Test Your Tech

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Crackers and cookies are:

A. Bytes to share with friends.
B. The best minor league baseball team of all time and their cheerleaders.
C. Hackers who attempt to break a program (crackers) and data stored on your computer by a Web server (cookies).

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Security

Exploring the Dark Side of the Internet

Negative Issues

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- Malware
  * Viruses, et al.
  * Spyware / Adware
- Privacy
  * Phishing
- Malicious
  * Cracking (not hacking)
  * Network service attacks

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Different Types of Virii/Spyware

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- Spyware
- Adware
- Embedded Programs
- Trojan Horse
- Browser Hijackers
- Dialers
- Worms

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Why do people make Virii/Spyware?

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- Profit
- Malice
- Boredom
- Business
- A challenge
- "Respect" from other virii writers

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How do I know if I've got a Virus/Spyware?

- Virii
  * Programs will stop working correctly
  * Loosing data (documents disappearing)
  * Computer is running slower than normal
- Spyware
  * Popups (on or off the internet)
  * New toolbars
  * Home page changes
  * Search results look different
  * Error messages when accessing the web

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What does Spyware look like?

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What does Spyware look like?

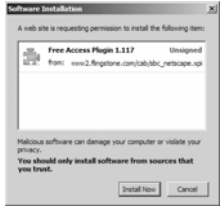fit100-21-spyware © 2008 University of Washington

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What does Spyware look like?

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How do I get rid of Spyware?

- Use a *legitimate* spyware removal program
  - Windows Defender: http://www.microsoft.com/athome/security/spyware/software/
  - Spybot: http://www.safer-networking.org/en/

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How do I prevent Spyware?

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- Be conscious of what you are clicking on/downloading
- Some pop-ups have what appears to be a close button, but will actually try to install spyware when you click on it. Always look for the topmost right red X.
- Remember that things on the internet are rarely free. "Free" Screensavers etc. generally contain ads or worse that pay the programmer for their time.

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How do I get rid of/prevent Virri?

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- Run antivirus software
  * http://www.washington.edu/computing/security
- Keep it up to date!
  * Virus definitions need to be updated regularly!

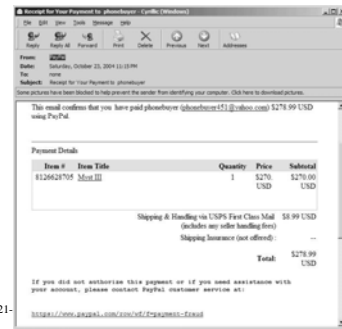fit100-21-spyware © 2008 University of Washington

Phishing

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- Most commonly an Email stating your account information needs updating
- Watch for URL's that are numeric or different from the link you clicked on
- Best thing to do is to type in the URL and check your account directly without following any links in the Email
- Many legitimate emails no longer contain a link (Paypal)

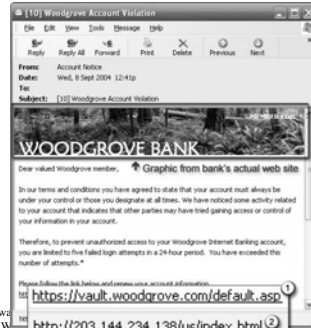fit100-21-spyware © 2008 University of Washington

Phishing Examples

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How secure do you need to be?

- Be Prudent not Paranoid
- Did you initiate the action?
- Why is this free?
- Is the source trustworthy?
- When in doubt search for it!

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- White Hat   Hackers
  - Very tech savvy and use powers for good
  - Security consulting, penetration testing, security audits, etc…
  - Goal is to help
- Grey Hat
  - Very tech savvy and use powers for good - sort of
  - Goal is often to help, but by doing mischievous things in the process
- Black Hat
  - Very tech savvy
  - The bad guy!
  - Goal is to "own you"

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Cracking (Bad Hacking)

- Black Hats doing bad things
  - Defacing web sites
  - Stealing private information
  - Stealing money
  - Blackmail
  - Etc…

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Cracking - What are their secrets?

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- Social Engineering
  * Manipulating people to have them give you access
  * "Hello I am calling from tech support about the problem you submitted. Let me get your password and I will help you right away…"
- Buffer Overflow
  * Finding problems in programming code
  * Writing outside of memory location (Example - writing past the end of an array into a variable called: myPassword and saving your own password)
- Cross Site Scripting
  * One site or program is used to edit another site
  * See my example: https://faculty.washington.edu/samspade/secure/ (works in IE and Safari)

Denial of Service Attack

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- Also known as a DoS attack
  * attack on a computer system or network that causes a loss of service to users
- Consuming the bandwidth of the victim network or overloading the computational resources of the victim system.
- Sort of like someone constantly calling you over and over again. You wouldn't be able to use your phone.
- If they don't affect you directly
  * May slow down your network service...
- If they do affect you directly
  * May block your network service...

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Questions

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- If I wanted to update a group of co-workers about a project and solicit their feedback, would I want to use a synchronous or asynchronous system?
- What communication system would work well and why?

Questions

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- If I were in marketing, and wanted to "put my finger on the pulse" of a particular group of people: say candy lovers, what social technologies could I use to find out what they are thinking?

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