Plan

1. Discuss terms of reference with a customer. Decide on a UI, features (whether or not the customer needs additions to enhance the machine; such as a plugboard and/or a reflector), general functionality.
2. Discuss what has to be achieved and how it is going to be achieved with the available resources.
3. Research how to develop the application. Allow some time to study the matter.
4. Produce a descriptive plan on how to build the app.
5. Gather available resources (online tutorials, reference books, Python documentation, IDE).
6. Start the development of the application.
7. Test it.
8. Fix bugs.
9. Test again.
10. Present the finished application to the customer and receive feedback.
11. Redesign the application to meet the customer's requirements.

Contains data for the rotors. Here we have 3 rotors.

GUI Python   Future user interface

rotorData

- rotor1: Array
- rotor2: Array
- rotor3: Array

+ applySettings()
+ reset()

Enigma_Cipher

+ encryptor: encryptMessage
+ decryptor: decryptMessage
- plugboard: Plugboard
- rotorData: Rotors

+ encryptMessage(): String
+ decryptMessage(): String
+ configRotors()
+ configPlugboard()

Plugboard swaps pairs of letters and contributes to the strength of the encryption.

Plugboard

- plugboardMapping()

+ swapLetters()
+ initializePlugboard()

Applies transfomrations on each rotor

Rotors

+ shiftRotors(): char

Contais text data

Encryptor

- text_to_encrypt: String

+ encryptText(): String
+ encryptOutput(): String

Contais text data

Decryptor

- text_to_decrypt: String

+ decryptText(): String
+ decryptOutput(): String