

Don Bosco Institute of Technology
Department of Computer Engineering

Academic year – 2021-22

Class: B.E. COMPUTER ENGINEERING

Subject: Computational Lab -I

Course Code: CSL704

Experiment Title: Use of steganographic tools like OpenStego, to detect data hiding or unauthorized file copying

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Roll No.: 05

Batch: D

Date of Performance: 27/7/21

Date of Submission: 27/7/21

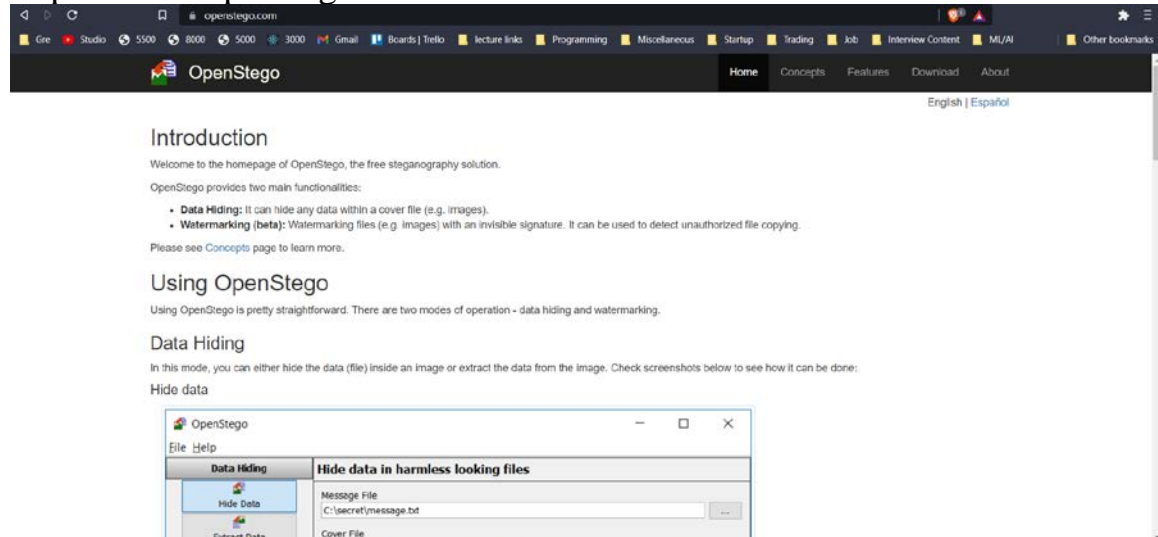
Aim : To use steganographic tools like OpenStego, to detect data hiding or unauthorized file copying

Screenshots:

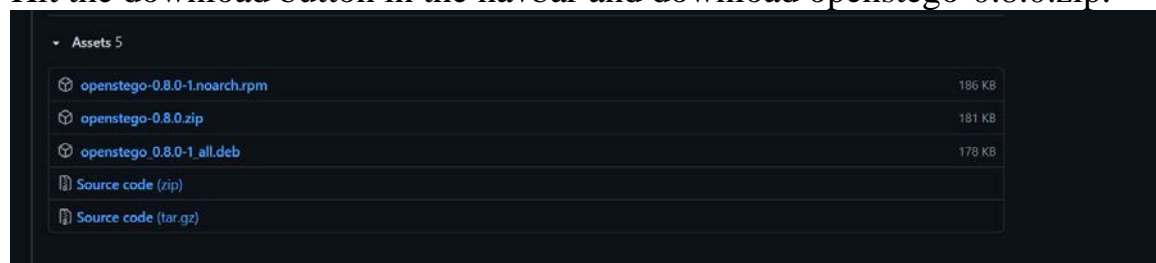
Installation

Visit

<https://www.openstego.com/>



Hit the download button in the navbar and download openstego-0.8.0.zip.



Extract the folder and run openstegno.bat

lib	1/16/2021 3:12 PM	File folder	
LICENSE	1/16/2021 3:12 PM	File	18 KB
openstego.bat	1/16/2021 3:12 PM	Windows Batch File	2 KB
openstego.ico	1/16/2021 3:12 PM	Icon	5 KB
openstego.sh	1/16/2021 3:12 PM	SH Source File	1 KB
README	1/16/2021 3:12 PM	File	8 KB

Data Hiding

Hide Data

The image shows the OpenStego application window. The title bar says 'OpenStego'. The menu bar has 'File' and 'Help'. The left sidebar has two sections: 'Data Hiding' and 'Digital Watermarking (Beta)'. Under 'Data Hiding', there are buttons for 'Hide Data' (selected) and 'Extract Data'. Under 'Digital Watermarking (Beta)', there are buttons for 'Generate Signat...', 'Embed Watermark', and 'Verify Watermark'. The main area is titled 'Hide data in harmless looking files'. It contains three input fields: 'Message File' with the path 'C:\Users\Hayden\Desktop\assdf\password.txt', 'Cover File' with the path 'C:\Users\Hayden\Desktop\assdf\1.jpg', and 'Output Stego File' with the path 'C:\Users\Hayden\Desktop\assdf\2.bmp'. Below these is an 'Options' section with a dropdown for 'Encryption Algorithm' set to 'AES128', and empty text boxes for 'Password' and 'Confirm Password'. A 'Hide Data' button is at the bottom right.

Section	Item	Value
Input Fields	Message File	C:\Users\Hayden\Desktop\assdf\password.txt
	Cover File	C:\Users\Hayden\Desktop\assdf\1.jpg
	Output Stego File	C:\Users\Hayden\Desktop\assdf\2.bmp
Options	Encryption Algorithm	AES128
	Password	
	Confirm Password	

Input Files

password.txt - Notepad

File Edit Format View Help

haydenpassword



Output



Extract Data

OpenStego

File Help

Data Hiding	Extract hidden data
<div>Hide Data</div> <div>Extract Data</div>	<div>Input Stego File C:\Users\Hayden\Desktop\assdf\2.bmp</div> <div>Output Folder for Message File C:\Users\Hayden\Desktop\assdf</div> <div>Password</div> <div>Extract Data</div>
Digital Watermarking (Beta)	
<div>Generate Signat...</div> <div>Embed Watermark</div> <div>Verify Watermark</div>	

Success

Message file successfully extracted from the Cover file: password.txt

OK

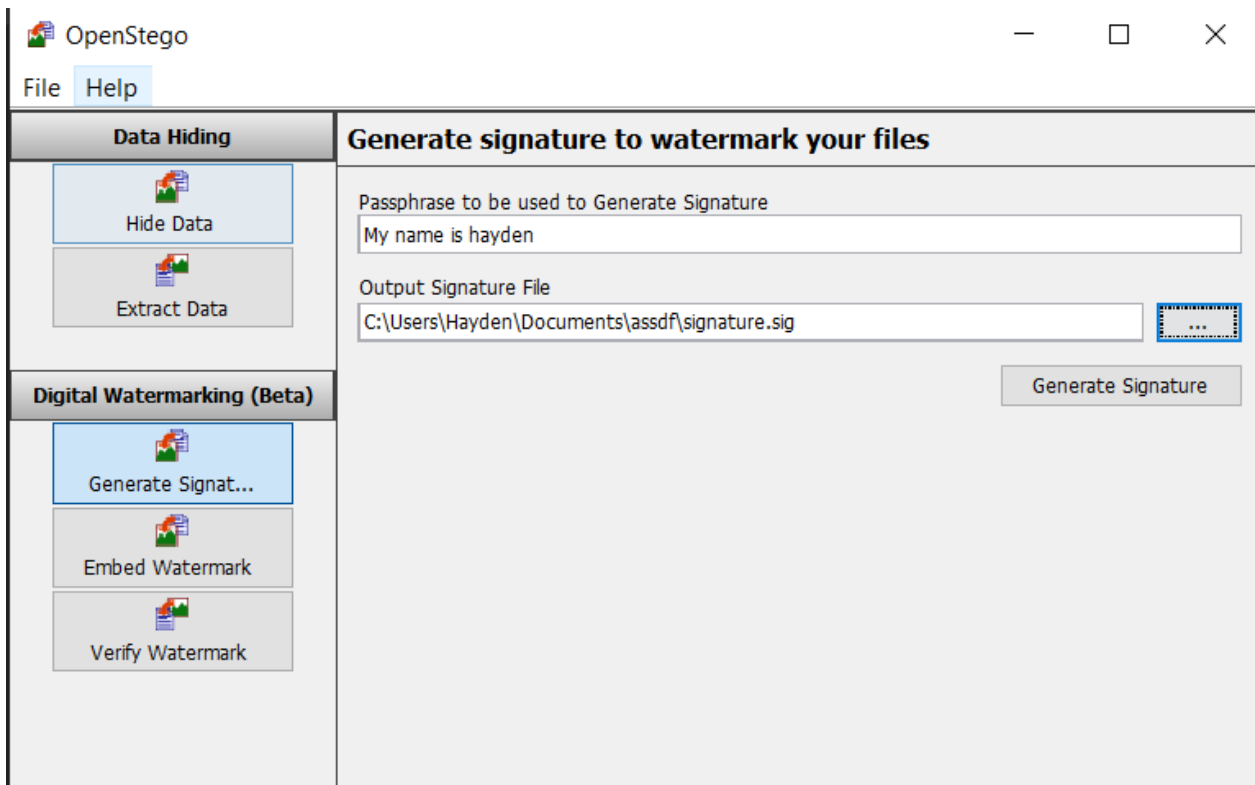
password.txt - Notepad

File Edit Format View Help

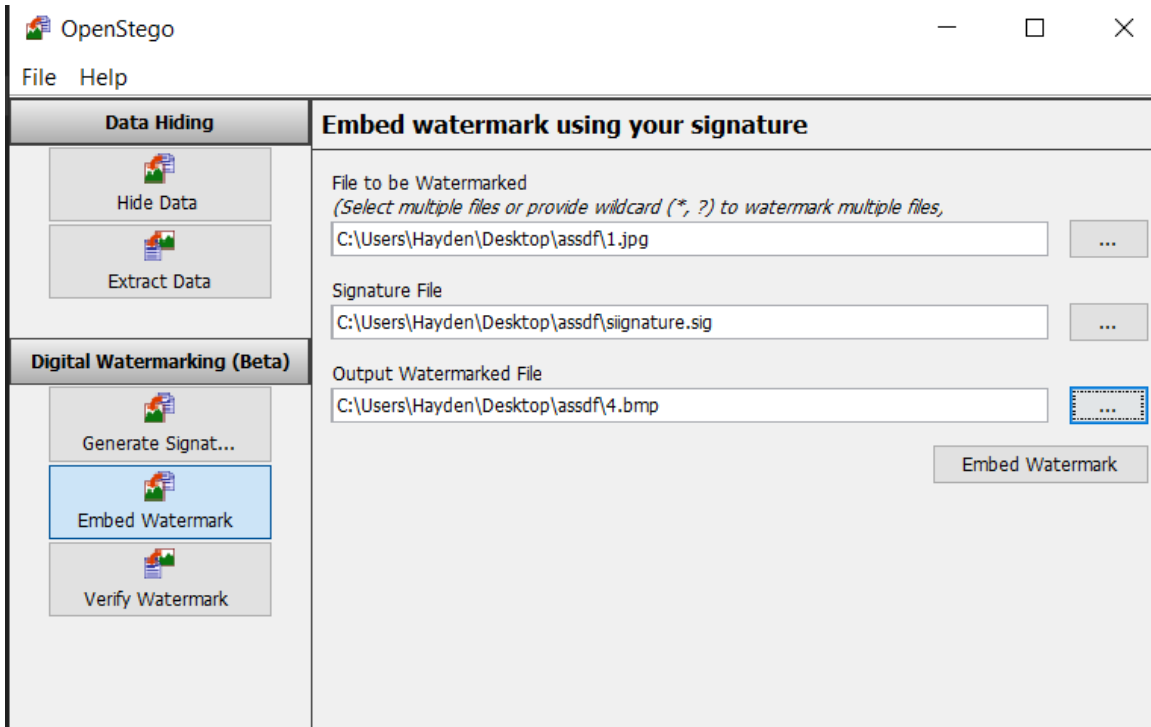
haydenpassword

Digital Watermarking

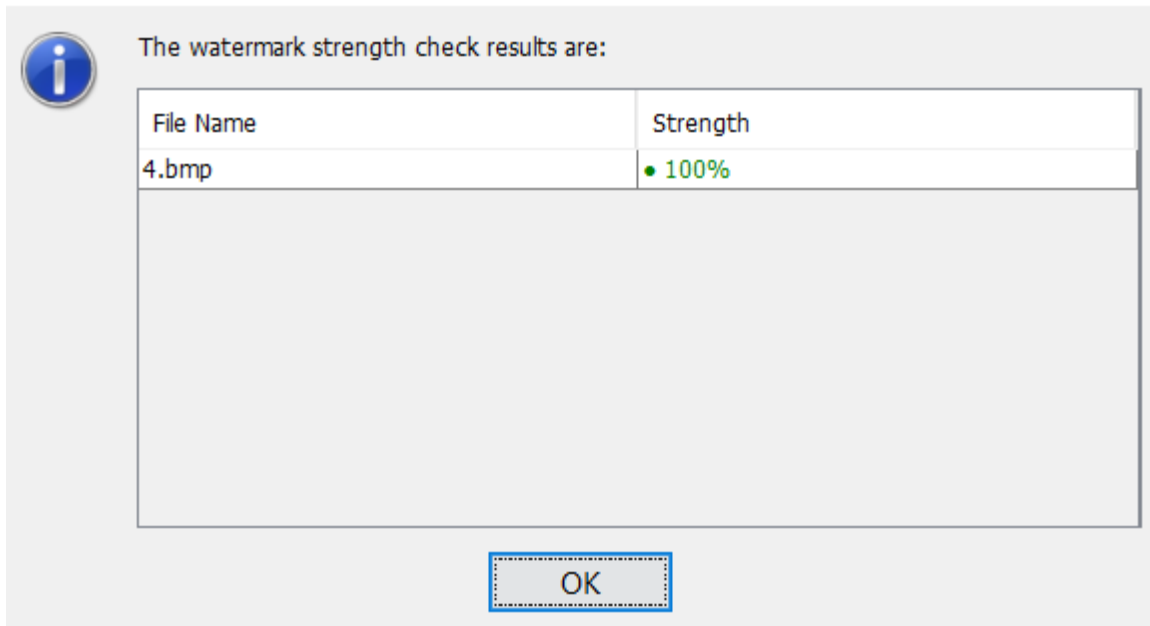
Generate signature



Watermark Files



Verify Watermark



Conclusion :Students were able to use the tool to perform different operations like hiding data, extracting data, creating signature files, embedding watermark and verifying the watermark.