## Installing the Python Encryption Files from GitHub

## William M. Marcy, PhD, PE Las Cruces, NM Updated 10-23-2023.

- 1. Download Python 3.12 or later from <u>Python.org</u> for the operating system for your computer. (Windows, Mac, or Linux)
- 2. Create a host directory on your computer to receive the zip files downloaded from GitHub.
  - a. The source-settings.zip contains the Python source files and settings files used in the examples. Use WinZip to unzip these files into the host directory you have created.
  - b. Unzip the deciphered zip file into the host directory. This will create a directory named Deciphered which will receive deciphered files..
  - c. Unzip the OTP-files.zip in the host directory. This will create a directory named OTP-files with the OTP files used in the examples.
  - d. Unzip the Plain Text.zip file into the host directory. This will create a directory named Plain Text with the plain text files used in the examples.
  - e. Unzip the Documentation.zip file into the host directory. This will create a directory named Documentations PDF DOCX will all of the documentation for the one time pad software plus background and information on setting up GPG software for several popular e-mail clients such as Outlook, eM Client, and Thunderbird.
  - f. Unzip the Enciphered.zip file into the Host director. This will create a directory named Enciphered which will hold the enciphered files.
- 3. The settings files in the host directory will reflect the drive, directory name and location used on my computer. The directory path in *settings.txt* will need to be edited to match the drive, directory name and location on your computer before using them to run these examples. The other setting files use in examples will also need to be edited.
- 4. There is an aid to editing the settings files to help accomplish this. Load OTP-Encipher-decipher.py and use Command 10 to load the settings file settings.txt. You will see the directory paths from my computer. Now use Command 9 to save the settings.txt file. The path to the drive and directory where you have installed the OTP software will be noted at the bottom of these files as an aid in editing them. You can exit this program for now.
- 5. After you have used Command 10 to load a settings file and then re-saved it using Command 9 you can use a text editor (such as <u>Notepad</u>) to edit the re-saved files. At the end of the settings file being edited, you will see a **path string for the drive and**

<u>directory name</u> being used on your computer. Use your text editor's search and replace function to replace of the part of the text strings reflecting the directory name and location on my computer with the one at the bottom of the settings file reflecting to the name and location of the directory on your computer. You only need to do this once if you are using my example settings files. If you create new settings files of your own, they will automatically reflect the drive, directory, and name on your computer.

- 6. It is very useful to know how to do this if you decide to move your one time pad file directory to a new location such as a SDC card, USB drive or another computer. All you need to do is load, edit and save your settings files and using this method.
- 7. All of the example settings files work correctly after these onetime edits.
- 8. If you click on one of the Python files in this application, it will run in a command window. It is much more useful to use *Python IDLE* and then load one of the programs and run it from Python IDLE. This will allow you to see the programming and modify the code for your own use.
- 9. It is preferable to set the options for Python IDLE, so it opens in the **editor mode**. This will let you see how the programs are implemented.
- 10. You can learn a lot about Python programming from these programs.
- 11. This is Open Source Software Public Domain software. Having the source programs does not compromise the integrity of the files encrypted at all.
- 12. Keep your OTP's and cipher codes secret. An external micro SDC or Thumb drive is a very good solution.
- 13. If you are in a threatening environment, use Command 11 to reset all parameters to 'none' before saving a settings file. If you delete a settings file, remember that it will end up in your trash basket. Be sure to empty your trash.