

PRACTICAL: 1

AIM:

The transmission of information need to be secure over the communication channel and the data has to be confidential. To do so, steganography is the technique to concealing/hiding the secrete file, message, audio or video in some another format of file. OpenPuff is one of the free steganography tool for the windows environment. Study and implement the practical approach for Steganography.

-Using DOS commands

-Using OpenPuff Tool

THEORY:

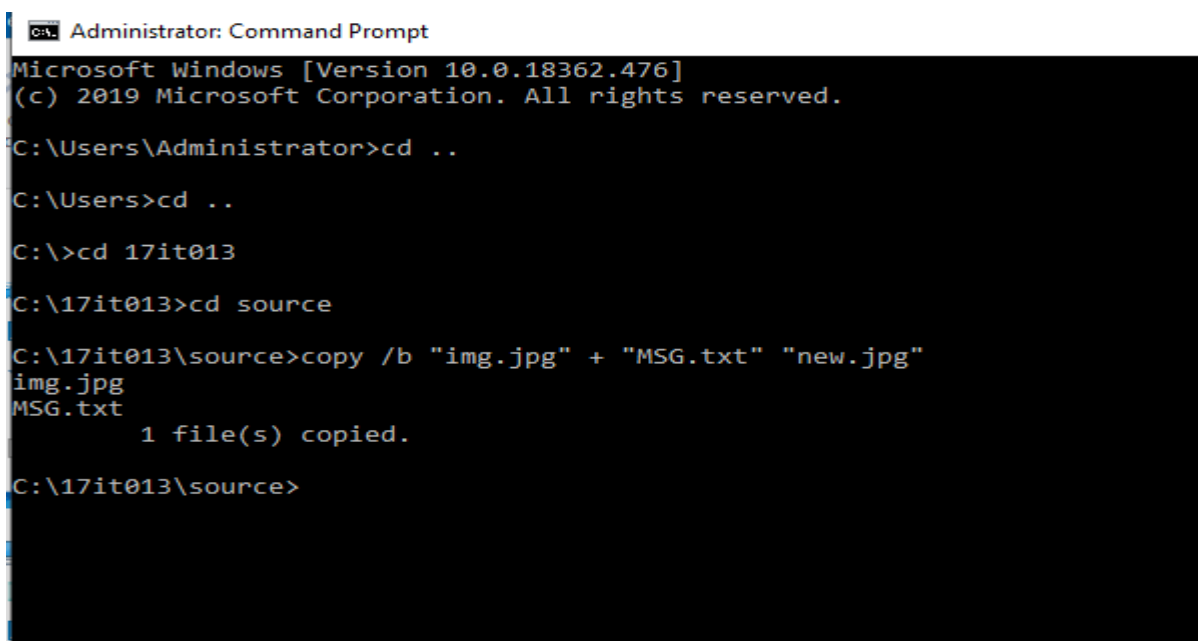
Steganography is technique which is hiding data in larger carrier. For steganography there is a tool which is called OpenPuff which get text file or any kind of data or information which is stored in carrier. Here carrier size is more than data file. Here we hide data form outside the world. Here wed change some kind binary bits of carrier as per data file. We store data and secure using password. At least we unhide data , and use again.

CODE:

```
Copy /b "img.jpg" + "MSG.txt" "new.jpg"
```

OUTPUT:

1) DOS Command



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.18362.476]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>cd ..

C:\Users>cd ..

C:\>cd 17it013

C:\17it013>cd source

C:\17it013\source>copy /b "img.jpg" + "MSG.txt" "new.jpg"
img.jpg
MSG.txt
        1 file(s) copied.

C:\17it013\source>
```

```

_K5Ëf"0^$n0èR0]íyÔmb+x" fÝ+. "“HEÝæñ«ÝÜÄ±000°Ú`H!o01ã0y0
a~Ž      ý0²-U-æið³0E=€0Q0sŽ{ )$ÊÜL0Fã‘žid÷-í9t`0Ç±0B$Ê.0É0i
>G%1é“HC      @ämí?4$6<K0’\Ä0»900viö(áegÂíÄ00EFßj00äF’
DX[Ú1Än-êO 6ÓDPÉv-«ä1>003ú²kwrÜ$ {•³.à0a”$0ÄÊ%µY0` ;0
üqJŠ!`ù/ç ‘í; <ûñpÉ` ; ZJÜà#%2²ÆÜqóG^İ |xó,69{00Š2)B00°‘’»SĈ
amÚ8ü÷W’ ; #0mjmbi05VRSv <c>Üø!EšY!ŽX”VfR,,±#0?0E[N%y>Ëul
0äà0ÜæY!âJ00f•i0Y$0ÄµÁ‘Æ0-Äiİ^1i[¼0-š0%`$0x.p0Q7Z%ÁŽMñi*
¹0Ê’0000€Ý0;FÆ%±3İrÑiFÊ00Ê0i0
Byä      óY_^~GíGE«\^ÑVt;°v.0?T°mJx0š 0TmÀ?uip!
¹²²Ê»01+y`00Yj00’{G00 Ü0÷cJá¹»0-ó<Äü±$0]¿4rj3JÆkš0B
Üiæ0.ý0password is 1234567

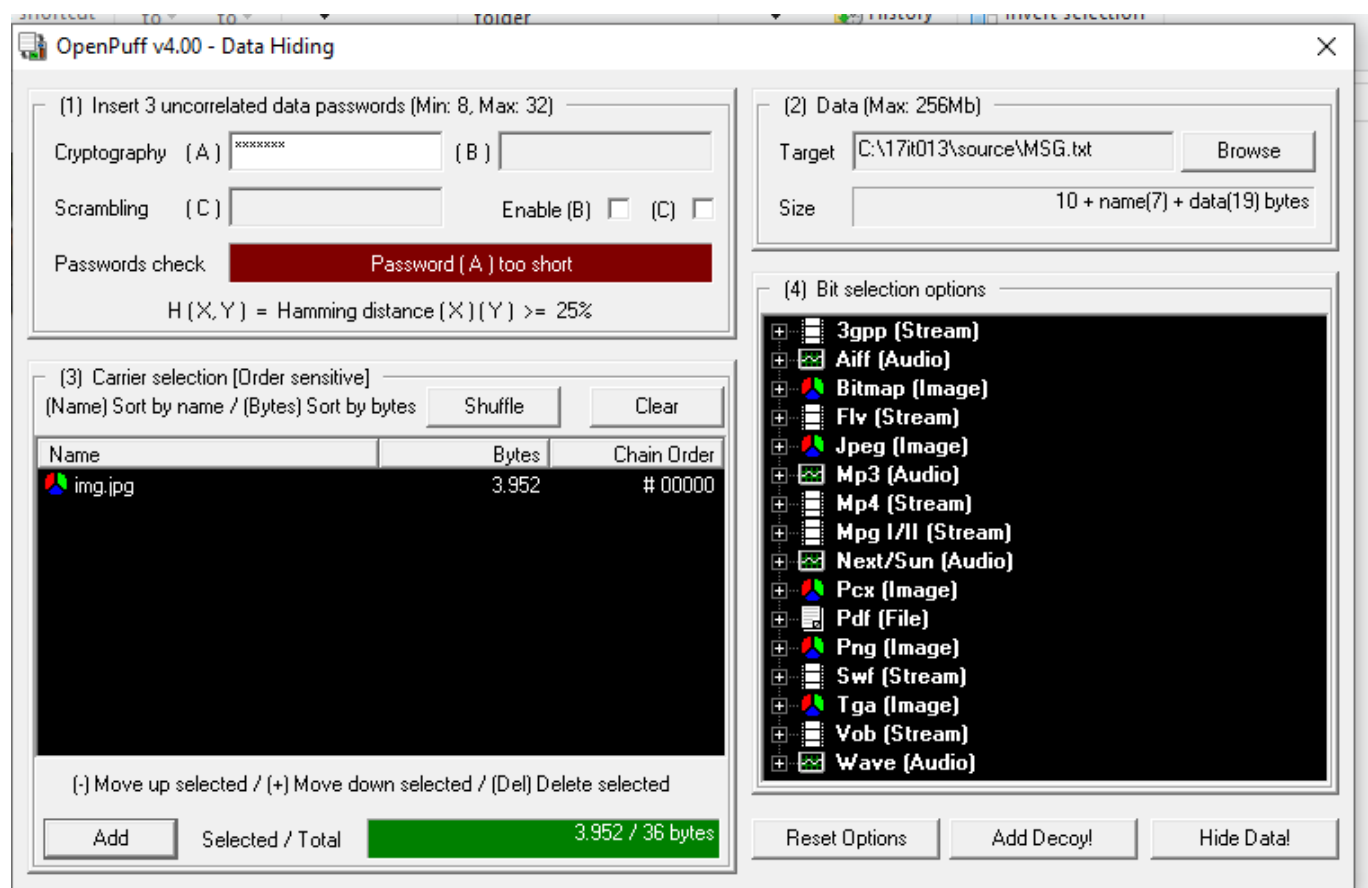
```



The Information stored in MSG.txt file is hide with the img.jpg and converted into new.jpg. This new.jpg is send to the Receiver side thus we can secure the data.

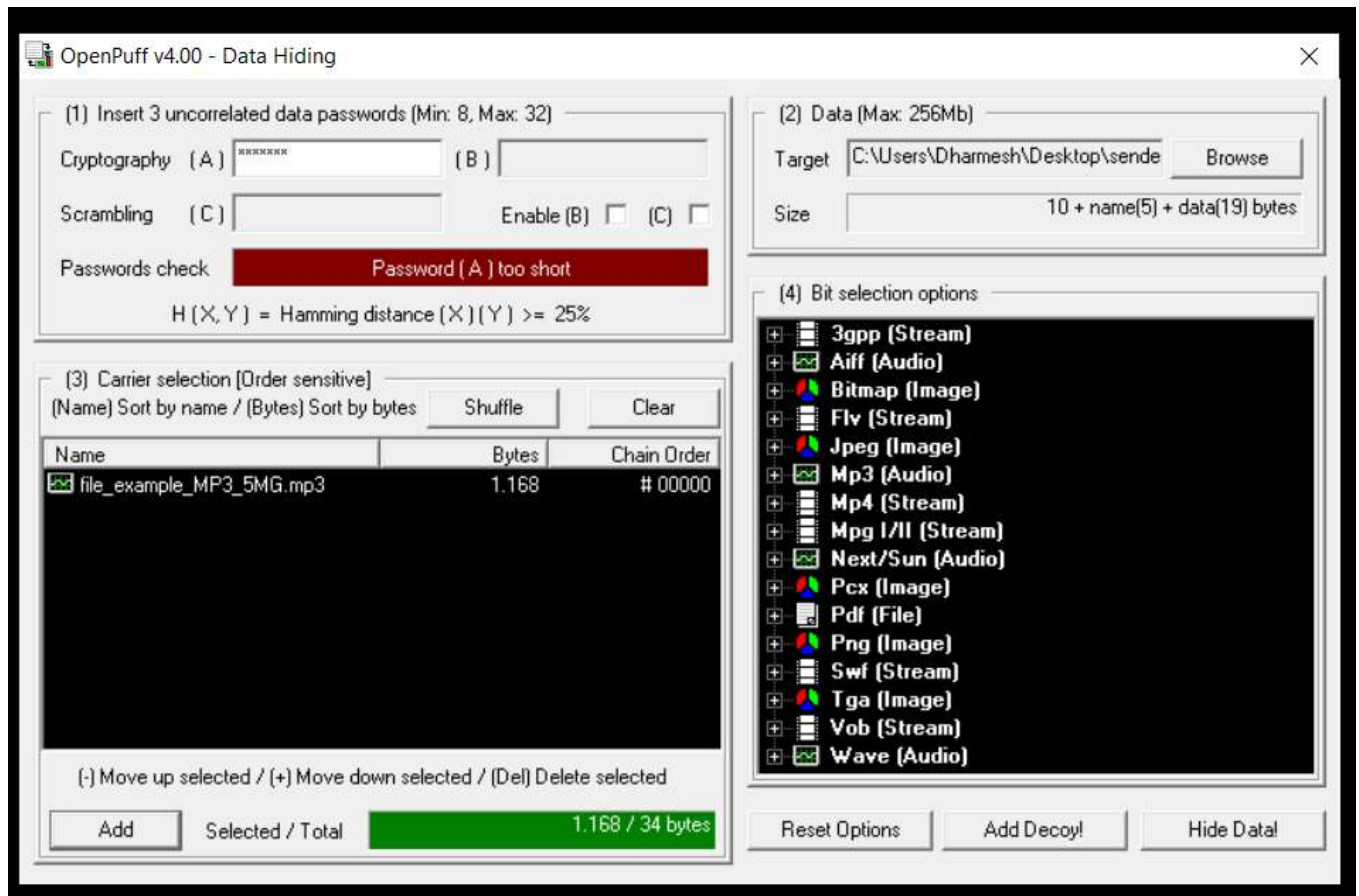
2) OpenPuff tool

Data hiding in images:

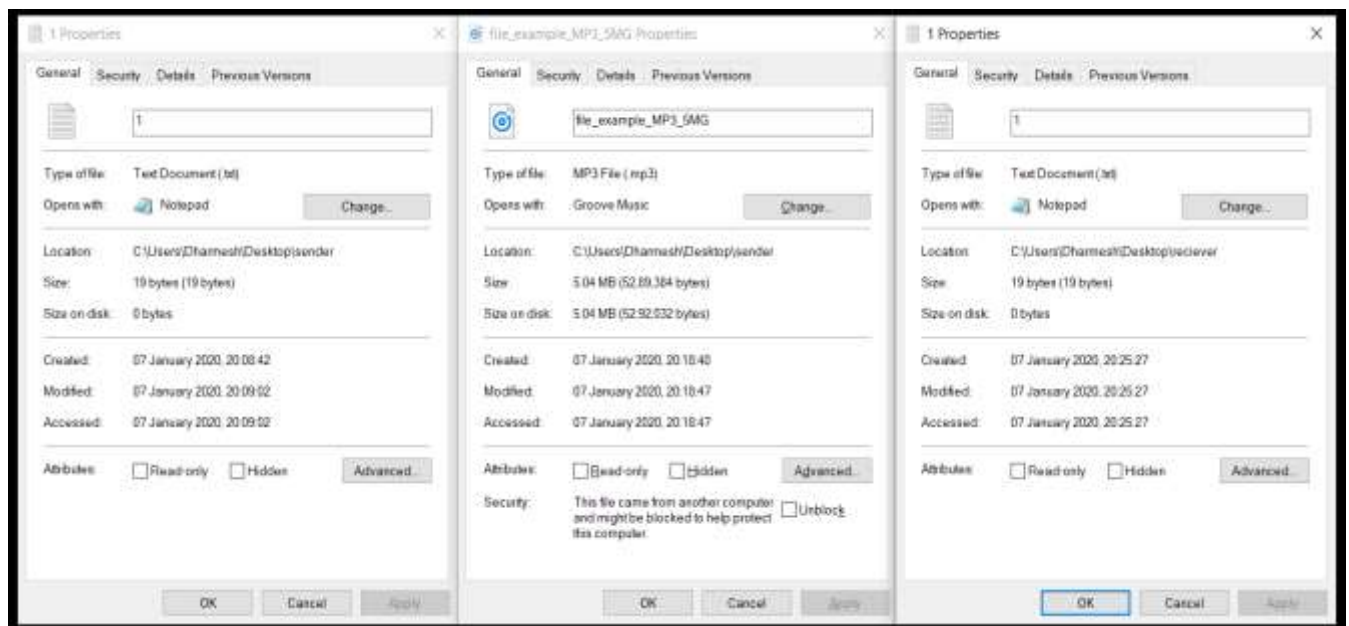


Here using openpuff data hiding tool the MSG.txt file is to be hide in the image name img.jpg which here after giving password, the data hiding is performed and new image data.jpg is created at particular location.

Data hiding in audio:

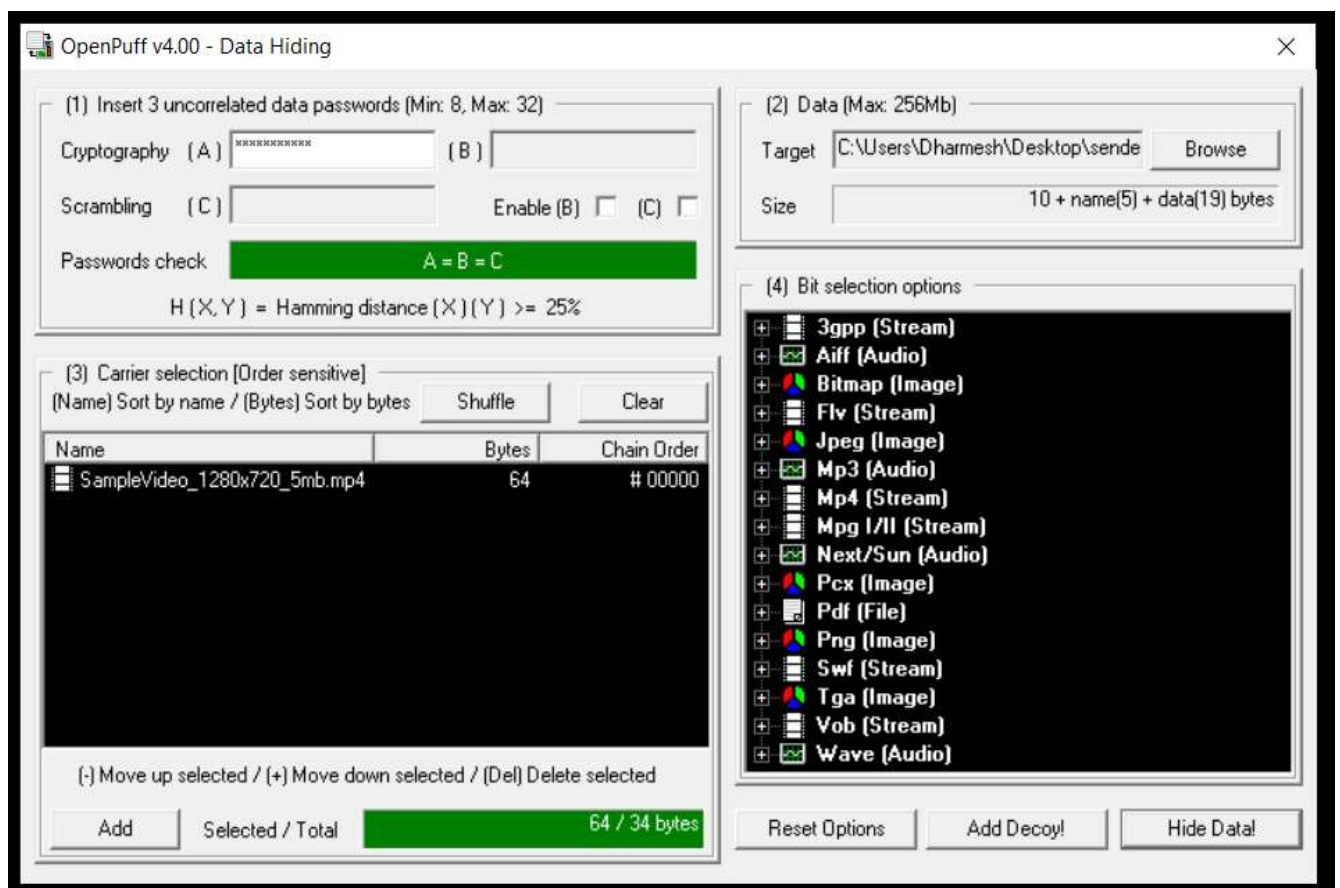


Here using openpuff data hiding tool the 1.txt file is to be hide in the audio file name file_example_MP3_5MG.mp3 which here after giving password, the data hiding is performed and new audio data is created at particular location.

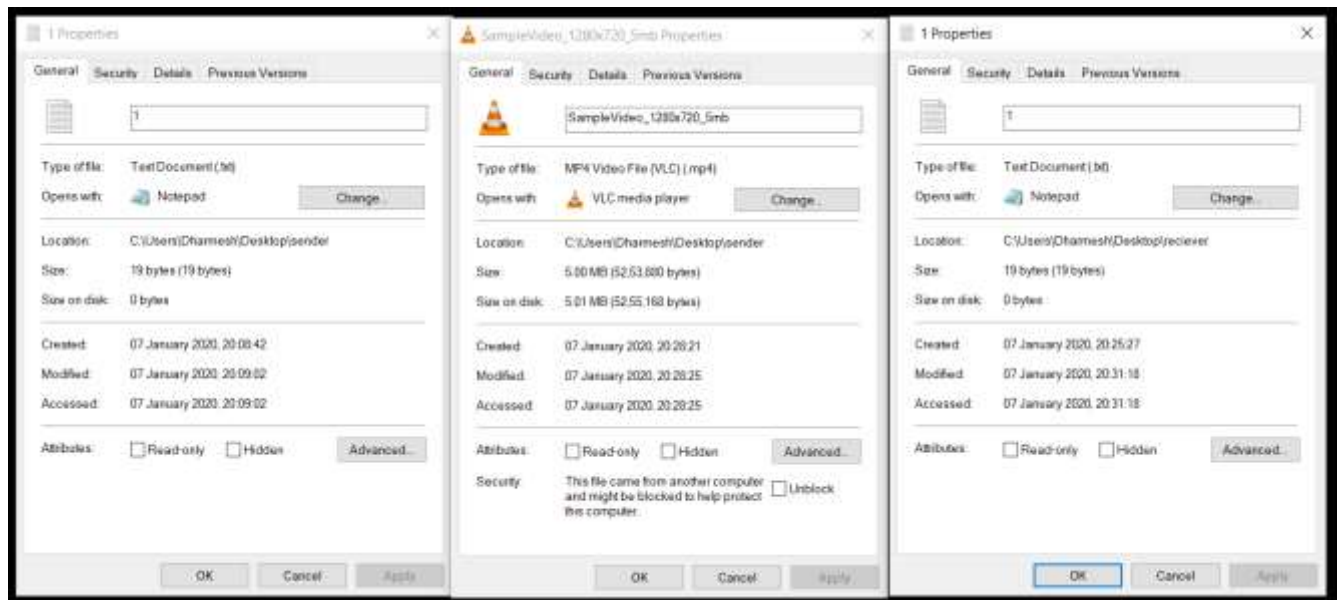


As shown in above figure the properties of audio file without data hiding and audio file with data hiding is captured. Here data are changed in very less so, there are not change in output file.

Data hiding in video:



Here using openpuff data hiding tool the 1.txt file is to be hide in the video file name Sample video.mp4 which here after giving password, the data hiding is performed and new video data is created at particular location.



As shown in above figure the properties of video without data hiding and video with data hiding is captured. Here data are changed in very less so, there are not change in output file.

LATEST APPLICATIONS:

- Confidential communication and secret data storing
- Media Database systems

LEARNING OUTCOME:

We learn the concept of Steganography through which we can make data transmission in secure way.

Also We learn the functionality of openpuff tool.