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 processign
- 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