

# Challenge: Scavenger Hunt \*Mini\*<sup>1</sup>

## Objective

The goal of this challenge is to wade through the ridiculously threaded sequence of stuff that's been put together and to (hopefully) reach the end of the rabbit hole...the center of the onion...the light at the end of the tunnel...the undoubtedly satisfying conclusion! Hopefully, this challenge will help prepare you for what's coming during Cyber Storm.

It typically begins with a piece of paper...perhaps somewhat unfortunately. To successfully complete this challenge, you will need Internet connectivity (ha!), your know-how, the cooperation of your teammates, and many of the programs that you have written in this class.

Oh, and if you find the need to grab some files from an FTP server along the way, the following commands may prove useful: `passive, binary, prompt, mget *`.

When you think that you have successfully completed the challenge, **send the answer to the final question to The Sun team on Discord.**

**The deliverable for the challenge is a compressed folder submitted on Moodle. The folder must contain following:**

- (1) A document that provides a **thorough** summary of your team's completion of the challenge; include **all** relevant information such as TimeLock server details, account usernames and passwords that you discover along the way, working Steg settings (and on which filenames they worked on), Vigenere passphrases, and so on; include screenshots as appropriate; clearly specify the answer to the final **question**; note that **each** team member should contribute their own paragraph to this document that describes their role in the challenge;
- (2) The "go back to the beginning of this challenge" image that you decrypted successfully;
- (3) Any modified Python code (e.g., your Binary program, Vigenere program, TimeLock program, XOR program, Steg program, etc); and
- (4) Any other scripts or programs that you created to assist you (if applicable).

**You will be graded on how well:**

- (1) You decode the initial binary "document" (10%);
- (2) You implement the TimeLock algorithm to access the FTP server & obtain the initial images (20%);
- (3) You determine the appropriate image and the Steg details to obtain a useful clue (15%);
- (4) You decrypt the useful clue (above) (10%);
- (5) You decrypt and discern documents subsequently obtained from the FTP server (15%);
- (6) You obtain and address the "conclusion" (10%);
- (7) Your document **thoroughly** details your team's path to complete the challenge, how well **each** of the members of your team documents their **role** in the challenge, and how accurately you specify the answer to the final question (20%).

GOOD LUCK!

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<sup>1</sup>Note that this is a \*small\* version of a similar challenge that you will likely encounter during Cyber Storm!