

3.3 Network Applications

Methods & Tools for Creating a Network Application

- Client-sever scripting:
 - Client-side scripting:
 - ◆ Client makes a request for specific script
 - ◆ Scripts are transferred from server to client's machine
 - ◆ Client machine runs and interprets script and displays the content
 - ◆ E.g. websites (HTML)
 - Server-side scripting:
 - ◆ Client makes a request for specific script
 - ◆ Scripts are ran on the server
 - ◆ Results/contents are returned to the client's machine
 - ◆ E.g. interactive websites that require live server processing
- Handheld devices:
 - Portable devices used to help in development of applications
- Technology standards:
 - Ensure hardware and software produced by different vendors can work together
 - Easier to develop hardware and software:
 - ◆ Can be developed in layers in a top-down design
 - Promote competition and hold down prices

Security of Network Application

- Password:
 - Use strong passwords
 - Change password regularly
- 2 Factor Authentication

Network Security for Network Applications

- Firewall:
 - Lowers risk of hacking
 - Protects client and server-side data
- Update system regularly:
 - Lowers risk of hacking
 - Regular patches for possible exploits and hacks

- White hacking:
 - Ethical hacking
 - Hiring hackers on contract to attempt to discover exploits and vulnerabilities in system
 - Used to gain knowledge of and subsequently patch exploits to prevent future hacking

Ethics & Social Issues of Network Applications

- Copyrights:
 - Downloading of copyrighted data e.g. through torrents
 - E.g. Napster, PirateBay
- Hacking:
 - Leak of personal data
 - NUH hack
 - Meltdown & Spectre attacks