

Antall Nguyen
Stream Cipher (RC4 Implementation)
MATLAB code is attached to this project folder

My computer configuration:

Processor: AMD Ryzen 7 2700 Eight-Core Processor 3.65 GHz
Installed memory (RAM): 16.0 GB

RAM is running at 3000 MHz.

Output:

```
Enter message to encrypt: this homework
Enter number of encryption iterations: 1000
Original Plaintext: this homework
Encrypting
Run Time: 12.082 sec
Ciphertext: @Xy«EäM
Decrypting
Re-plaintext: this homework
```

It can be seen that the runtime for encrypting 1000 is a bit long and it depends on the length of the plain text. Running for 1 encryption iteration displays a time of 0.10769 secs

```
Enter message to encrypt: this homework
Enter number of encryption iterations: 1
Original Plaintext: this homework
Encrypting
Encryption: 0.10769 sec
Ciphertext: @Xy«EäM
Decrypting
Re-plaintext: this homework
```

The thing that is interesting to me, is that the ciphertext remains the same no matter how many encryption iterations are done. I am not sure if it is how I implemented the algorithm, or if this is supposed to happen.