Practical Cyber Security Fundamentals Assignment Creation Template

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* Introduction

**Title:** Jordan Loves Orange Juice

**Category:** Forensics

**Themes:** Forensics toolkits, encodings, context clues

**Difficulty:** Intended difficulty of this problem is a low-medium level difficulty.

**Objectives:** Areas in which students will improve upon by completing this challenge:

* Ability to use common forensic toolkits
* Ability to use context clues provided to determine what direction to work towards in finding the flag
* Overview

2.1 Explanation

* Using your knowledge of forensics, analyze this picture of Jordan to find the file and properly decode the flag. Good luck.

2.2 Prerequisite Knowledge

* Knowledge of common forensics tools
* Knowledge of common (and uncommon) encodings

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* Details

3.1 Implementation

Provided is a beautiful picture of Jordan in his glory days. Using Openstego, a file was hidden within the picture. Inside this file is a large amount of text, which is the result of encoding the flag three times using a Citrix CTX1 encoding. Once decoded, though, one will notice that the resulting string is not in English. A picture of a hand, with an Italian caption, is provided to clue individuals into the fact that the flag needs to be translated from Italian to English. Lastly though, the final word of the flag is in Hebrew. Given that the title includes Jordan’s name, individuals should be able to make this connection. Once the final translation is done, the individual will be left with the flag.

3.2 Methodology

Primary steps to solving this challenge:

Step 1: Open the provided image in Openstego.

Step 2: Retrieve the hidden .txt file from within the image.

Step 3: Used the provided clues to determine which encoding is used on the flag.

Step 4: Decode the flag using the Citrix CTX1 decoder 3 times.

Step 5: Translate the resulting flag from Italian to English.

Step 6: Translate the final word of the flag from Hebrew to English.

Step 7: All done.

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| 4 | Suggested Rubric |  |
| An example rubric is provided below: | |  |
|  |  |  |
|  | Quality of write-up | 5 pts |
|  |  |  |
|  | Clarification of the task to be completed | 5 pts |
|  |  |  |
|  | Successful retrieval of file from image | 5 pts |
|  |  |  |
|  | Successful decoding of file | 5 pts |
|  |  |  |
|  | Successful translation of flag | 5 pts |
|  |  |  |
|  | Successfully identifying the flag | 5 pts |
|  |  |  |

* Notes

Ways in which this problem could be improved, grading lenience, additional information

References

Appendices

* Name of source code le B Second appendix item

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