CSC351: DIGITAL FORENSICS
Final Project
Due Diligence, Dual Role, Steganography Project
Kutztown University, Computer Science and Information Technology Department

PROJECT INFORMATION

Purpose: This project helps learners understand how a suspect can hide data within another file, and how digital forensic professionals perform due diligence in uncovering and documenting the hidden data.

Grade/Points: This assignment is worth up to 25% of the course's grade. The percentages below are based on 100% of the 25%.

Due Date: Sunday, April 28th, 11: 30 p.m.

Instructions The following instructions were not meant to be comprehensive. Learners may need to perform additional steps depending on their operating system, method, and tools used. There is a 20% overall quality of your report. If you run into any issues, search on the Internet for possible explanations, discuss generally with your classmates, email me the questions, and/or reach out to me during office hours as soon as possible.

    A. Listen to the steganography lecture.
    B. Listen on how to use the report template to be used in Section D.
    C. Play the suspect's role (embedding): (20%)
        1. Take (originals) 10 pictures (selfie, scenery, etc.) and save them as Evidence x (x = 1 ... 10). Note: If you would like a challenge, instead of a digital picture, use another format (e.g., a video).
        2. Email me which file names have the incriminating evidence with the subject header "CSC351: Evidence".
        3. Choose content(s) to be placed within <u>two or more</u> pictures. Each file's content must be a unique type (a short text message, a one-page email message, this assignment, a C++ program, an .exe file to simulate a malware, a picture, a small one-file game, etc.) Reminder: There is a size limitation of the secret content versus the original picture. It may be necessary to change the original picture to a 1080p, 1440p, or 4K picture depending on the size of the secret content.
        4. Search for your choice of a steganography tool to embed the content. Note: Many steganography tools will do both embedding and extraction.
        5. Embed the contents into the pictures.
        6. Upload your pictures (including your hidden content files) onto my shared OneDrive under your folder name.
    D. Play the investigator's role (extraction and reporting): (60%)
        1. Carefully follow the instructions and fill out the Forensic Report Template.docx.
        2. Rename the template forensic report to Case No CSC351SP2024 - <first 5 characters of your last name>.pdf
        3. Submit the pdf onto D2L -> Assessments -> Assignment -> Final Project before the deadline.

GRADE: SCORING RUBRICS

Deliverable Criteria	Exemplary	Proficient	Below Average	Poor
Play the suspect's role (20%)	Completely followed Section C's instructions	Mostly followed Section C's instructions	Some-what followed Section C's instructions	Did not follow Section C's instructions
Play the investigator's role (60%)	Completely followed Section D's instructions	Mostly followed Section D's instructions	Some-what followed Section D's instructions	Did not follow Section D's instructions
Overall (20%)	Overall, the project was very good.	Overall, the project was good.	Overall, the project was passable.	Overall, the project needed serious help.