RET Site: Cyber Security Initiative for Nevada Teachers (CSINT)

A partnership between UNR and Nevada High and Middle Schools

Information

Teacher: Fabian Avalos
School: Procter R. Hug High School
Classes taught:
- Computer Literacy (Semester long course)
- IT Essentials I & II (Year long course)
- Computer Science I (Year long course)
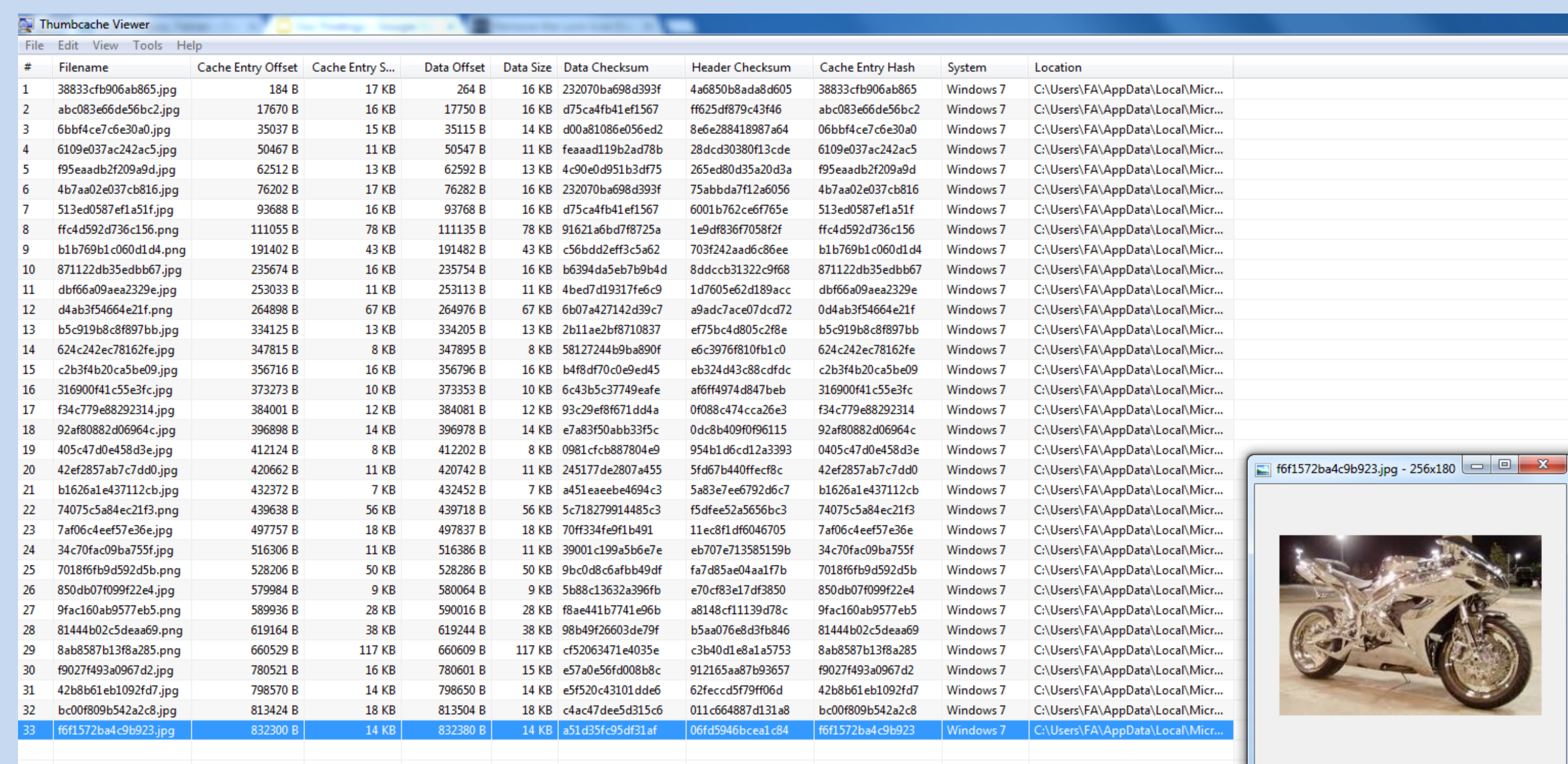- Principles of Business and Marketing (Year long course)

Adaptation

The modules will be incorporated in all classes:
*Computer Literacy: Geolocation activity; binary
*IT Essentials: Digital Forensics; Binary; Network Simulation; Virtual Machines
*Computer Science: Scratch and Binary.

Thumbcache Viewer

Big Picture Overview

**Digital Forensics:** Thumbnails, file carving, HDD Image, Write Blockers
Binary Numbers Activity: A fun circle activity to get the students comfortable with the binary number system.
Photo Geolocation Activity: Demonstrates how much information is stored in a picture.
Scratch: Use scratch to create fun presentations.
Network Simulation: Online simulation that allows students to setup computers, routers, and printers.
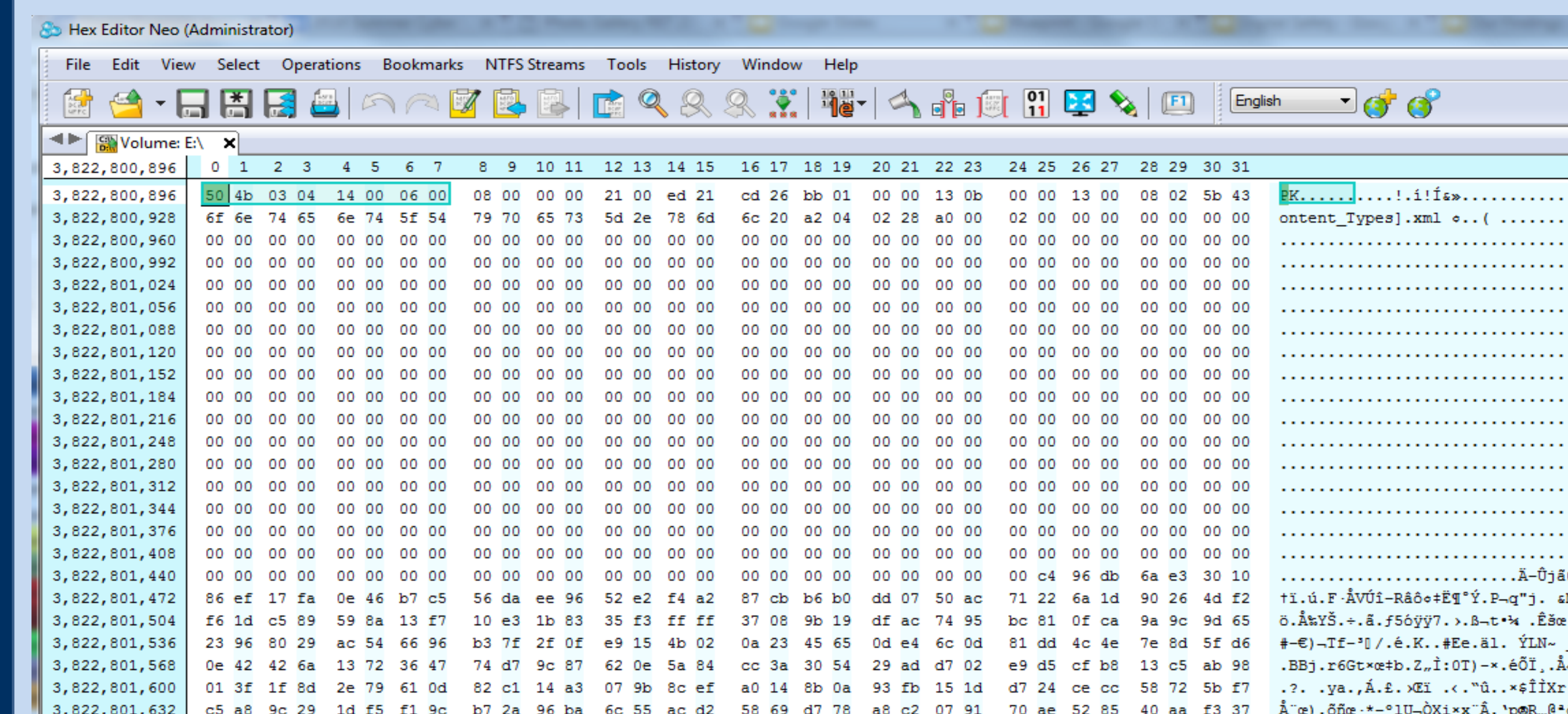**Virtual Machines:** Allows for a sandbox environment.
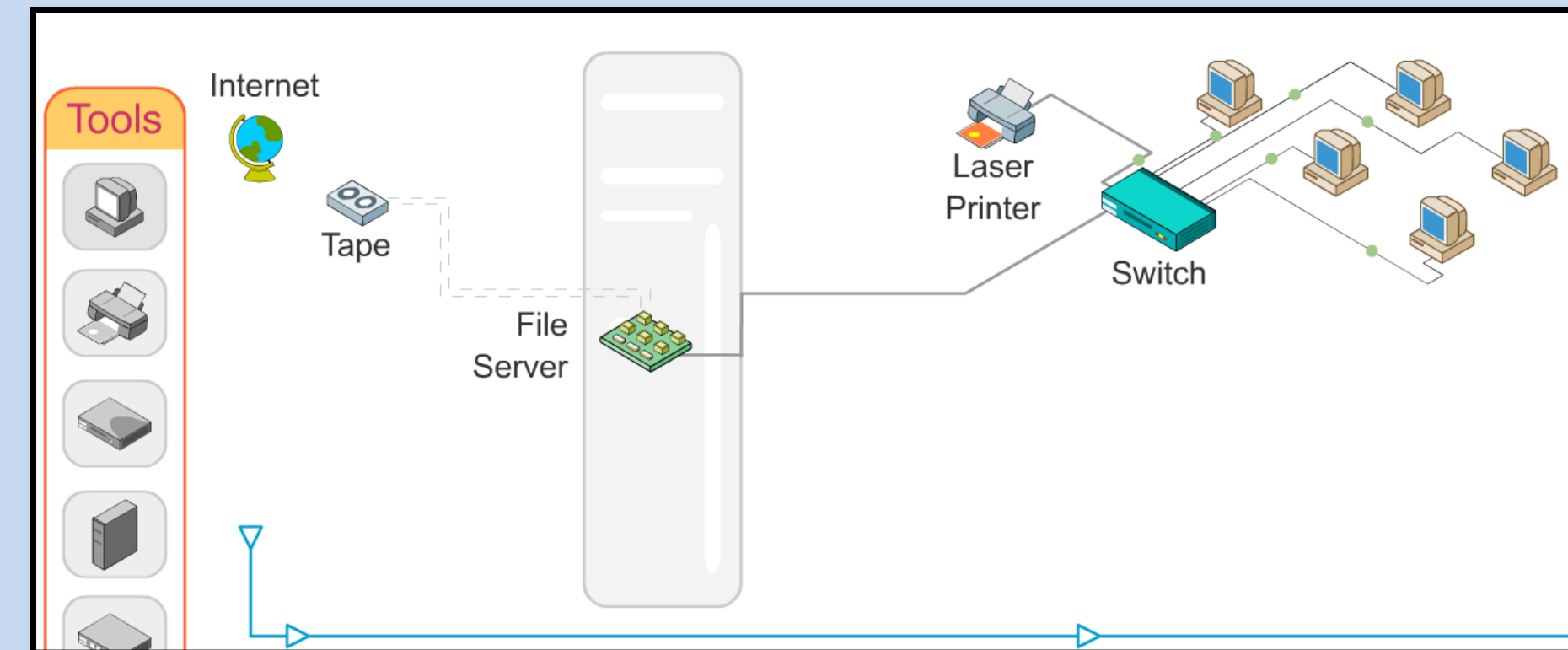
Technical Overview

The idea is to create stand-alone modules that can be implemented as needed. Everything needed packaged together as a zip file: PowerPoint presentation, software or links to download the software, and instructions on how to use the tools.

Hex Editor Neo

Assessment

Pre-Assessment: Will be given at the beginning of each module. This will be in multiple choice format using Schoology. 10-15 questions.
Post-Assessment: Will be given at the end of each module. The post assessment will be the same as the pre assessment.
Summative Assessment: The students will create a PSA poster or Info-graphic that showcases what they have learned.

PSA POSTER

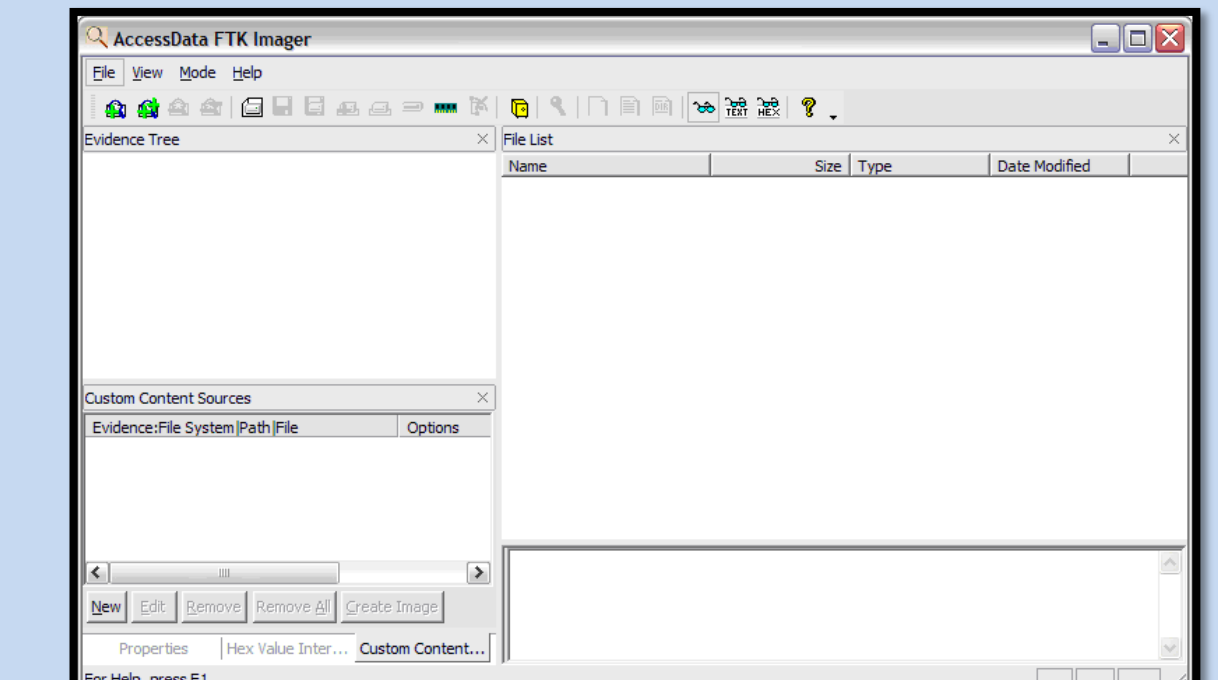## Tools Needed

ExifTool
FTK Imager
ORACLE VM VirtualBox
Hex Editor Neo
Scratch:
   https://scratch.mit.edu/
Network Simulation:
   http://www.teach-ict.com/gcse_new/networks/hardware/resources/NWB_SIM.swf

ExifTool