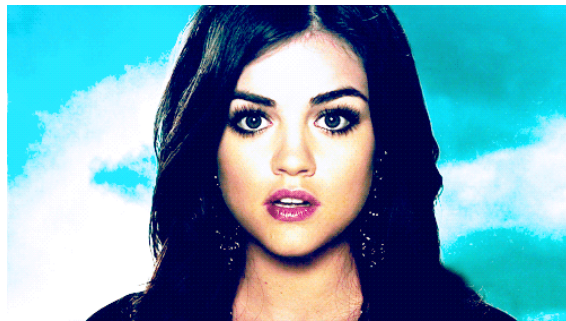
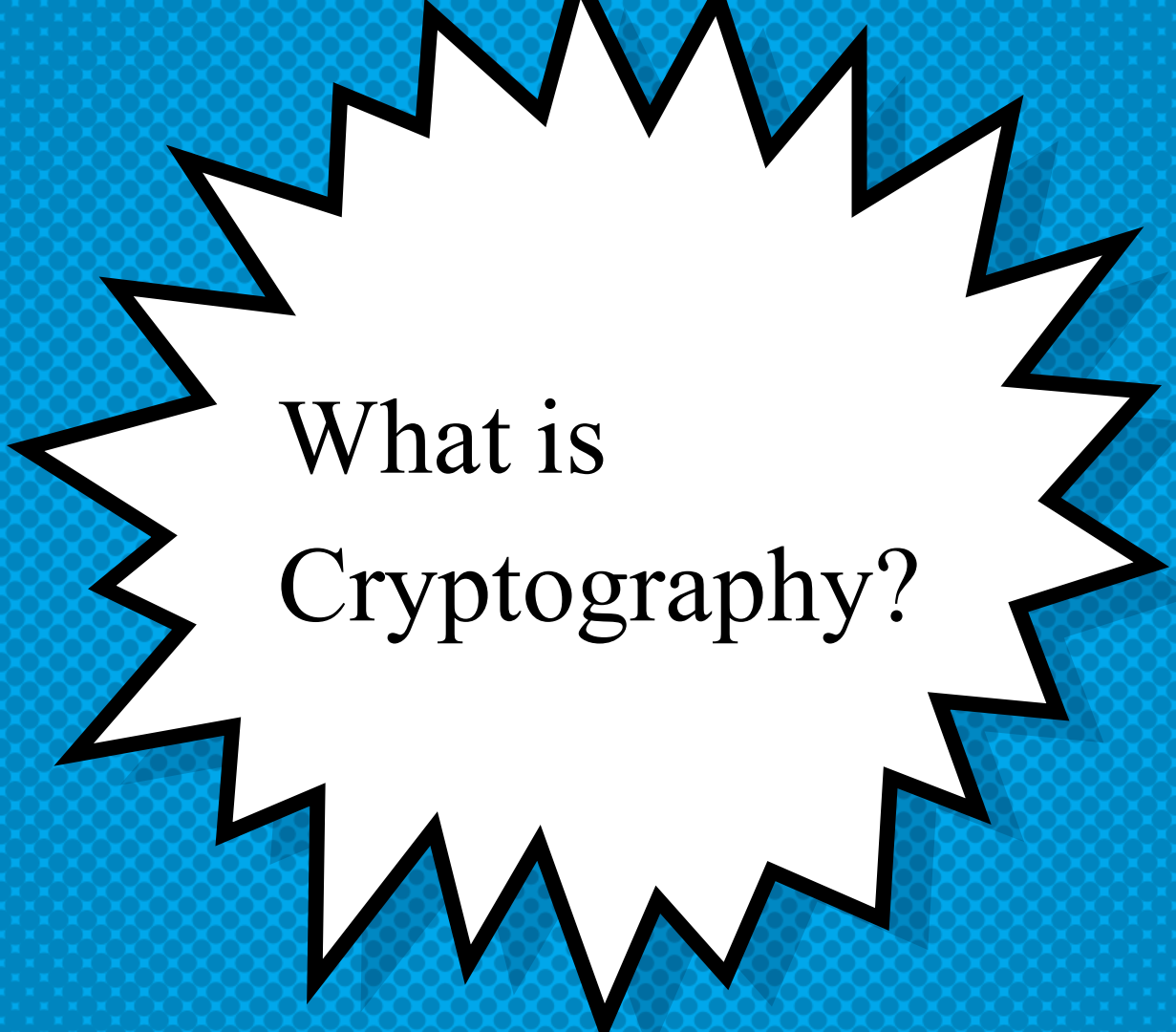


SHHHHHH!



(DON'T TELL ANYONE!)

qfmdhcufovm
=
cryptography



What is
Cryptography?



The word cryptography in Greek means "secret writing"



Cryptography is the process of hiding messages to protect sensitive information.





WHY SHOULD WE
CARE?



No offense, but I really don't care.

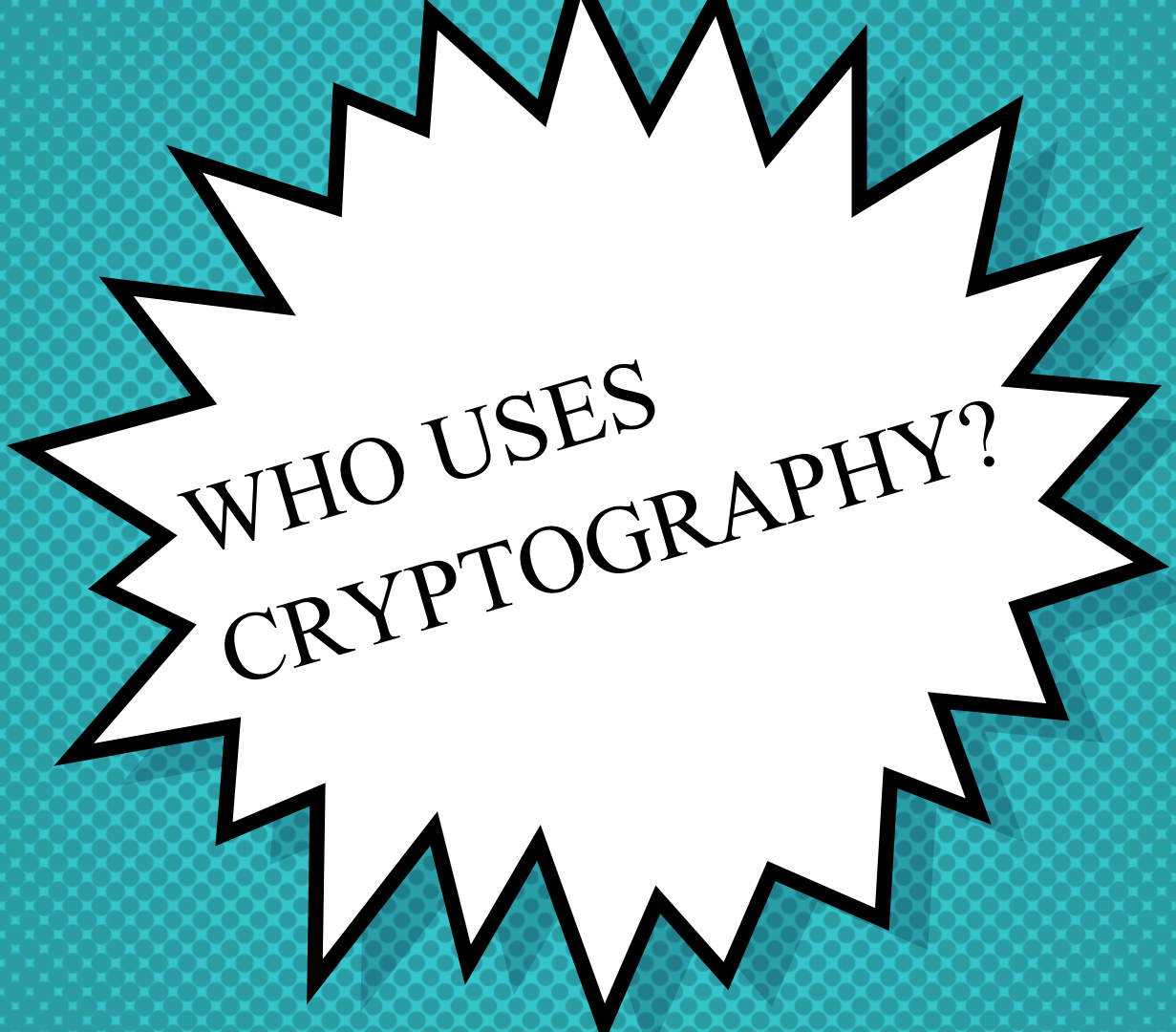


Every time you make a call, talk, send emails or text, the messages are encrypted so that only the person you mean to send it to can understand



Without encryption, communication and tasks involving money would become dangerous. Your information could easily be stolen





WHO USES
CRYPTOGRAPHY?

WELL

...



THIS GUY?





NO! Not
him

These People:

A lot of people use cryptography, including the government.



The Navy uses cryptography for communications, analysis, security, monitoring, tracking and other military purposes

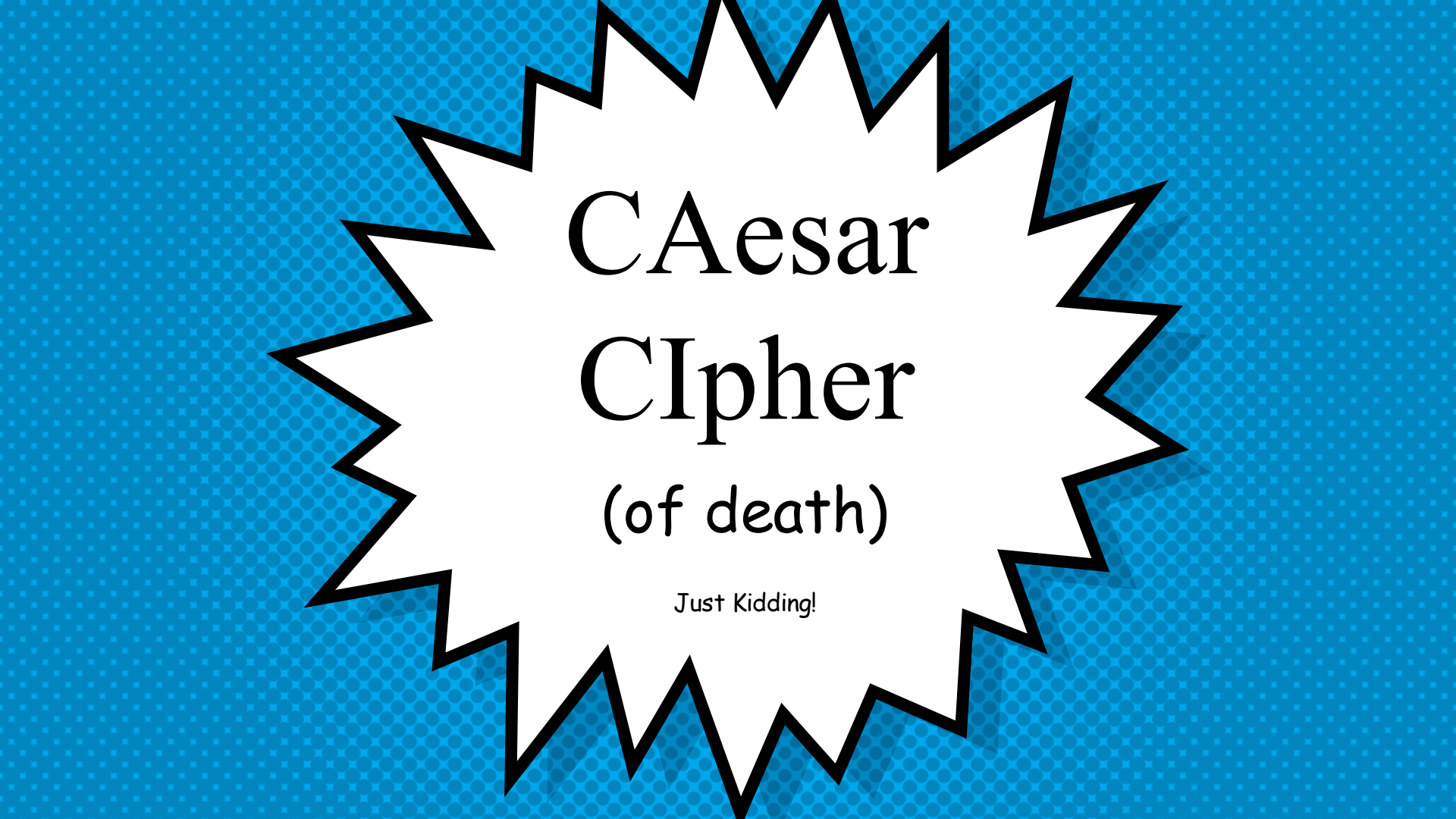


Private business enterprises use cryptography to protect information and themselves from cyber attacks and hackers from competing businesses



Cryptologists in the government help fight against terrorists. Investigations also take place of sensitive information. This also helps the NSA provide information to higher leaders





CAesar CIpher (of death)

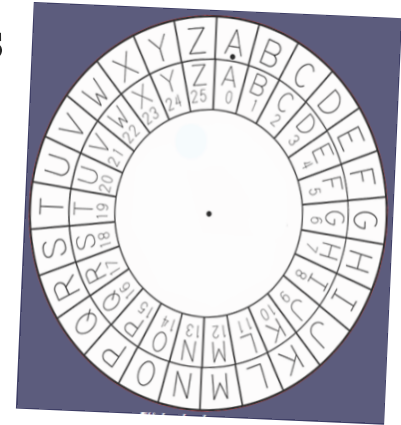
Just Kidding!

Caesar Cipher

⚙️ The Caesar Cipher is one of the simplest and most widely known encryption techniques

⚙️ Roman ruler Julius Caesar used a very simple cipher for secret communication

⚙️ Inside wheel is the encrypted message, outside wheel is the actual message





Types of Cryptography



Secret Key Cryptography

☐ In cryptography, a private or secret key is an encryption/decryption key known only to the party or parties that exchange secret messages.

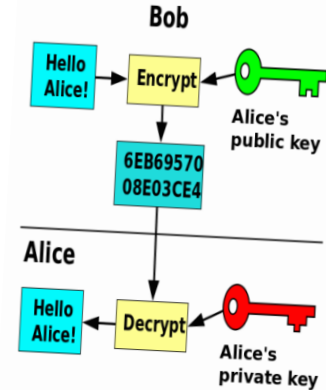
☐ In secret key cryptography, a key would be shared by the communicators so that each could encrypt and decrypt messages.



Public Key Cryptography

Any person can encrypt a message using the public key of the receiver, but such a message can be decrypted only with the receiver's private key.

For this to work it must be computationally easy for a user to generate a public and private key-pair to be used for encryption and decryption.



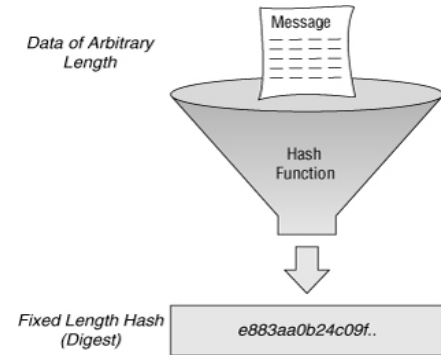
Hash Functions

A hash function is an algorithm that turns a message into a secret code. The secret code is called a hash.

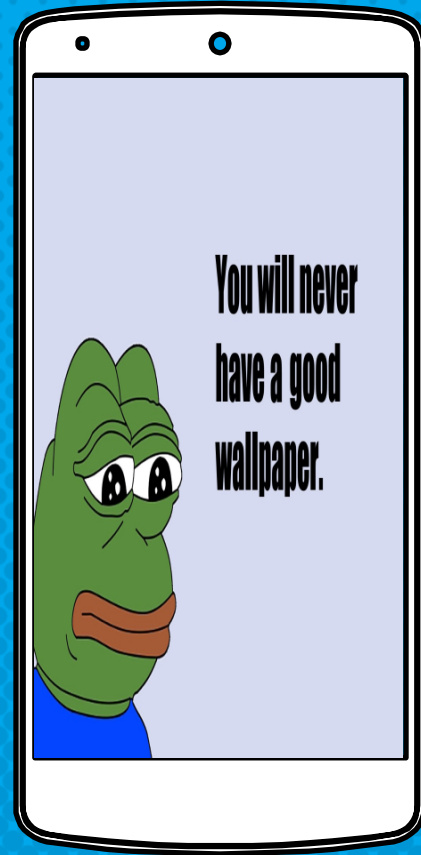
Some properties:

- Once the hash is converted, it cannot be transformed
- Two messages will never have the same hash
- It is impossible to change the message without changing the hash

Hash functions are used for online credit cards and other things where the information is never used again. The website cannot access the information after the hash has been converted, neither can other people/hackers



Activity time!

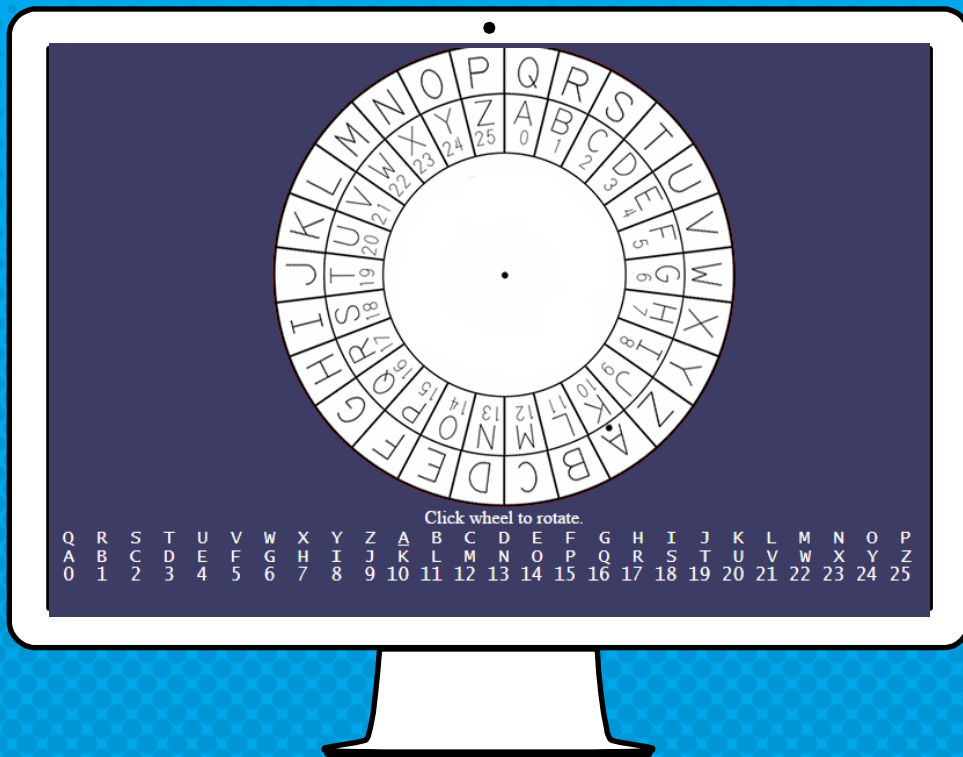


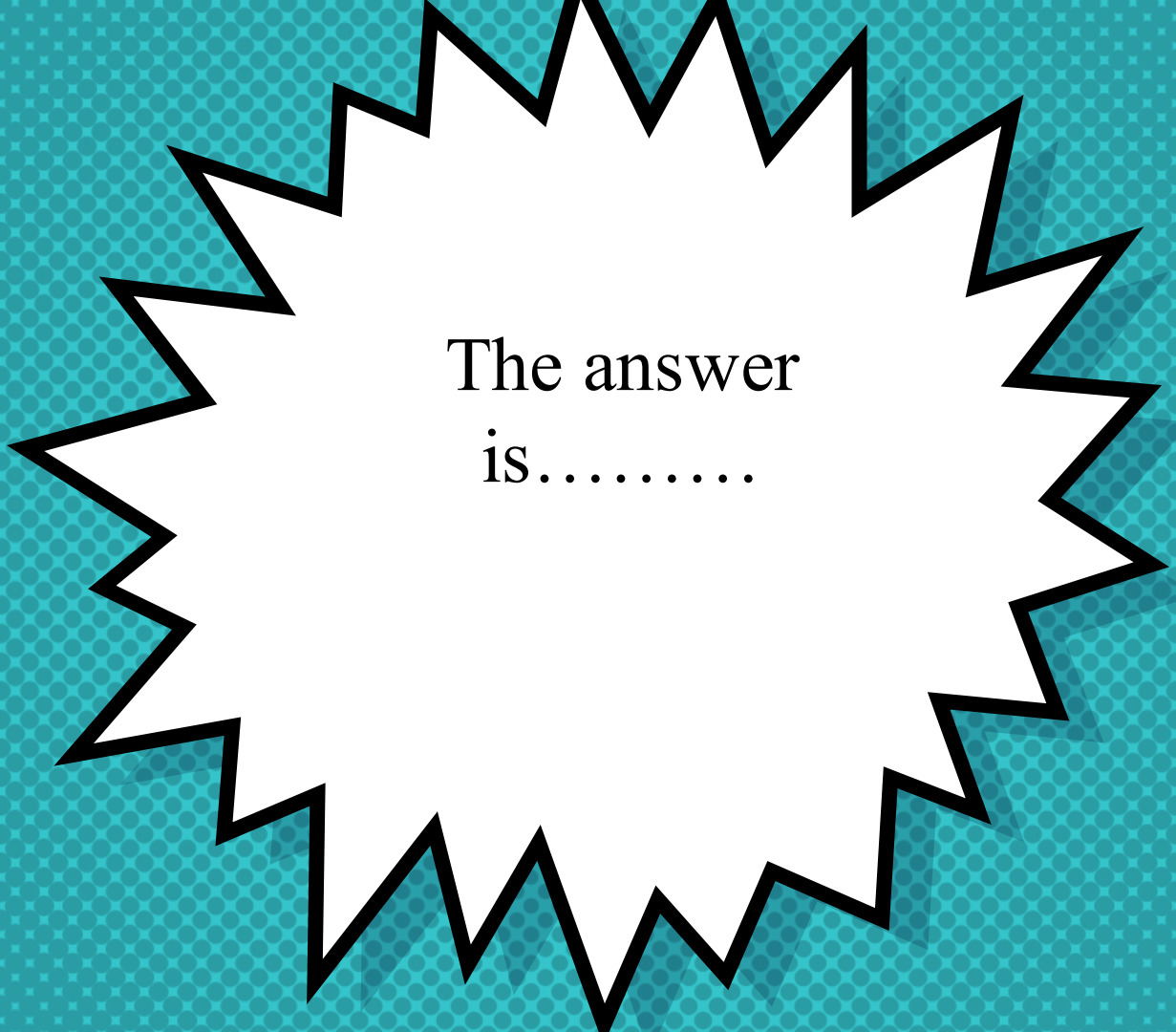
Let's decrypt a message
using a
Caesar Cipher Wheel.

□ = 10

The message:

Kbdowsc
sc vsd!





The answer
is.....



Artemis is lit!

literally.....

.....



Story Time



Citations (If you would like to access cool stuff)

-<http://www.xarg.org/tools/caesar-cipher/>

-<http://inventwithpython.com/cipherwheel/>



Thanks for staying awake

