

main.py

```
The matrix is not square.

The matrix is invertible.

Plaintext: ATTACKATDAWN
Plaintext column vectors: [array([[ 0],
    [19]]), array([[19],
    [ 0]]), array([[ 2],
    [10]]), array([[ 0],
    [19]]), array([[3],
    [0]]), array([[22],
    [13]])]

Ciphertext: WBDBQCWBVHYV
Ciphertext column vectors: [array([[22],
    [ 1]]), array([[3],
    [1]]), array([[16],
    [ 2]]), array([[22],
    [ 1]]), array([[21],
    [ 7]]), array([[24],
    [21]])]

Plaintext: ATTACKATDAWN
Plaintext column vectors: [array([[ 0],
    [19]]), array([[19],
    [ 0]]), array([[ 2],
    [10]]), array([[ 0],
    [19]]), array([[3],
    [0]]), array([[22],
    [13]])]

The determinant = 0.
```