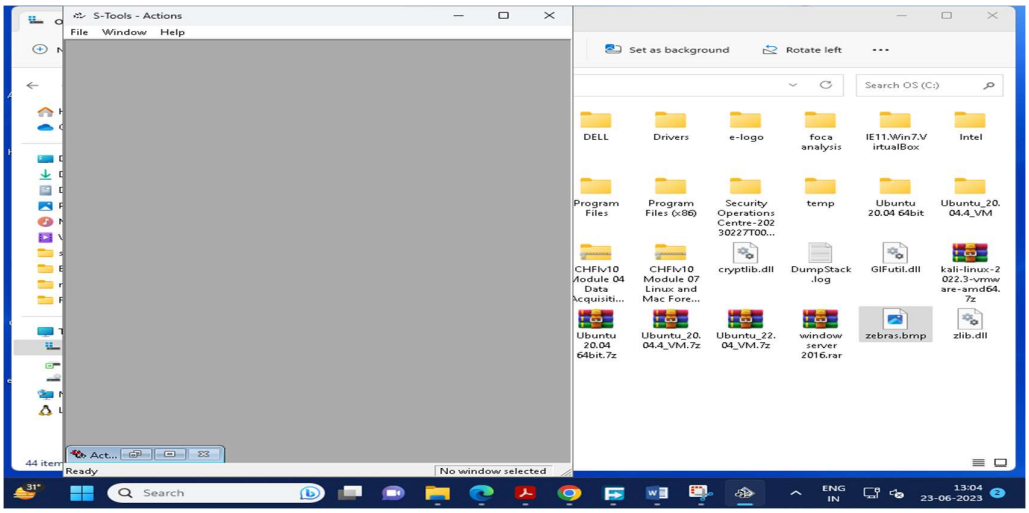
PRACTICAL NO. 08

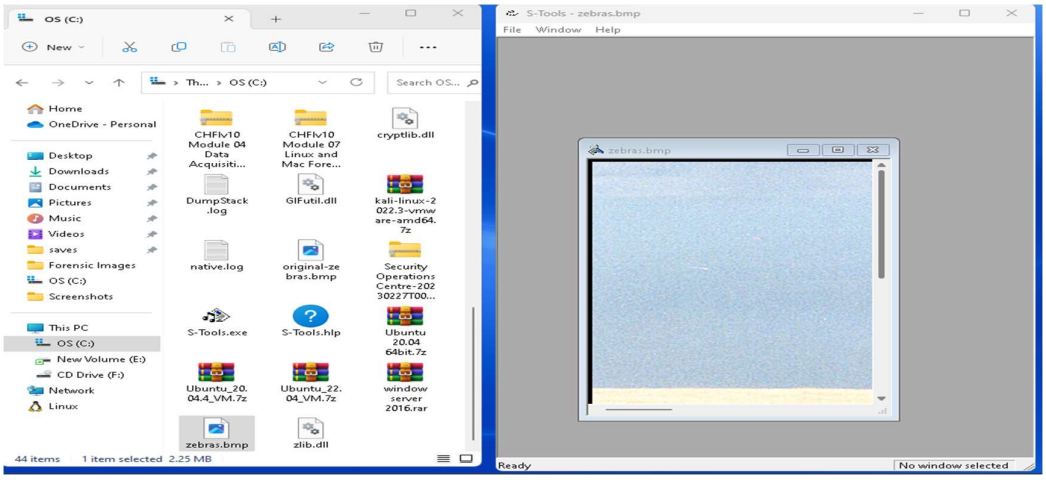
a. Using Steganography Tools [S-Tools]

Following steps Show how to use freeware S-Tools utility to hide and reveal files inside pictures

Step 1) Select the S-Tools.exe file and open the steganography software tool.



Step 2) With both the working directory and the S-Tools program open minimize both windows and place side-by-side.



The S-Tools program is a drag and drop software. The files used to create the steganography file can be dragged from the directory into the S-Tools program.

Step 3) Select the file from the directory and drag it over the S-Tools main window and release the
file.

A dialogue box appears indicating that the file type is unknown. Supported file types for audio and image files are shown below:

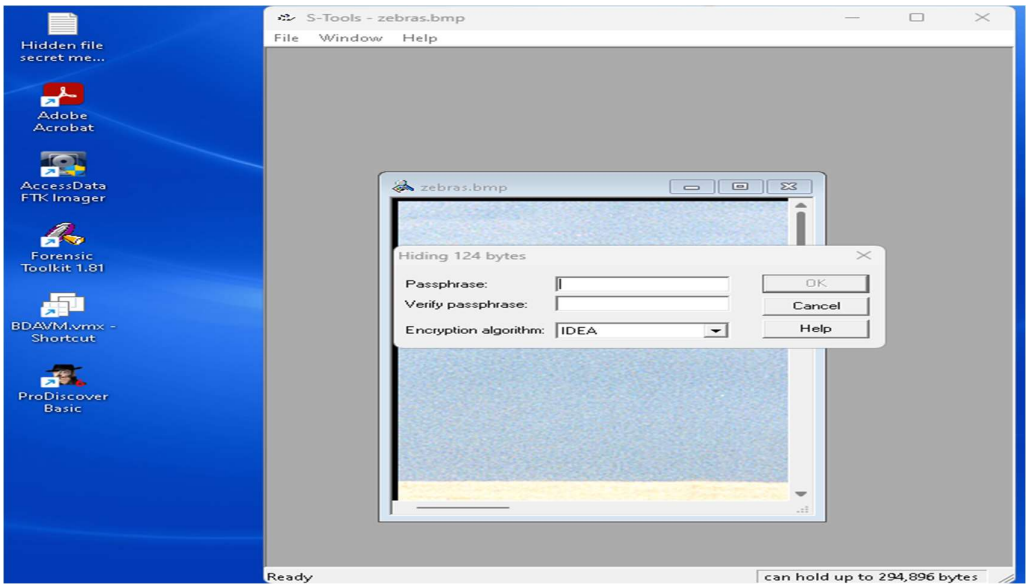
- Audio - *.wav
- Image - *.bmp and *.gif

If your image is in .jpg format, convert it to .bmp format.

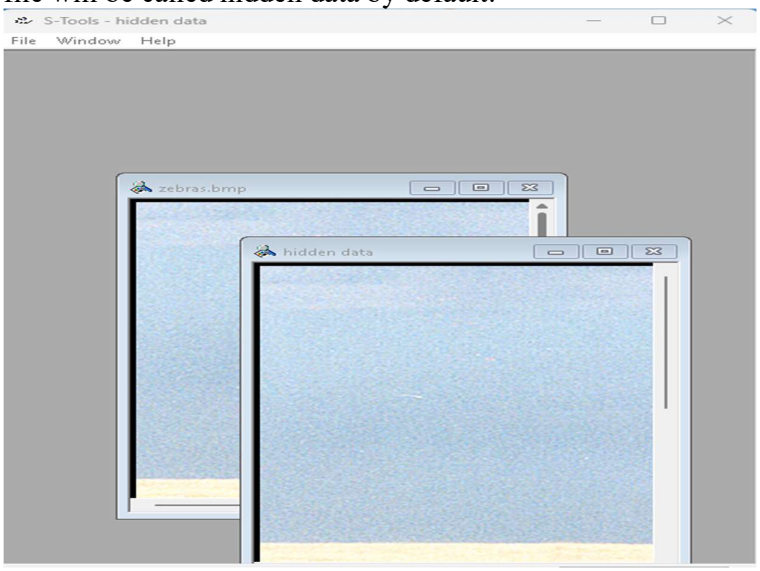
Step 4) Select a file to hide within the base file. If it's not there, create a txt file and save the file. Here we have created file name Hidden file
Step 5) The *.txt text file is selected and dragged on top of the base image. Release the file while the cursor is still on top of the base file.

Step 6) A dialogue box will appear asking the user to enter and verify a passphrase. Additionally, the user will have to select an encryption algorithm.

Step 7) Select the 'OK' button after entering a valid passphrase.



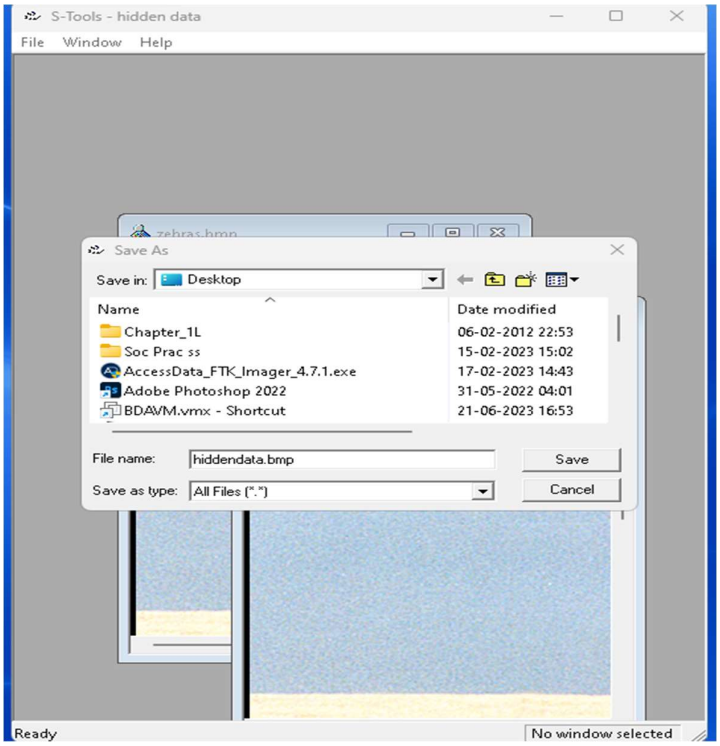
Step 8) The S-Tools main window will appear and a new file will be visible. The name of the file will be called hidden data by default.



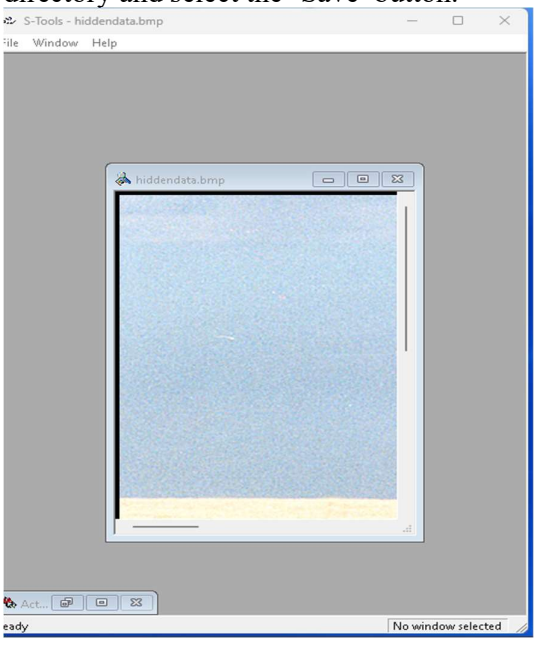
Step 9) Place the cursor on top of the hidden data image and select the right mouse button. The user will
have four options available to them:

- Save
- Save As
- Properties
- Reveal

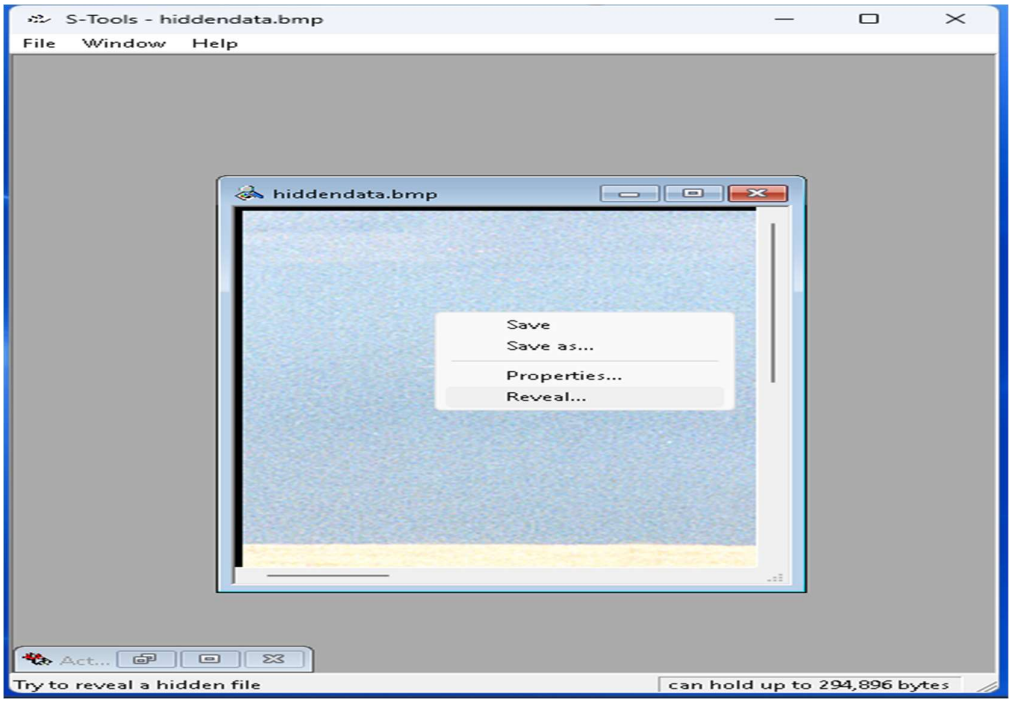
Select the ‘Save As’ button.



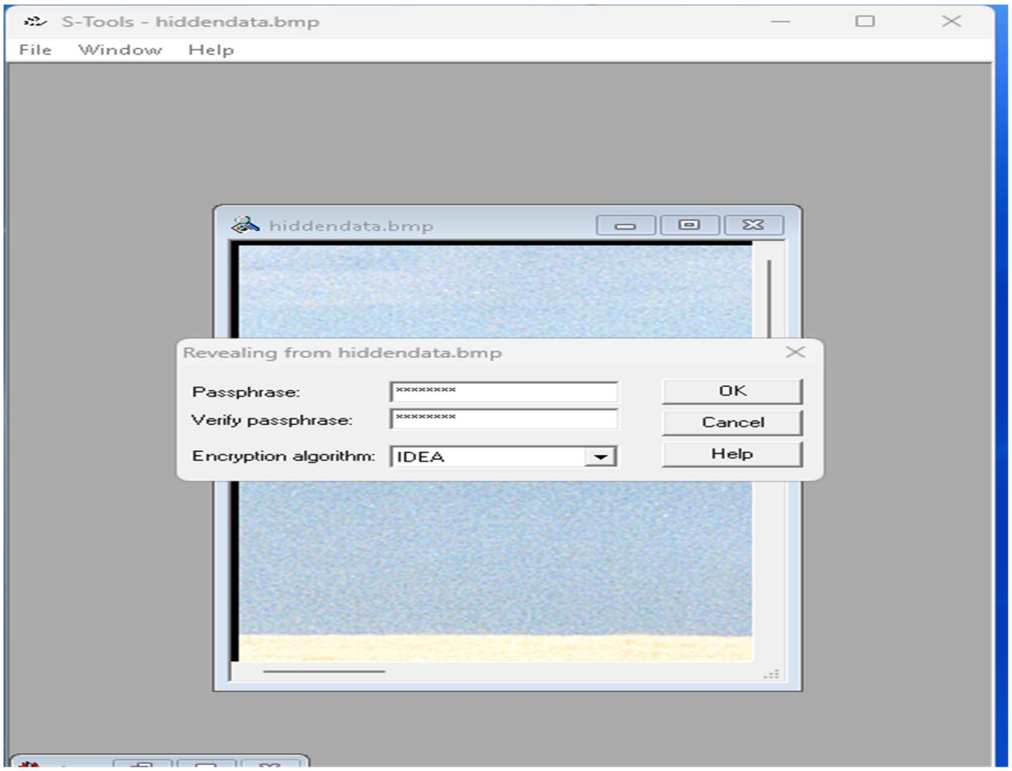
Step 10) A ‘Save As’ dialogue box will appear. Enter a valid file name, select the working directory and select the ‘Save’ button.



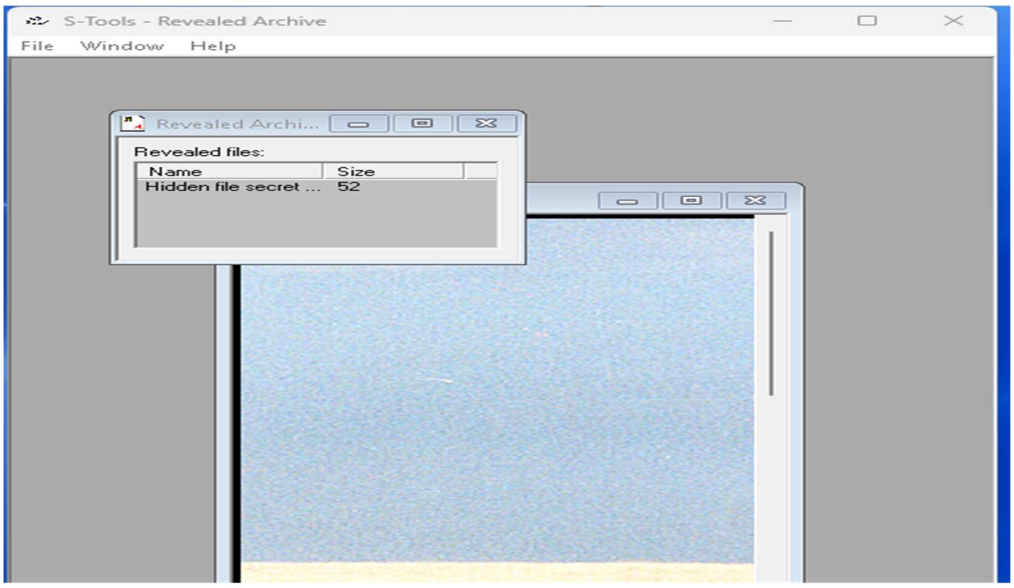
Step 11) Selecting the ‘Reveal’ button will display a passphrase dialogue box. A passphrase must be entered twice in the dialogue box and the correct encryption algorithm must be selected.



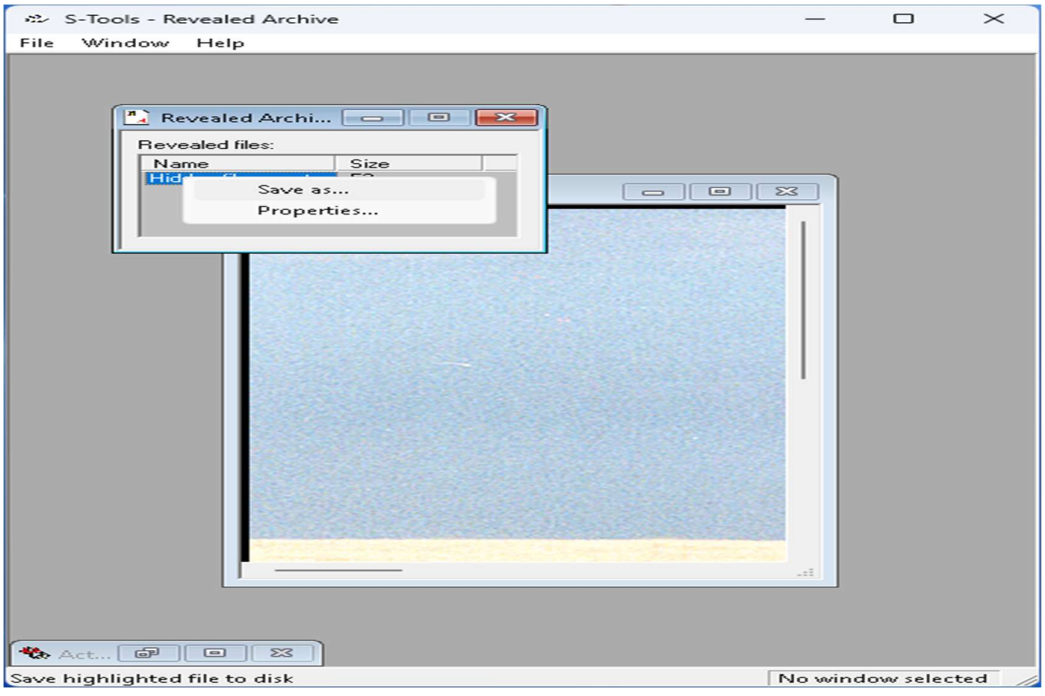
Step 12) Enter a passphrase twice, select the encryption algorithm, and select the ‘OK’ button.



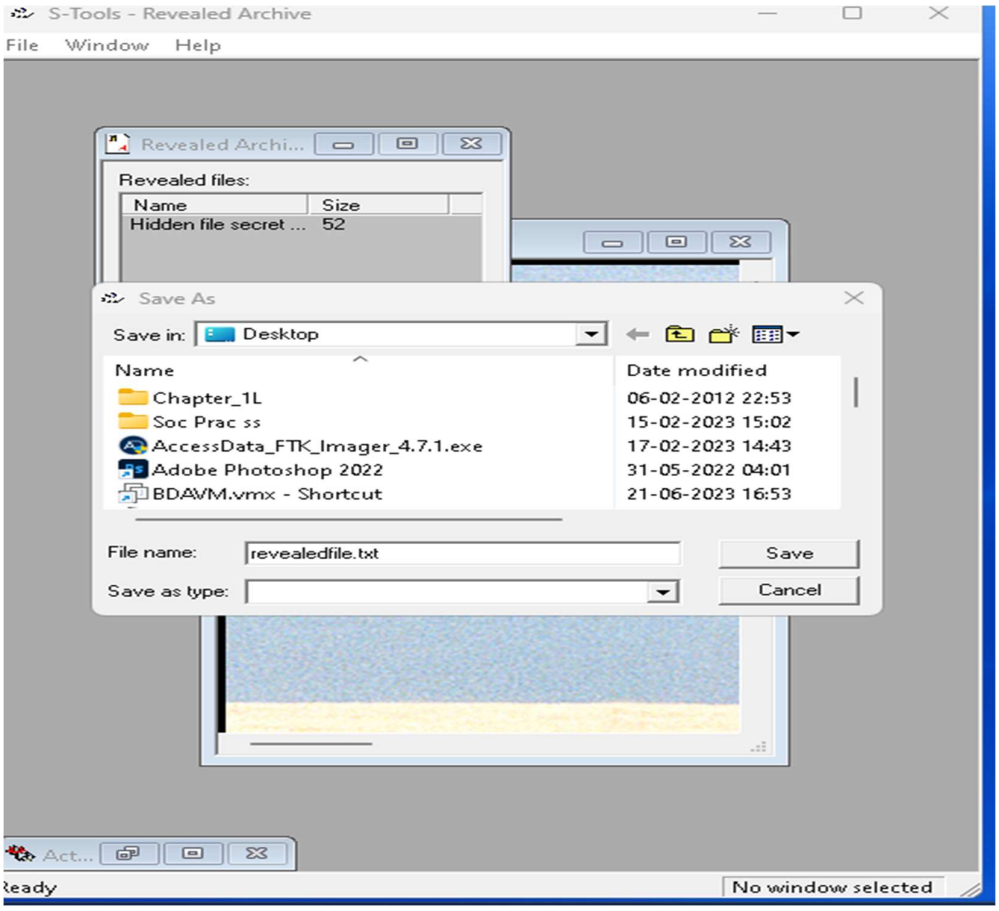
Step 13) A ‘Revealed Archive’ dialogue box will display which contains the file name and size of the hidden file.



Step 14) Select the ‘Save As’ button.



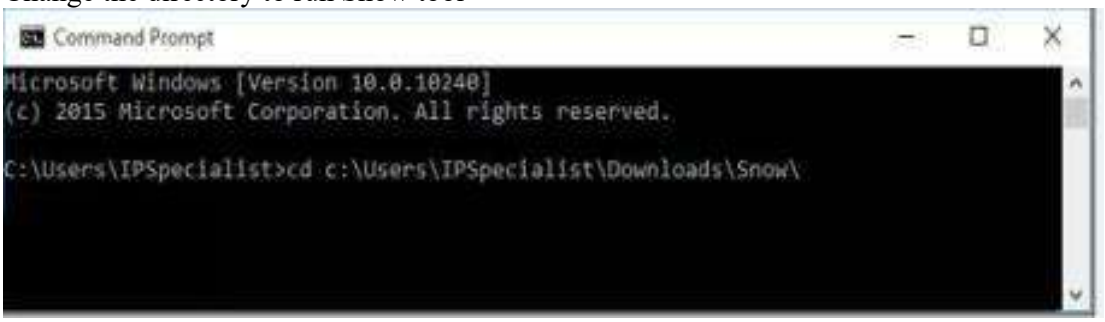
Step 15) The Revealed data is saved in revealfile.txt



b. Using Whitespace Stegnography tool SNOW

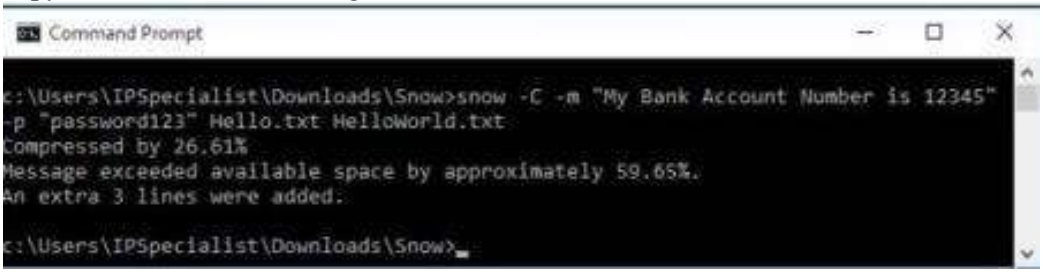
Step 1) Create a text file with some data in the same directory where Snow Tool is installed.

Step 2) Go to Command Prompt
Change the directory to run Snow tool



Step 3) Type the command
Snow –C –m "text to be hide" –p "password" <Sourcefile> <Destinationfile>

The source file is a Hello.txt file as shown above. Destination file will be the exact copy of source file containing hidden information.



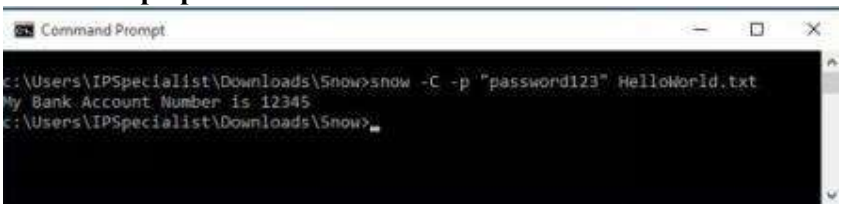
Go to the directory; you will a new file **HelloWorld.txt**. Open the File

Step 4) New File has the same text as an original file without any hidden information. This file can be sent to the target.

Recovering Hidden Information

On destination, Receiver can reveal information by using the command

Snow –C –p “password123” HelloWorld.txt



As shown in the above figure, File decrypted, showing hidden information encrypted in the previous section.