

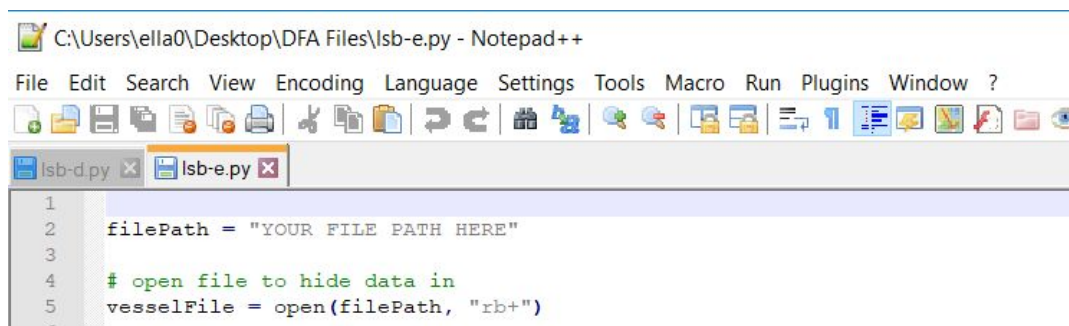
Steganography Lab 2

Setup

- To begin, make sure you have lsb-e.py and lsb-d.py downloaded from <https://github.com/reelru/StegoDFA>.
- Make sure python 3 is installed.


Encoding

First, open the actual script (lsb-e.py) in notepad++ or a different IDE or text editor.



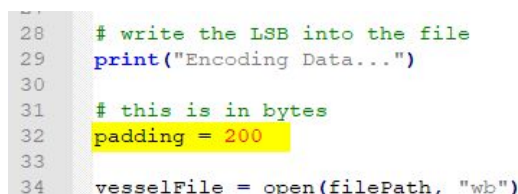
```
C:\Users\ella0\Desktop\DFA Files\lsb-e.py - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
lsb-d.py x lsb-e.py x
1
2 filePath = "YOUR FILE PATH HERE"
3
4 # open file to hide data in
5 vesselFile = open(filePath, "rb+")
```

Next, change the file path to the name of the file you want to encode. Make sure to put double slashes to escape the string properly, or just put the file name if it's in the same directory.



```
filePath = "C:\\Users\\ella0\\Desktop\\wallpaper.png"
# open file to hide data in
```

If it's an image or other file with a header, you can change the "padding" value to avoid the header hex values, which can actually mess up the file a lot.



```
28 # write the LSB into the file
29 print("Encoding Data...")
30
31 # this is in bytes
32 padding = 200
33
34 vesselFile = open(filePath, "wb")
```

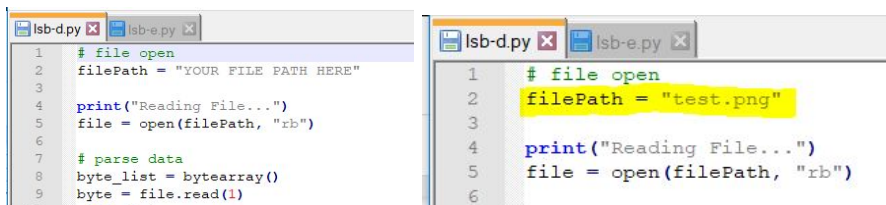
Don't forget to save the file, and then open powershell or the command prompt.

```
PS C:\Users\ella0> cd '..\Desktop\DFA Files\'
PS C:\Users\ella0\Desktop\DFA Files> py .\lsb-e.py
Reading Vessel File...
Translating message...
Encoding Data...
PS C:\Users\ella0\Desktop\DFA Files>
```

Navigate to the directory where the script is stored, and then run it. Simple! The message is now encoded.

Decoding

Like before, open the lsb-d.py script to edit it a little.



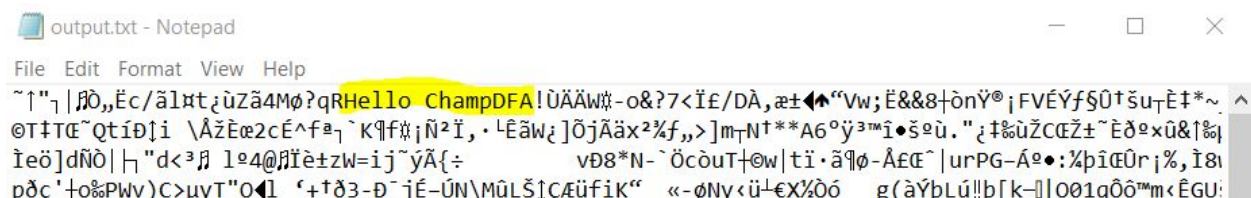
```
lsb-d.py
1 # file open
2 filePath = "YOUR FILE PATH HERE"
3
4 print("Reading File...")
5 file = open(filePath, "rb")
6
7 # parse data
8 byte_list = bytearray()
9 byte = file.read(1)

lsb-d.py
1 # file open
2 filePath = "test.png"
3
4 print("Reading File...")
5 file = open(filePath, "rb")
6
```

Then run the command to run the script

```
Windows PowerShell
PS C:\Users\ella0> cd '..\Desktop\DFA Files\'
PS C:\Users\ella0\Desktop\DFA Files> py lsb-d.py
Reading File...
Saving Data...
PS C:\Users\ella0\Desktop\DFA Files>
```

This will save the output to a file in the same directory as the script called "output.txt"



```
output.txt - Notepad
File Edit Format View Help
~!^|ß0,,Ëc/älxt;ùZä4Mø?qRHello ChampDFA!ÜÄÄW$-o&?7<Ï£/DÄ,æ±◀“Vw;Ë&&8+ðnY®;FVÉÝf$Û†šutÊ†*~
@T†T€~Qtíð†i \ÄžËæ2cÉ^fæ;`K¶f;ñ²Ï,·-Ëäw;]ÖjÄäx²%f,,>]m_TN†**A6°ÿ³™i•$ëù."¿†%ùžCæž±~Èð°xû&†%|
Ïeö]dÑ0||_h"d<³ß 1e4@ßÏè±zW=ij~ÿÄ{÷ vð8*N-`Öcòut+@w|tì·ä¶ø-Å££^|urPG-Å°•:%þîæÛr|%,Ï8i
pðc'+o%PWv)C>uyT"O¶l '+†ð3-ð-¡É-ÚN\MÛL$†CÆüfik“ «-øNv<ü-£X%ðó g(àÿbLÚ!!b[k-||O01qðð™m<ÊGU:
```