Physical, Web and Network Security

Session 5

Cyber Security boot camp organized by **YELLOW CIRCLE**

Instructors

- Name
- Job / Company
- Industry Experience
- Something interesting

Volunteers

- Name
- Job / School
- Something interesting

Session Overview

Physical, Web, Network Security

- Controlling access to building

- Secure web and OS application

- Network level security

- Layers of security mechanisms

- Ultimate goal is to keep bad guys out

- Allow access to good folks

Physical Security at Google Data Center

- Lets watch it:
    - *https://youtu.be/XZmGGAbHqa0?t=44*
    - *Teacher materials: video-5.1*
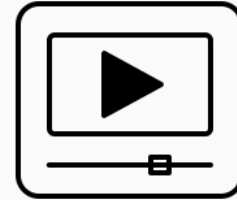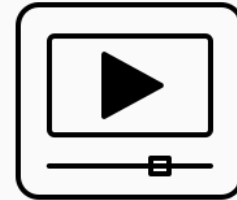
Physical Security

- House without door does not provide security

- Physical security includes:

  - *Vault doors*

  - *Concrete walls*

  - *Biometrics*

  - *Others*

- Physical security is as important as cyber security.

- Laptop in a house with front door open is not secure

Physical locks are secure?

- Door locks can be hacked quickly

- Lets watch it:

  - *https://www.youtube.com/watch?v=Mz5IOFK38nU*

  - *Teacher materials: video-5.2*

Student Activity

How secure is your home?

- Pass student worksheet
- Work in teams
- What makes your home secure?
- Create a list of items, tools, tech.
- Only physical security

codeforgrove   How secure is your home?

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Session 5 - Physical, Web and Network Security

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Student Activity

codeforgrove

How secure is your home?

- Teacher / Classroom discussion

- What are the common tools, items?

codeforgrove   How secure is your home?
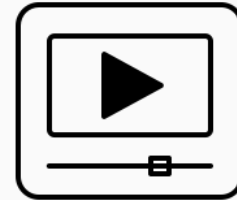
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Web Application Hacking

- Using free tools on the Internet

- Lets watch it:

    - *https://youtu.be/5ADO1E-NAG4?t=25*

    - *Teacher materials: video-5.3*

Video Discussion

- Tools used:
  - *Kali Linux*
  - *Nessus Scanner*
  - *What Web*
- Open-source / FREE

Securing Web, Applications and Systems

- Websites being hacked / defaced

- Applications with security holes

- Unpatched systems / greater risk to all

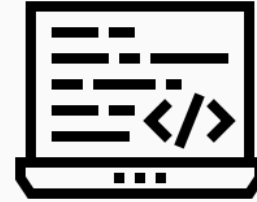- Virtual keyloggers

Web / Application Security

Computer virus / malicious software

- Malware

- Ransomware

- What is anti-virus?

- Email security, read before clicking a link!
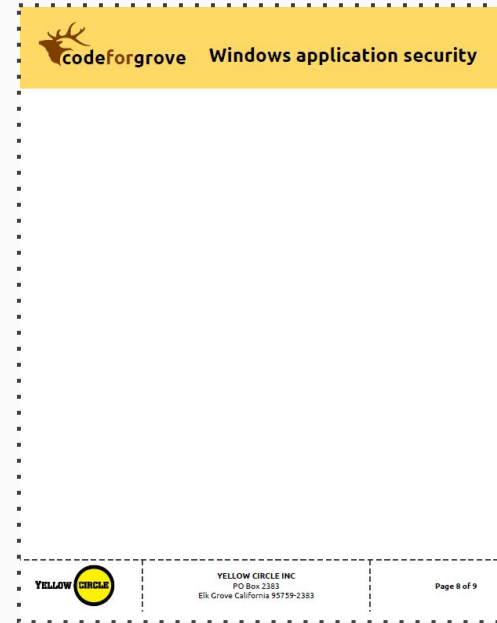
- Why are you installing that program?

Web security / coding

- HTTP vs HTTPS
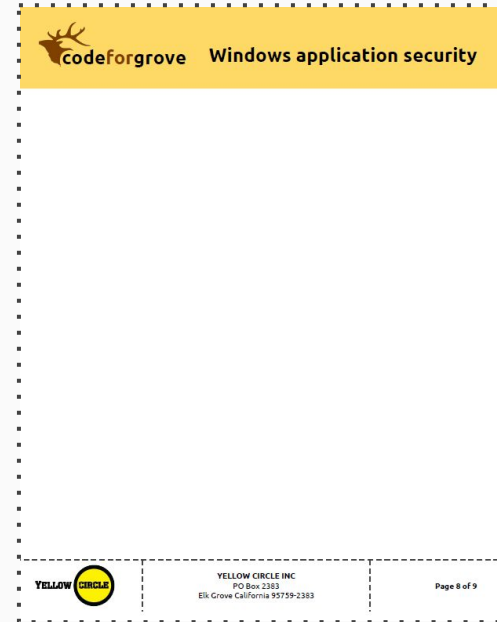
- Why is it important to code securely?

Windows Application Security

- Pass student worksheet

- Work in teams

- Research security applications

- Only focus on Microsoft Windows

- Students can use SmartPhones

- Examples: McAfee, Norton

Windows Application Security

- Teacher / Classroom discussion

- What are the common programs?

codeforgrove **Windows application security**

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Dude! Where's my firewall

- Pass student worksheet

- What is firewall?

- This is an individual activity

- Draw diagram / firewall at home

- Where does it reside?

- AT&T, Comcast, Frontier?

Dude! Where's my firewall

- Teacher / Classroom discussion
- Review few diagrams with class

Firewalls

- What does a firewall do?

- Why is it called firewall?

- Keep good in / bad out!

More FIREWALLS!

- Hardware firewalls

- Software / Virtual firewalls

- Extended features:

    - *Spyware protection*

    - *Zero-day defense*

    - *Malware protection*

What we learned...

- Physical Security

- Web / Application Security

- Network security

How are we doing?

- Pass survey sheet
- Students:
  - Fill in Session #
  - Circle room #
  - Answer questions
- Volunteers to collect surveys

End of session 5

- Time for break

- Snacks served in Cafeteria

- Remember to use restrooms