Assignment 3

Start Assignment

Due Nov 13 by 11:59pm **Points** 100 **Submitting** a text entry box or a file upload
Available Oct 23 at 12am - Nov 13 at 11:59pm

The Caesar Cipher is a type of substitution cipher in which each letter of the plaintext is shifted a specific number of positions down the alphabet. To illustrate, a shift of 1 would transform 'A' into 'B', 'B' into 'C', and so forth. We've touched upon this topic during our class sessions.

Objective: The aim of this assignment is to delve deeper into various cybersecurity concepts and practices. Below is a brief overview of its mechanism. Please create an implementation of the Caesar Cipher using your preferred programming language.

Encryption:

1. Decide on a shift value (key) `k`.
2. For each character `c` in the plaintext `P`:
   - If `c` is an alphabetical character:
     - Shift `c` by `k` positions in the alphabet to get encrypted character `e`.
3. Return the encrypted text.

Decryption:

1. Use the same shift value (key) `k`.
2. For each character `e` in the ciphertext `C`:
   - If `e` is an alphabetical character:
     - Shift `e` by `-k` positions in the alphabet to get decrypted character `c`.
3. Return the decrypted text.

It is estimated to be finished in 4 hours.

Evaluation Criteria: 100 points

- **Practical Implementation**: 60 points

- Functionality of the tool: 30 points
- User manual clarity: 30 points

- **Case Study Evaluation**: 40 points
  - Quality of analysis: 20 points
  - Relevance and accuracy: 20 point