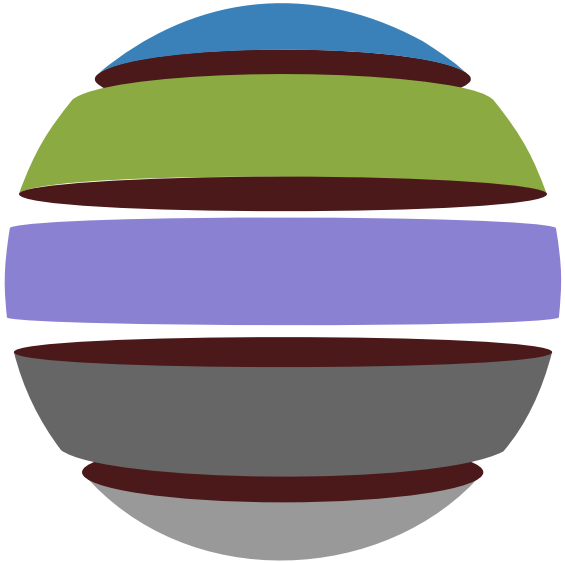
Cyber Security?

What is Cyber Security?

- Cyber security is the application of ***technologies***, ***processes*** and ***controls*** to protect systems, networks, programs, devices and data from ***cyber attacks***.
- The main purpose of cyber security is to protect all ***organizational assets*** from both external and internal threats as well as disruptions caused due to natural disasters.

Digital Forensics and Incident Response

Application Security



Identity and Access management

Cloud Security

Threat Intelligence

Endpoint Security

Security Operations

Risk Management

Roadmap to Cyber Security

First things first

Ask Yourself, Why?

Understand the need

IT’S NOT EASY

Know your interest

Why Cyber Security?

To become an Ethical Hacker?

Get familiar!

To become an Ethical Hacker?

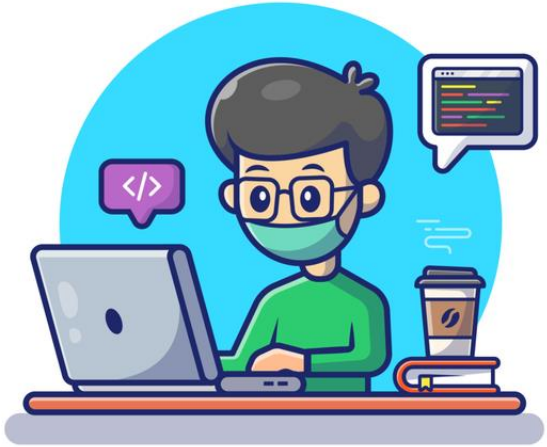
- **Computer Basics**: Hardware, Software, I/O, processing methodology
- **Web and Internet**: HTTP, DNS, Web Servers, FTP, SMTP
- **Networking:** TCP/IP, ARP, Devices, types, Routing and Switching
- **Operating Systems**: Linux (Kali, Ubuntu, Red Hat), Windows, Android, iOS, MAC
- **Command Line**: CMD, Bash, Powershell

To become an Ethical Hacker?

- **Programming (really?)**:
  - *General Coding-* C, C++, Java
  - *Script Writing-* Python, Ruby, Go
  - *Web App Testing-*
    - *Frontend:* JavaScript
    - *Backend*: PHP, SQL, JSP, NodeJS, NoSQL, Python
  - *Shell Scripting-* Bash (zsh)

To become an Ethical Hacker?

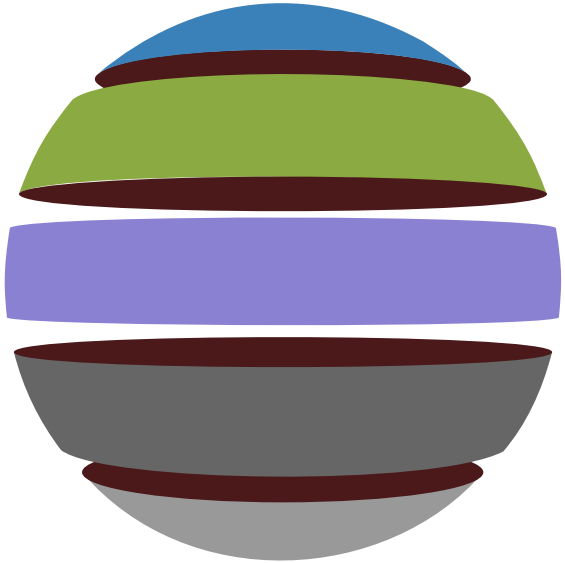
- **Study!**
  - *Undergrad Computer Science Courses*
    - B.Tech/BCA/B.Sc
  - *Undergrad Cyber Security Courses*
    - B.Tech/BCA/B.Sc
  - *Post grad Courses*
    - M.Tech/MCA/M.Sc
  - *PG Diploma*
  - *Art of Googling!*



Security Analyst/Engineer

Security Auditor

Digital Forensic Investigator



SOC Analyst

Penetration Tester

Malware Analyst

Security Consultant

Red Teamer/Blue Teamer

To become an Ethical Hacker?

You Decide..

To become an Ethical Hacker?

By the time you do..

To become an Ethical Hacker?

- **OWASP Top 10**
- **Learn to Operate Tools!**
- **MAKE PROJECTS!!**
  - *Solve a market problem*
  - *Contribute to open source*
  - *Combine CS with machine learning, Web3, blockchain, cloud..*
  - *Automate the recurring*

To become an Ethical Hacker?

- **Learn to Google stuff for yourself**
- **Become a reader!**
- **GitHub**
  - *Tools and exploit repos*
  - *SecLists, PayloadAllTheThings..*
- **Bug Bounty Programs**
  - *Bugcrowd, Hackerone, Intigriti, YesWeHack*

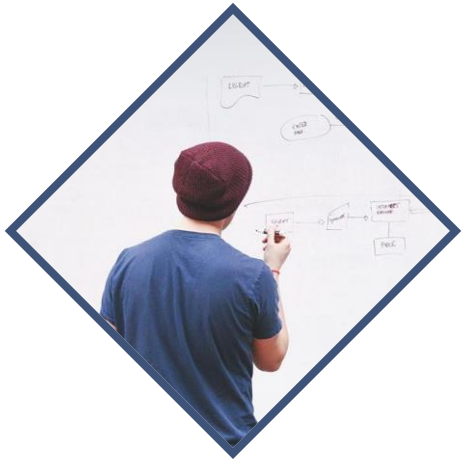
To become an Ethical Hacker?

- **PortSwigger Academy**
- **Twitter!**
  - *Security Community is here, where are you?*
  - *Follow and RT*
- **Ask!**
  - *Questions lead to answers*
  - *Curiosity > Research > Inference > Viewpoint > Intellect++*

To become an Ethical Hacker?

- **Capture The Flags**
  - *Tryhackme, HackTheBox, Proving Grounds*
- **Security Conferences**
  - *Defcon, BlackHat, OWASP, Null*
- **Security Forums (JOIN NOW!!)**
  - *Stack, Reddit, Discord*
  - *Contribute!*

Learning Never Stops..



PROFESSIONAL CERTIFICATIONS

To become an Ethical Hacker?

Security

- Certified Ethical Hacker (CEH)
- Offensive Security Certified Professional (OSCP)
- CompTIA Security+
- eLearnSecurity (eJPT)
- GIAC Security Essentials (GSEC/GPEN/GWAPT)
- Certified Information Systems Security Professional (CISSP)

To become an Ethical Hacker?

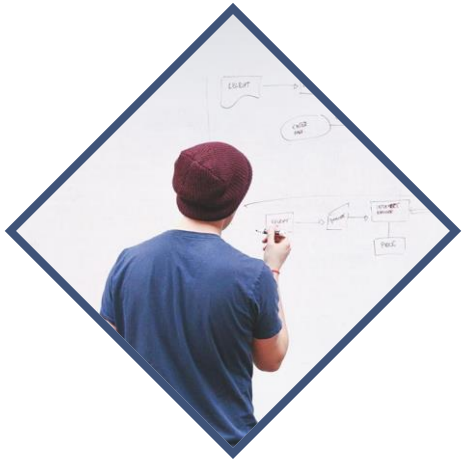
Networking

- Cisco Certified Network Associate (CCNA)
- CompTIA Network+
- Cisco Certified Network Professional (CCNP)
- Cisco Certified Internetwork Expert (CCIE)

To become an Ethical Hacker?

Linux

- Red Hat Certified Systems Administrator (RHCSA)
- Red Hat Certified Expert (RHCE)
- CompTIA Linux+



CAREERS IN HACKING?

7,000,000

Ethical Hackers would be needed by 2025 in India

7,20,000

Average Salary

3,50,000

For a beginner/Fresher

15,00,000+

For a professional

170,000$

Average Salary

90,000$

For a beginner/Fresher

300,000$

For a professional

Careers in Ethical Hacking

"If you are online, you are vulnerable."

WHAT DOES
IT TAKE?

To become an Ethical Hacker?

- Programming **is** important!
- Have a Hacker's mindset
- Be verbose, but don't talk much
- Be social, speak and communicate
- Logical thinking
- Don't learn it all, but know it all
- Don't forget the ***soft*** skills..

HACKING

Is an art, practised through a creative mind.

THANKS!

Any questions?