

## Walkthrough

1. First run the actual code itself and see what the output is:

```
C:\>python3 main.py
Hey! I can help you encrypt thing! What do you want encrypted: hello world
Here you go: .....
Oh and can you figure out what this is for me: .....
Hint: .....
Do you know what the flag is:
```

2. The first thing to look at is the fact that the “Hint” is the key translated into morse code. And translating it out of morse code gives you :

- Here you go: H7N7LUXWRBDFDEHDOLDXQECYLI=====
- Unknown: 63GIL7IB5EPICN5OMIXURYZWGV2ED7VGAMPPS62UACGE4AWUQJIQ=====
- Hint: NNSXS23FPFVWK6LLMV4WWZLZNM=====

3. Then looking at the code itself, you can see that all of these have been translated into base32 of all things because it only has letters A-V and 0-9 which morse code can translate.

4. Translating from Base32 gets you:

- Here you go: keykeykeykeykeyk
- Unknown: XINBBTTZ3MSJI3UFCBICOC65467WUQDYD5XU3WXLK3M6NBPYORQ
- Hint: NNSXS23FPFVWK6LLMV4WWZLZNM

5. Turned into hex is:

- a. Here you go: \x3f\xdb\x5f\xd2\x6f\x88\x46\x51\x90\xe3\x72\xc7\x78\x10\x58\x5a
- b. Unknown:  
\xf6\xcc\x85\xfd\x01\xe9\x1e\x81\x37\xae\x62\x2f\x48\xe3\x36\x35\x74\x41\xfe\xa6\  
x03\x1e\x9f\x7b\x54\x00\x8c\x4e\x02\xd4\x82\x51
- c. Hint: \x6b\x65\x79\x6b\x65\x79\x6b\x65\x79\x6b\x65\x79\x6b\x65\x79\x6b

- ### 6. Using python to decode the hex using AES:

```
key = b"\x6b\x65\x79\x6b\x65\x79\x6b\x65\x79\x6b\x65\x79\x6b\x65\x79\x6b"
input = b"\x3f\xdb\xf5\xd2\xf6\x88\x46\x51\x90\xe3\x72\xc7\x78\x10\x58\x5a"
flag = b"\xf6\xcc\x85\xfd\x01\xe9\x1e\x81\x37\xae\x62\x2f\x48\xe3\x36\x35\x74\x41\xfe\xa6\x03\x1e\xf9\x74"
cipher = AES.new(key, AES.MODE_CBC)

ciphertext = cipher.decrypt(input)
cipherflag = cipher.decrypt(flag)

print(ciphertext)
print(cipherflag)
```

7. I get the flag!!!!!!!: b'rhit{this is the flag}\n\n\n\n\n\n\n\n\n\n\n'