Homework 1

P-1.4 a,b,c (10pts)

For each of the following assets, assign a low, moderate, or high impact level for the loss of confidentiality, availability, and integrity, respectively. Justify your answers.

- A student maintaining a blog to post public information.

- An examination section of a university that is managing sensitive information about exam papers.

- An information system in a pathological laboratory maintaining the patient data.

Ceasar Cipher (10pts)

Write a function that will take an plaintext string and offset value and return a cipher text

```
def ceasar(plaintext, offset):
    # Your code here
    #
    return plaintext

print(ceasar("Hello world", 3) == "KHOORZRUOG")
print(ceasar("Test again", 13) == "GRFGNTNVA")
```

Vigenere Cipher (10pts)

Write a function that will take an plaintext string and key string value and return a cipher text

```
def vigenere(plaintext, key):
    # Your code here
    #
    return plaintext

print(vigenere("Hello world", "C") == "KHOORZRUOG")
print(vigenere("We are discovered save yourself", "DECEPTIVE")
      == "ZICVTWQNGRZGVTWAVZHCQYGLMGJ")
```

Playfair Cipher (10pts)

Write a function that will take an plaintext string and key string value and return a cipher text

```
def playfair(plaintext, key):
    # Your code
    #
    return plaintext

print(vigenere("Hello world", "HELLO") == "ELFFEYETDM")
print(vigenere("We are shadows", "HIDE") == "YIIUDTIHENXR")
```