




# Physical, Web and Network Security

## Session 5

Cyber Security boot camp organized by **YELLOW** 



## Instructors

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



## Volunteers

- Name
- Job / School
- Something interesting



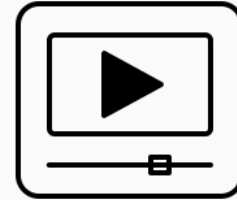
## Physical, Web, Network Security

- 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*

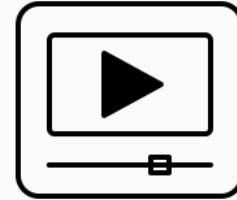


- House without door does not provide security
- Physical security includes:
  - *Vault doors*
  - *Concrete walls*
  - *Biometrics*
  - *Others*
- Physical security is as important as cyber security.
- Laptop in a house with front door open is not secure



## 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*



## 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

A worksheet template for the activity. It has a yellow header bar with the codeforgrove logo on the left and the title "How secure is your home?" on the right. The main body is a large white rectangle with a dashed border. At the bottom, there is a footer section with a yellow circle logo on the left, contact information for Yellow Circle Inc. in the center, and the page number "Page 7 of 9" on the right.

**codeforgrove**      How secure is your home?


**YELLOW CIRCLE**


**YELLOW CIRCLE INC**  
PO Box 2383  
Elk Grove California 95759-2383

Page 7 of 9

## How secure is your home?

- Teacher / Classroom discussion
- What are the common tools, items?

How secure is your home?



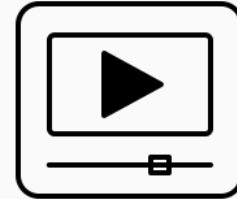
**YELLOW CIRCLE INC**  
PO Box 2383  
Elk Grove California 95759-2383

Page 7 of 9



## 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



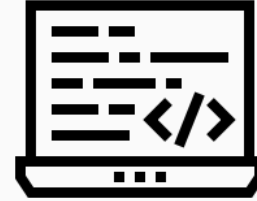
## Computer virus / malicious software

- Malware
- Ransomware
- What is anti-virus?
- Email security, read before clicking a link!
- Why are you installing that program?



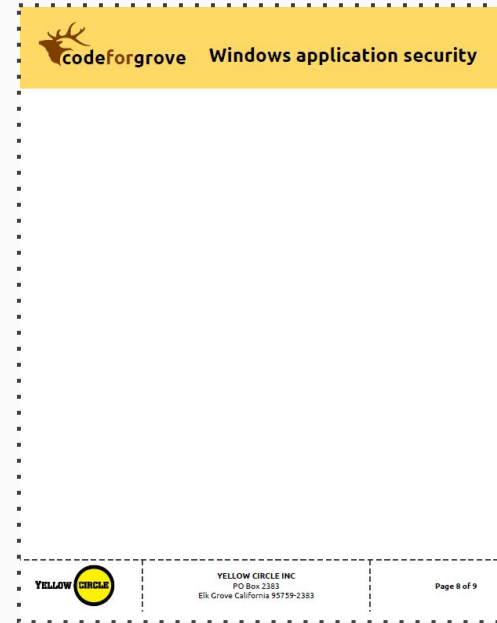
## Web security / coding

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



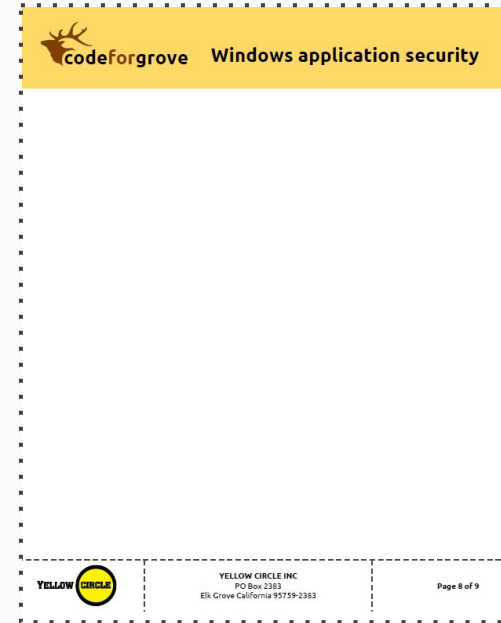
## Windows Application Security

- 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?



## 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

