Cyber Security

Lab-6

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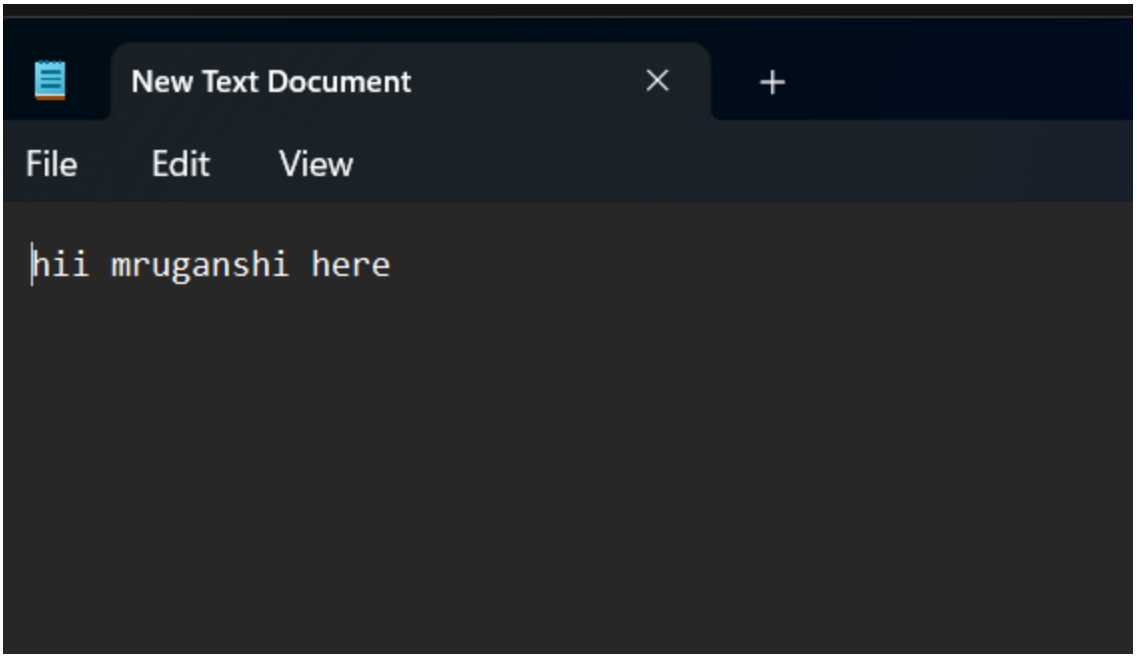
1. **Encrypt the .txt file into the .png file (You can download any image from google)**
   and save it inside a folder. Password protect your file with a password of your choice.Confirm the functionality of the Steganography.

   a. First hide the data inside an image using OpenStago
   b. Second, extract the data from the encrypted image using OpenStago.
   Check if you are getting the same .txt file or not ?

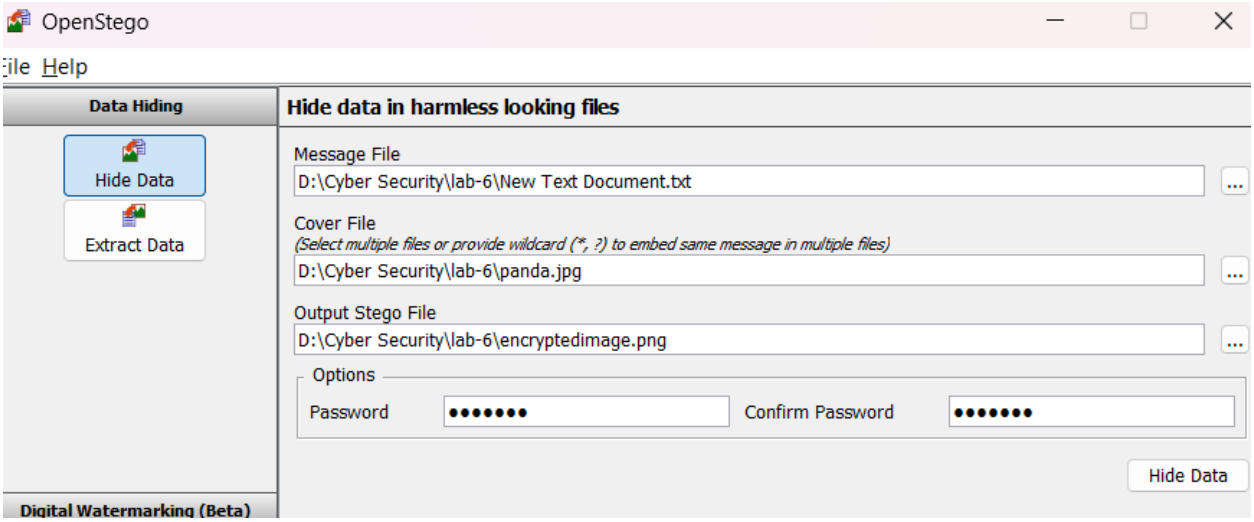
   (answer of all combine first three question)

this is my .txt file



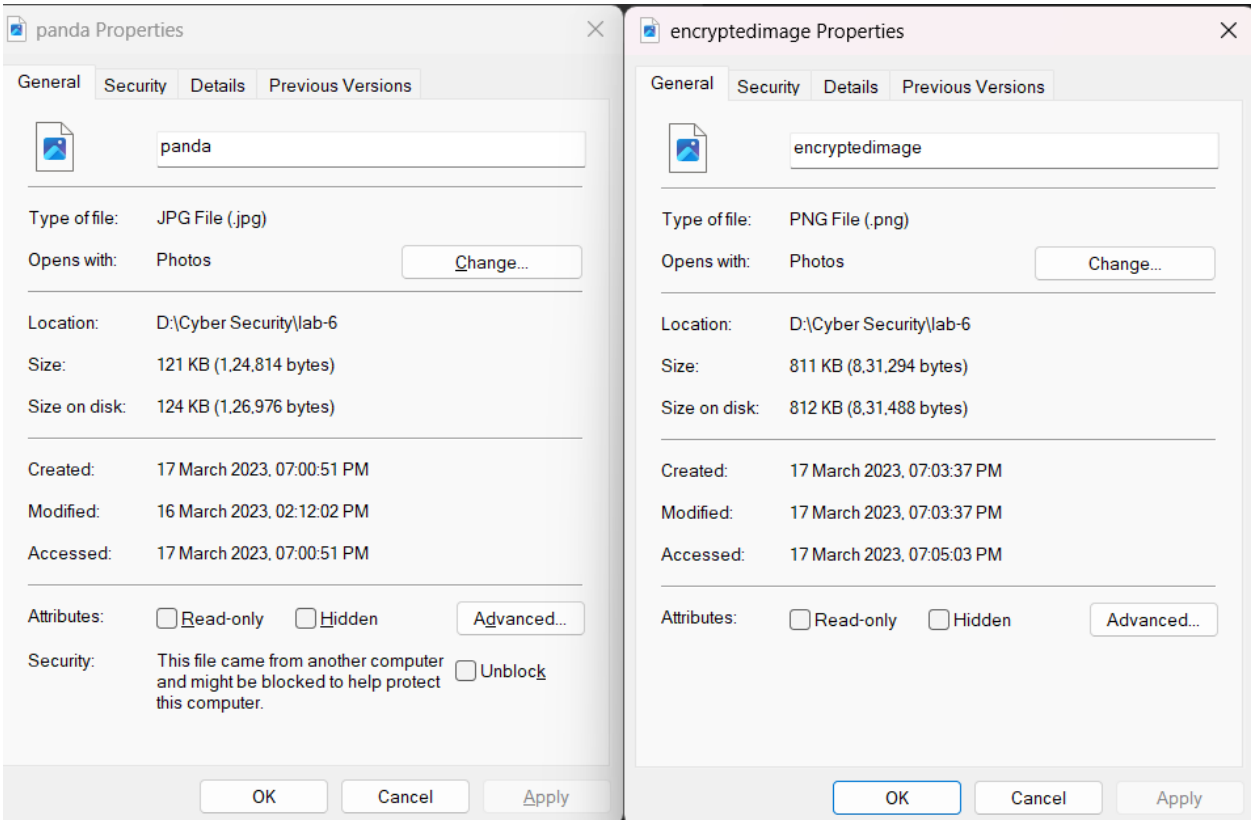
this is my image file in which this “.txt’s” content will be encrypted.

Now in opestego in place of the message file .txt file will go and in place of coverfile image file will go and we will set a password for the protection of my file.

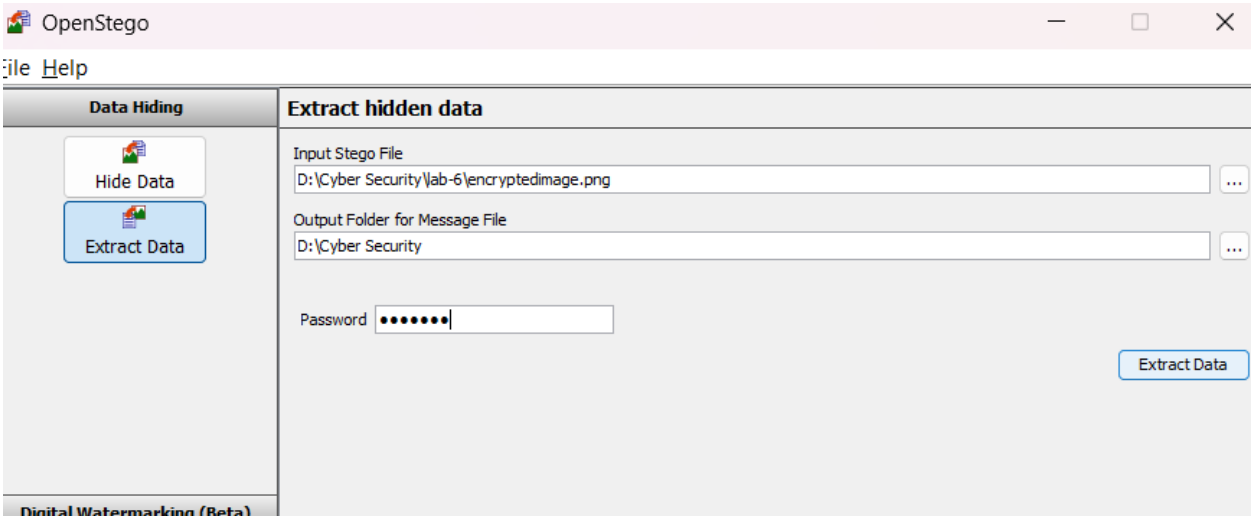


below is my encrypted image

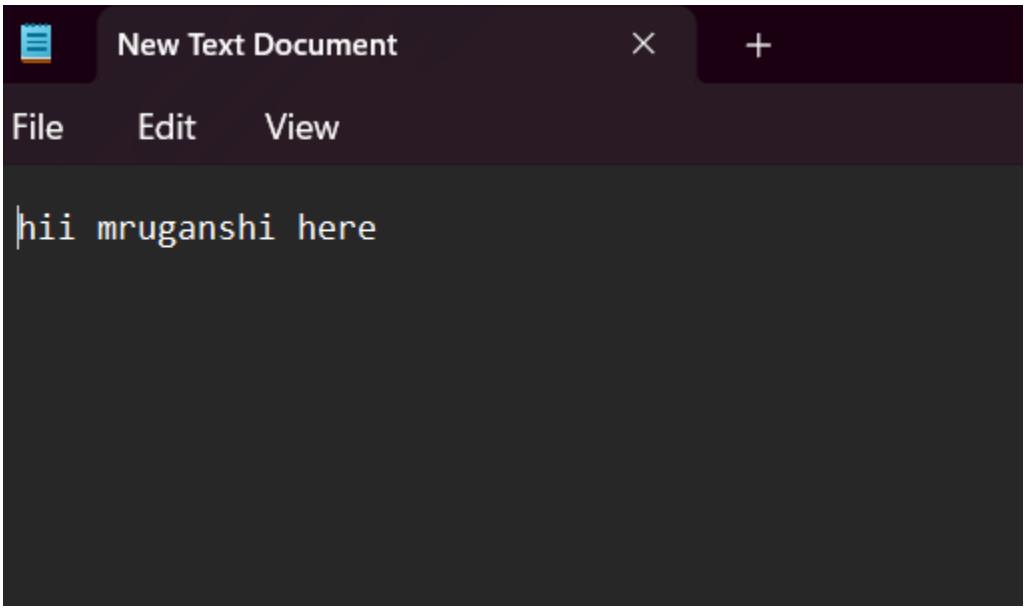
however we can confirm encrypted and original image identification by size of both images.



now to extract data from the encrypted image we will again use openstego in which in place of the input stego file we will put out the encrypted image and also give out the password that we used for encryption.

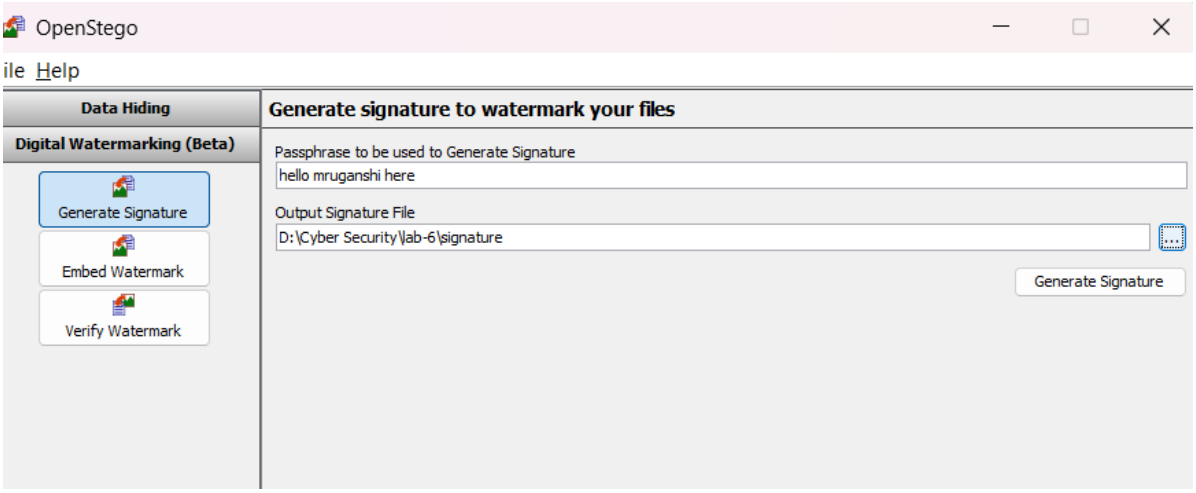


and here is our extracted data

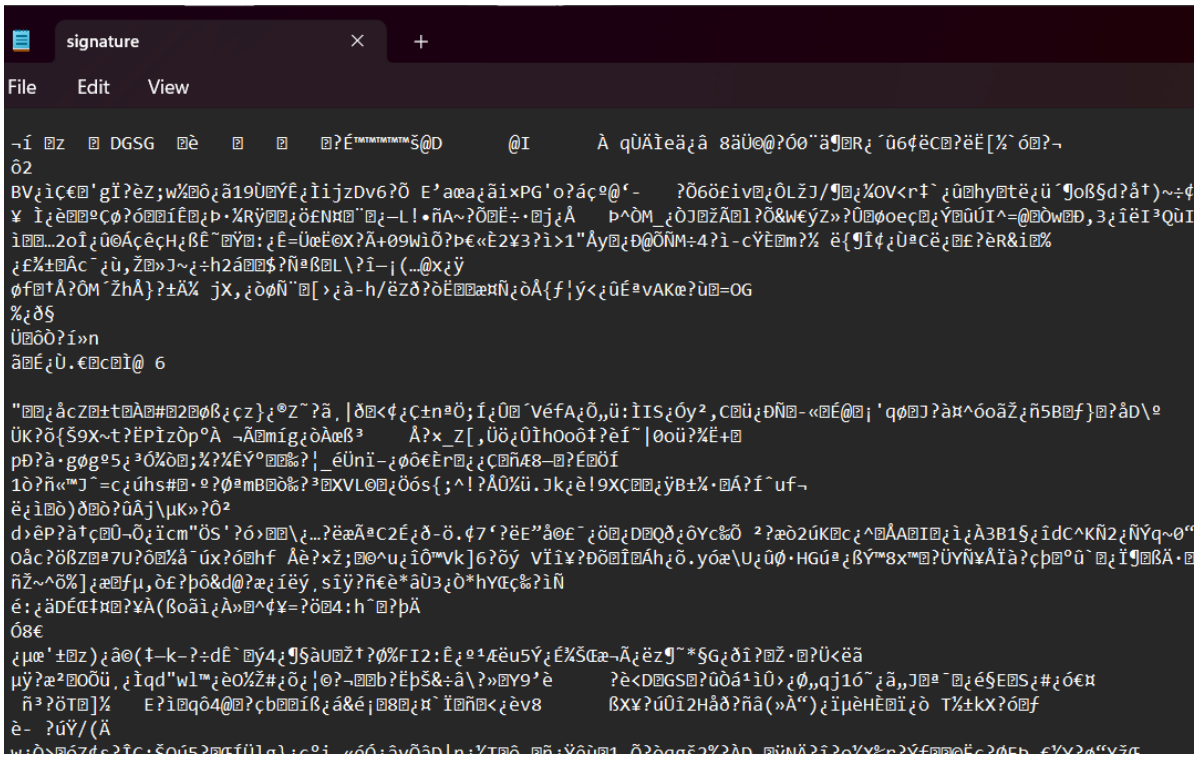


2. **Perform watermarking as well using OpenStago**
   a. First you need to generate the signature file
   b. Then embed the watermark
   c. At last verify the watermark.

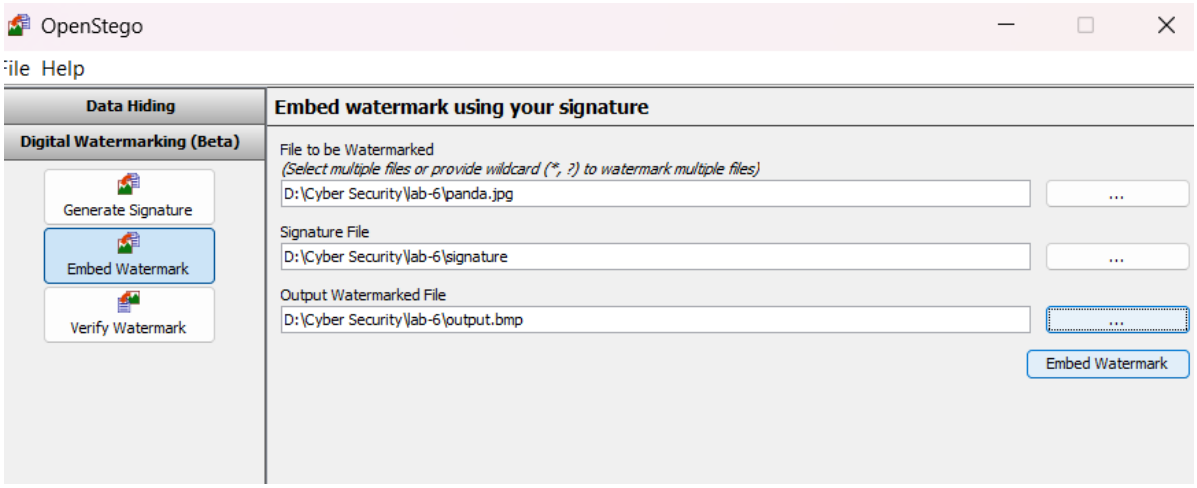
   Now firstly to generate a signature file we will go to the Digital Watermarking option in openstego. after that go to generate the signature. Put the data that is to be paraphrased to generate the signature and the location at which the output signature file should be put.



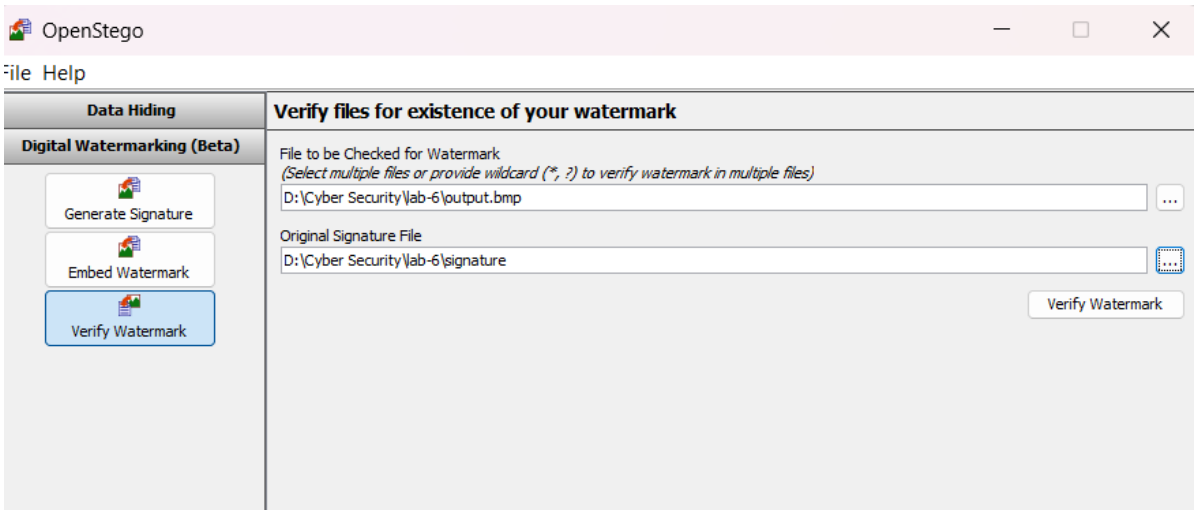
   this is the signature file



Now to embed the watermark we will use the same image that we used in the first question.



to verify watermark go to the option verify watermark. select watermarked image and signature file.



and you can see the results.