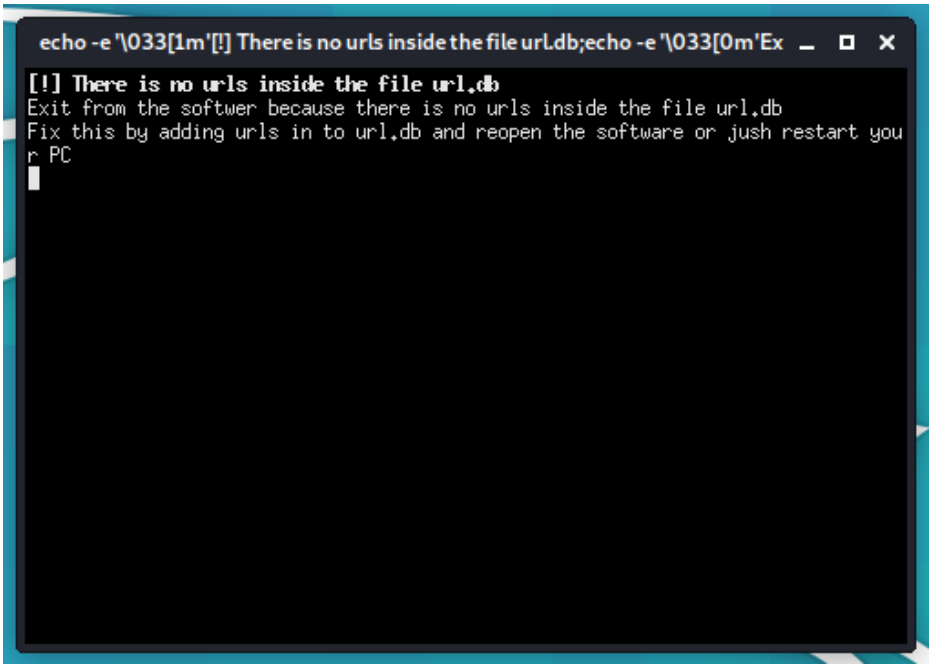
# SearchMetadata Project By Maor Sofer

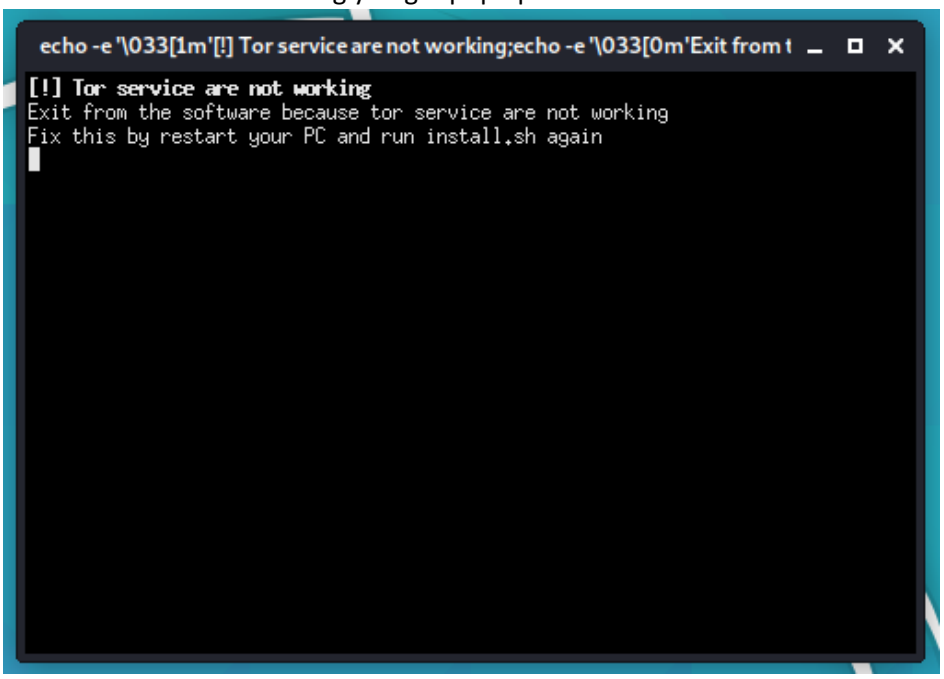
In the ReadMe.txt file you can read about the software (What the software do, How to install and preparation for start the software and How to use the software).
Here screenshot of the file:

```
 GNU nano 4.9.3                                                    ReadMe.txt
#### SearchMetadata ####
The software downloads images from sites that are in the url.db file and looks for hidden data behind them & GPS coordinates.
If the software find hidden data behind the image, it record it in searchmetadata.log in log folder and tell you in the log where it save the file with binwalk results.
If the software find GPS coordinates, it record it in searchmetadata.log in log folder and tell you in the log where it saved the file with exiftool results.
The software runs all the time and you can add or remove urls any time you want from url.db file.
The software uses crontab to continue to run after restart.
In each sites scan-loop of the software, it keeps all the sites it has left to scan within the log/lasturls.log file, so that the software can return exactly where it was before the restart.
The software saves all the photo`s md5-hashes that he scans in the log/scanhashes.log to avoid a duplication scan and allows you to know which photos were scanned by the software.
The main log file of the software is log/searchmetadata.log that contains all the logs of the software itself, and shows you whether or not the software found any hidden files and/or GPS coordinates,
as well as any errors in the software.
The software uses pop ups to tell you if there are  any error and shows you what the error are and how to fix them.
In the log/files folder the software contains all the files that he found with any hidden files or GPS coordinates, including them in the folder with binwalk or exiftool results.
The software uses binwalk to scan for hidden files behind the photos.
The software uses exiftool to see if there are any GPS coordinates in the photos.
The software uses tor service and torify command to be a 100% anonymous.

#### Install and preparation for start ####
Before you can run the software you need to add urls to the url.db file.
After this you need to run install.sh.
The file will install all the important stuff (such as: tor service and xterm commend) and writes a commend in crontab to run after any reboot.
After the file finish running, it starts the searchmetadata software.

#### How to use ####
The software runs automatically and does all the scans on its own, all you have to do is to insert the urls of the sites you want to scan to url.db file.
Ifat any point you'd like to add or remove urls, you just need to edit the url.db file without touching the software's code.
```

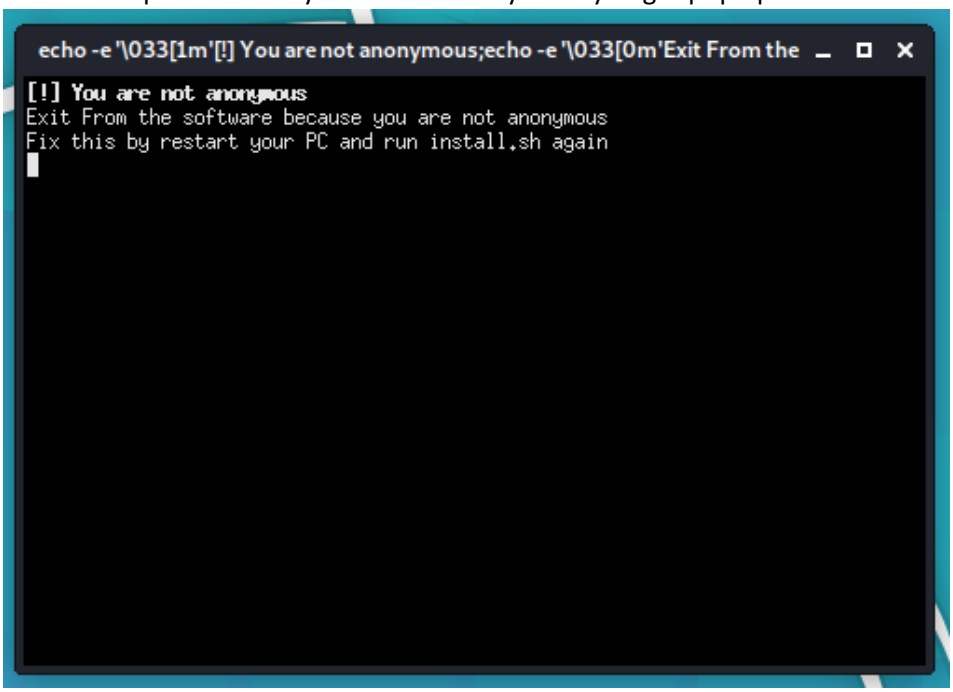
If there is no urls inside the file url.db you get a pop up like this:



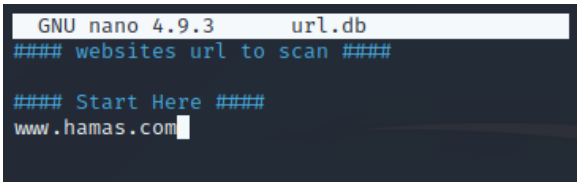
If tor service are not working you get pop up like this:




If there is a problem and you are not anonymous you get pop up like this:




The url.db file should look like this:



The scanhashes.log file should look like this:

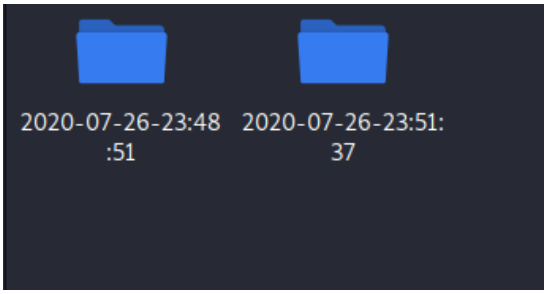
```
 GNU nano 4.9.3      scanhashes.log
fc578ef57880323844b89feae224f24a  test2.png
c50654e8e807d838fea953599540de9f  test.jpg
```

The searchmetadata.log file should look like this:

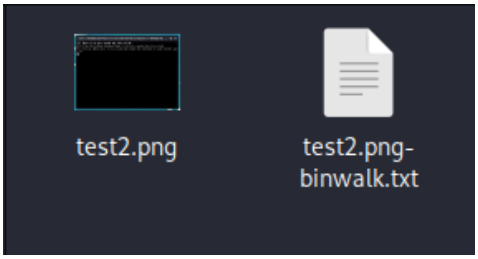
```
 GNU nano 4.9.3                          searchmetadata.log
2020-07-26-23:35:48 → [!] Exit from the softwer because there is no urls inside the file url.db
2020-07-26-23:35:20 → [!] Exit from the software because the tor service are not working
2020-07-26-23:36:27 → [!] Exit from the software because you are not anonymous
2020-07-26-23:48:51 → [+] In test2.png from www.hamas.com found hidden data behind them
The file saved in log/files/2020-07-26-23:48:51/ folder with binwalk result
2020-07-26-23:48:51 → [-] In test2.png from www.hamas.com not exist GPS data
2020-07-26-23:51:37 → [-] In test.jpg from www.hamas.com not found hidden data behind them
2020-07-26-23:51:37 → [+] In test.jpg from www.hamas.com exist GPS data
The file saved in log/files/2020-07-26-23:51:37/ folder with exiftool result
```

First line: Error for no urls inside file url.db.
Second line: Error for tor service not working.
Third line: Error for the software are not anonymous.
Fourth line: Found hidden file behind photo.
Fifth line: Where the software saved the photo with binwalk result.
Sixth line: Doesn't found gps data in the photo.
Seventh line: Doesn't found hidden files behind the photo.
Eighth line: Found GPS data in the photo.
Ninth line: Where the software saved the photo with exiftool result.

Here example for how the software save file in log/files folder:



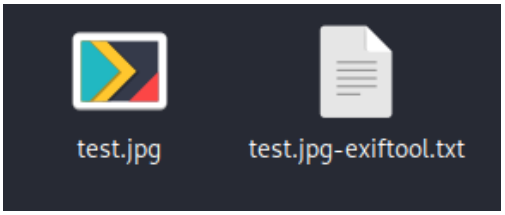

Here example for how the software save file with hidden files behind them with binwalk result:



Here example of binwalk result:

```
GNU nano 4.9.3                                                  test2.png-binwalk.txt

DECIMAL       HEXADECIMAL     DESCRIPTION
--------------------------------------------------------------------------------
0             0×0             PNG image, 508 x 362, 8-bit/color RGBA, non-interlaced
91            0×5B            Zlib compressed data, compressed
14360         0×3818          Zip archive data, at least v2.0 to extract, name: Modul 2 project/
14406         0×3846          Zip archive data, at least v2.0 to extract, compressed size: 13625, uncompressed size: 14360, name: Modul 2 project/no urls.png
28088         0×6DB8          Zip archive data, at least v2.0 to extract, compressed size: 12700, uncompressed size: 13755, name: Modul 2 project/not anonymous.png
40851         0×9F93          Zip archive data, at least v2.0 to extract, compressed size: 12803, uncompressed size: 13837, name: Modul 2 project/Tor not work.png
54152         0×D388          End of Zip archive, footer length: 22
```

Here example for how the software save file with GPS data in them with exiftool results:




Here example of exiftool result:

```
  GNU nano 4.9.3                    test.jpg-exiftool.txt
ExifTool Version Number         : 12.01
File Name                       : test.jpg
Directory                       : .
File Size                       : 2.8 MB
File Modification Date/Time     : 2020:07:26 23:46:06+03:00
File Access Date/Time           : 2020:07:26 23:46:06+03:00
File Inode Change Date/Time     : 2020:07:27 00:00:15+03:00
File Permissions                : rw-rw-rw-
File Type                       : JPEG
File Type Extension             : jpg
MIME Type                       : image/jpeg
JFIF Version                    : 1.01
Exif Byte Order                 : Big-endian (Motorola, MM)
Make                            : Apple
Camera Model Name               : iPhone 6s Plus
X Resolution                    : 72
Y Resolution                    : 72
Resolution Unit                 : inches
Software                        : 10.2
Modify Date                     : 2017:01:02 14:58:11
Exposure Time                   : 1/33
F Number                        : 2.2
Exposure Program                : Program AE
ISO                             : 50
Exif Version                    : 0221
Date/Time Original              : 2017:01:02 14:58:11
Create Date                     : 2017:01:02 14:58:11
Components Configuration        : Y, Cb, Cr, -
Shutter Speed Value             : 1/33
Aperture Value                  : 2.2
Brightness Value                : 4.403507249
Exposure Compensation           : 0
Metering Mode                   : Multi-segment
Flash                           : Off, Did not fire
Focal Length                    : 4.2 mm
Subject Area                    : 2015 1511 2217 1330
Run Time Flags                  : Valid
Run Time Value                  : 15132445674666
Run Time Epoch                  : 0
Run Time Scale                  : 1000000000
Acceleration Vector             : -0.05092595518 0.1487244898 -0.9487358326
Sub Sec Time Original           : 512
Sub Sec Time Digitized          : 512
Flashpix Version                : 0100
Color Space                     : sRGB
```