Proj 2: Basic Static Techniques (Lab 1-2) (20 pts.)

What you need:

- A Windows computer (real or virtual) with an Internet connection
- Recommended: the textbook: "Practical Malware Analysis"

Purpose

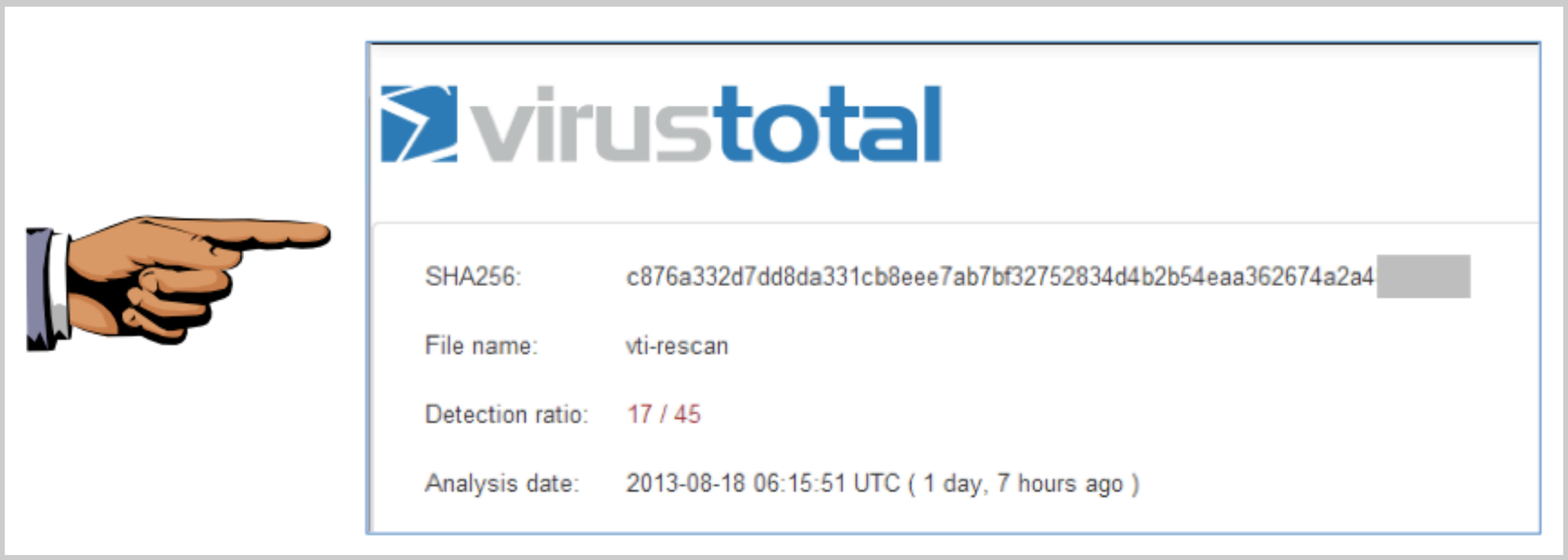
You will practice the techniques in chapter 1.

This project follows **Lab 1-2** in the textbook. There are more detailed solutions in the back of the book.

VirusTotal

Turn in an image showing your analysis of **Lab01-02.exe** as shown below.

We will grade it by checking the last digits of the SHA256 value.



Press the **PrntScrn** key to capture an imag of the whole desktop.

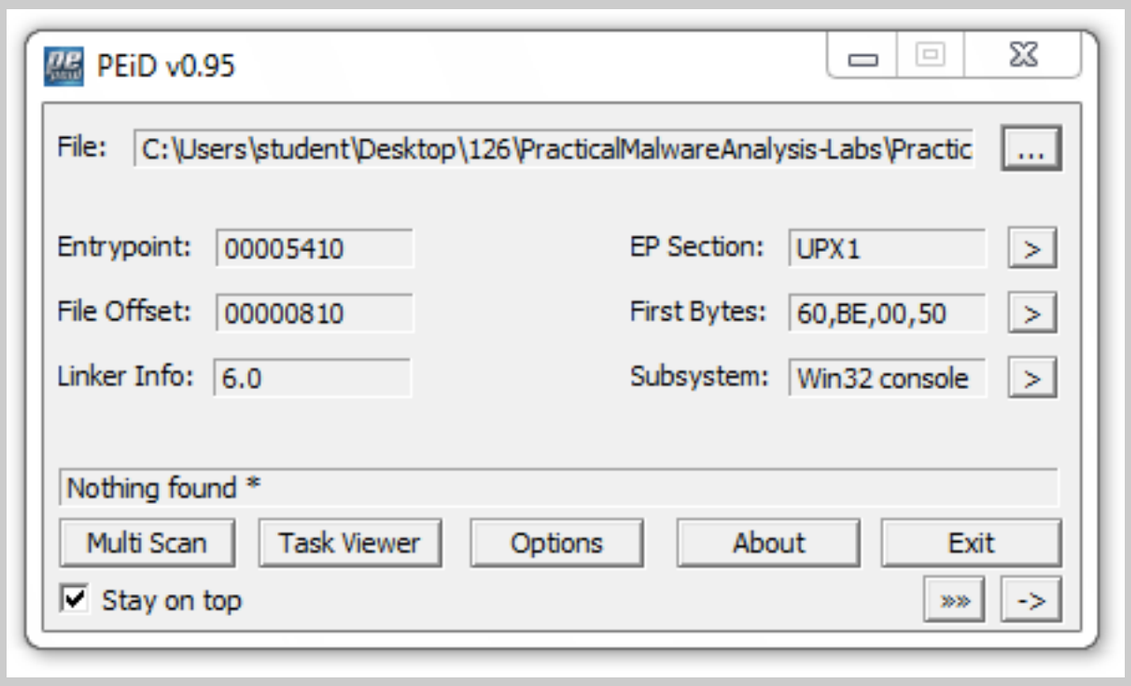
Open Paint and paste the image in with **Ctrl+V**.

Save this image with the filename "**Proj 2a from YOUR NAME**".

YOU MUST SUBMIT WHOLE-DESKTOP IMAGES TO GET FULL CREDIT!

Unpacking the File

Run PEiD on the file. It shows that the file is packed with UPX, as shown in the "EP Section" below.



Download the UPX Zip file from here:

http://upx.sourceforge.net/

Download the **upx391w.zip** file, as shown below.

Download

File	OS/Hardware
upx391w.zip	Win32/i386
upx-3.91-i386_linux.tar.bz2	Linux/i386
upx-3.91-amd64_linux.tar.bz2	Linux/AMD64
upx-3.91-armeb_linux.tar.bz2	Linux/ARM
upx-3.91-mipsel_linux.tar.bz2	Linux/MIPS
upx-3.91-powerpc_linux.tar.bz2	Linux/PPC
upx391d.zip	DOS/i386
upx391a.zip	Atari TOS-MiNT/m68k
upx-3.91-src.tar.bz2	Source code (you will need UCL)

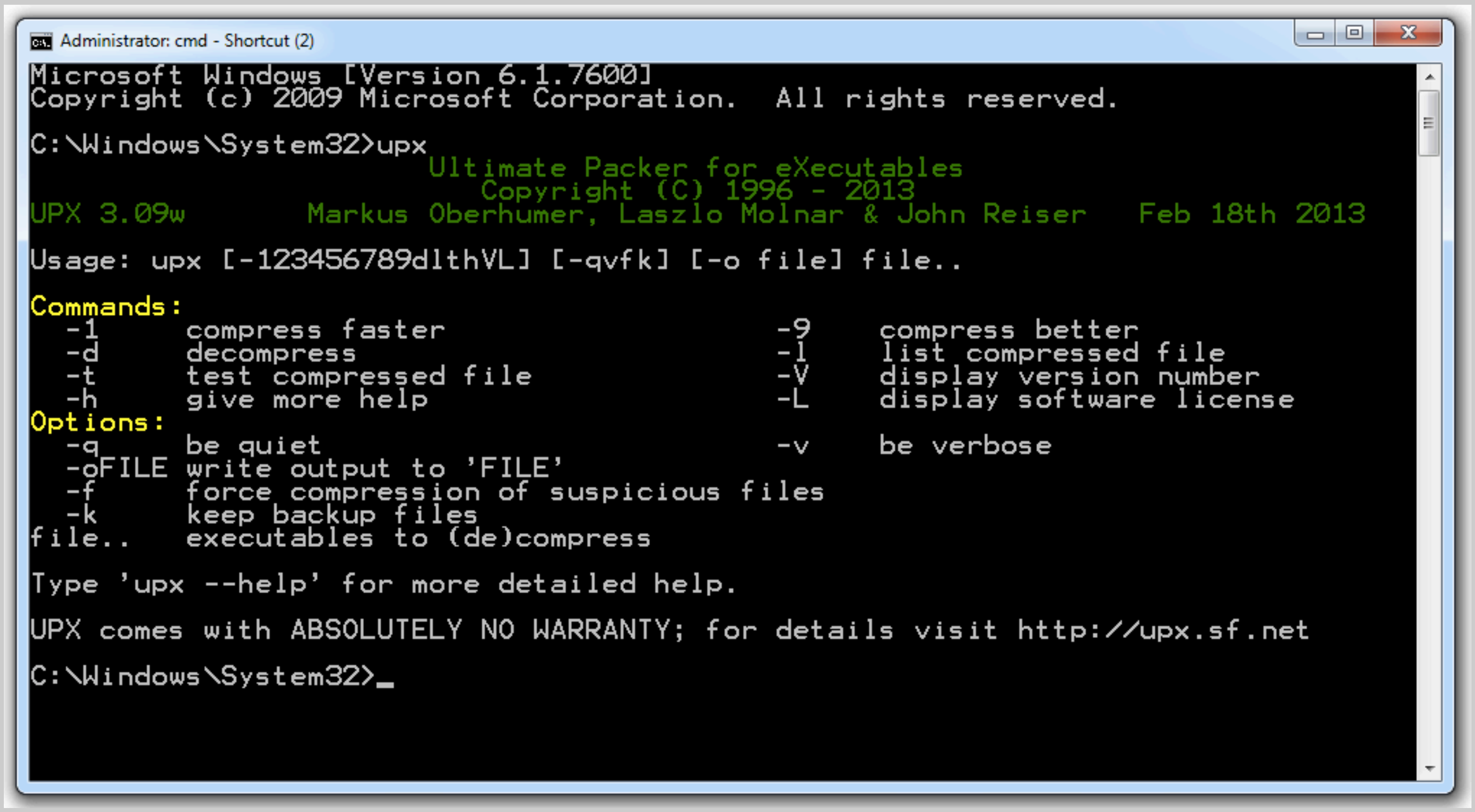
Just in case, here is the archive of old versions.

Unzip it and put upx.exe in your C:\Windows\System32 folder.

Open a Command Prompt window and execute this command:

```
UPX
```

You see a UPX help message, as shown below:



Use the CD command to move to the directory containing your malware samples.

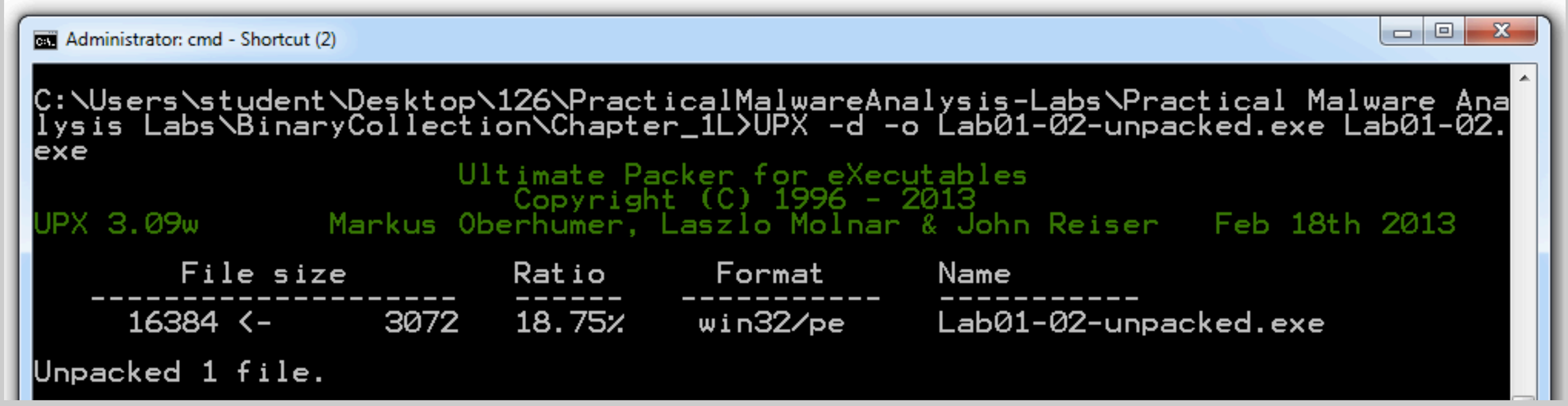
On my machine, I used this command:

```
cd "\Users\Administrator\Desktop\126\Practical Malware Analysis Labs\BinaryCollection\Chapter_1L"
```

Execute this command to unpack the file:

```
UPX -d -o Lab01-02-unpacked.exe Lab01-02.exe
```

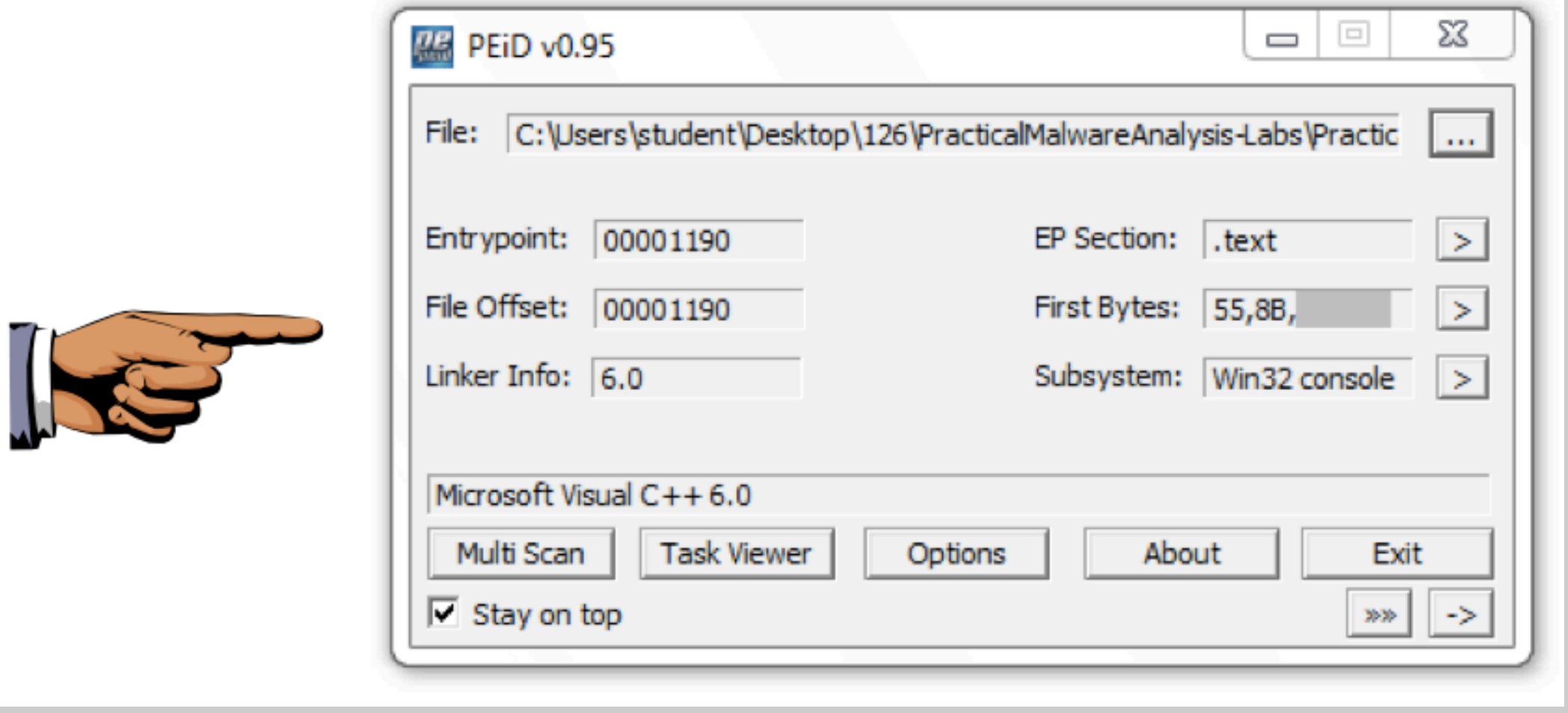
The file unpacks, as shown below:



Analyze the unpacked file with PEiD. It now is regognized as a "Microsoft Visual C++ 6.0" file, as shown below.

Turn in the image showing your analysis of **Lab01-02-unpacked.exe** as shown below.

We will grade it based on the "First Bytes".

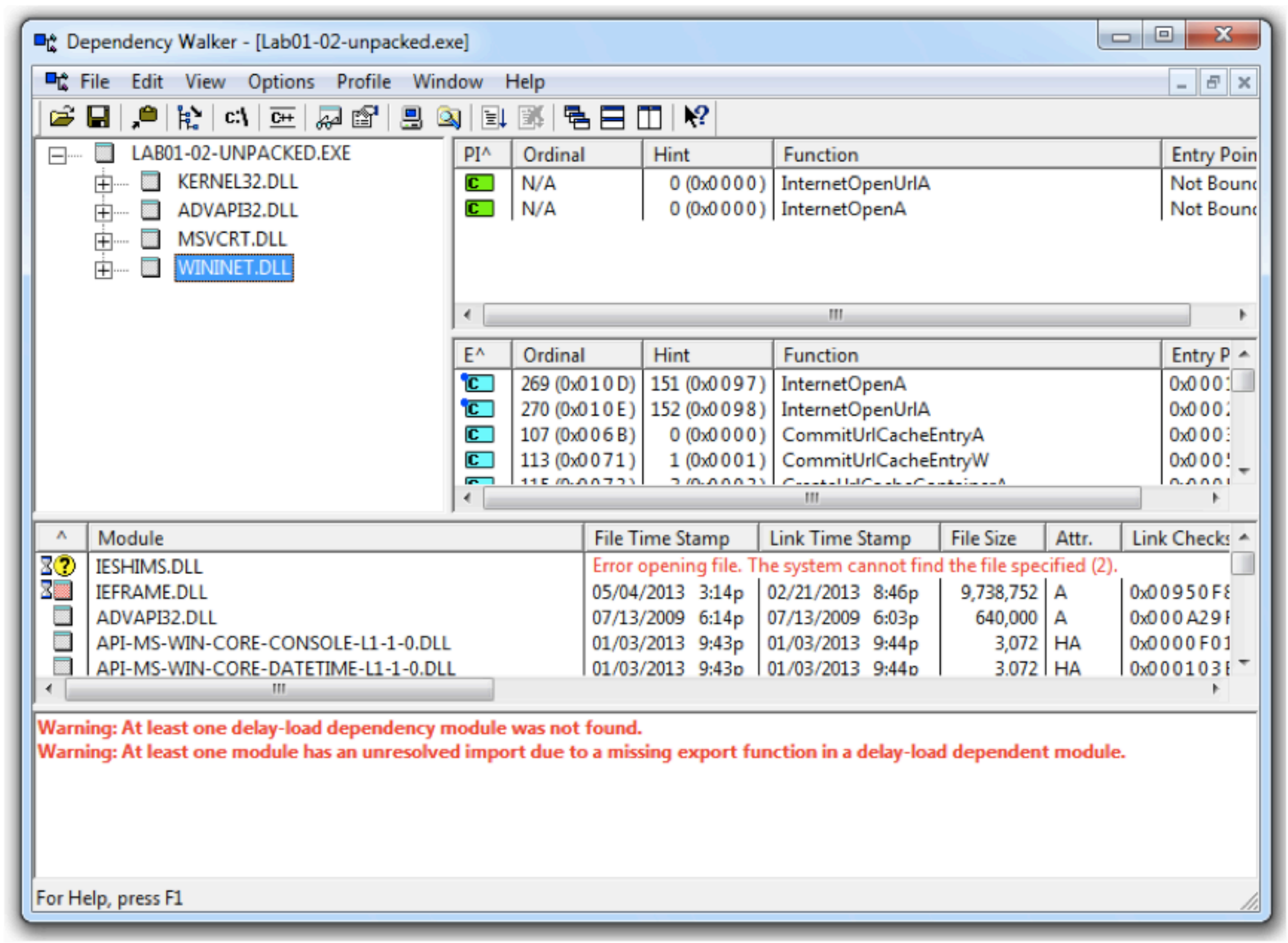


Save this image with the filename "**Proj 2b from YOUR NAME**".

Imports

Find the unpacked file's imports with Dependency Walker.

Turn in the image showing the two functions **InternetOpenUrlA** and **InternetOpenA** as shown in the upper right pane of the image below.



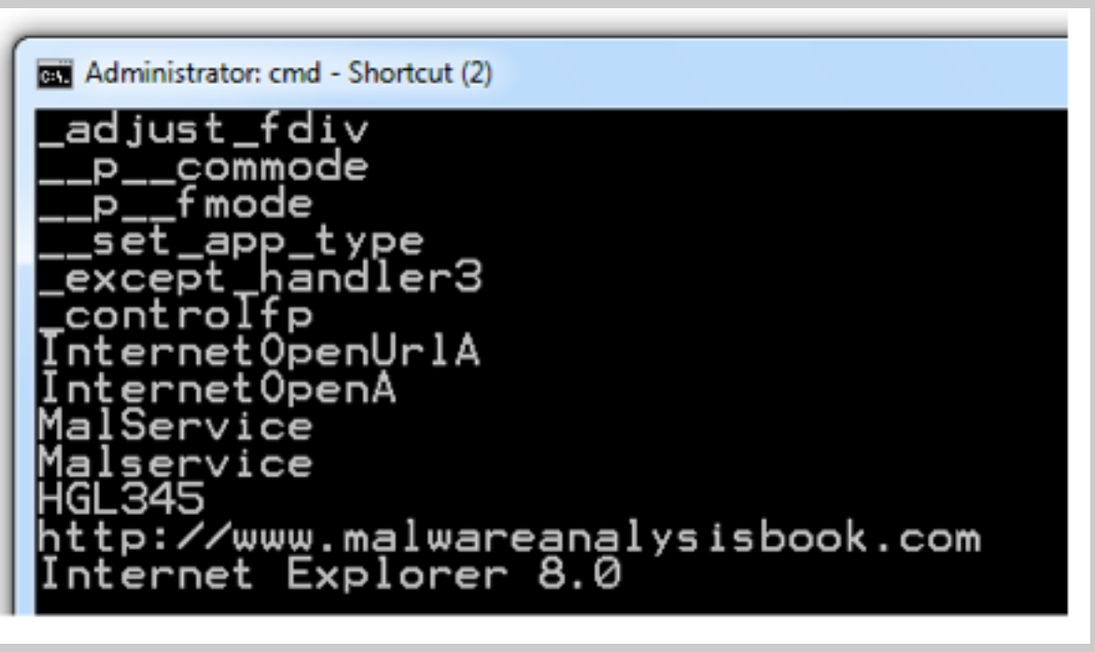
Save this image with the filename "**Proj 2c from YOUR NAME**".

Strings

Find the strings in the unpacked file.

You should see **MalService** and **http://www.malwareanalysisbook.com** as shown below.

These suggest that infected machines will connect to **http://www.malwareanalysisbook.com** and will show a running service named **MalService**.



Save this image with the filename "**Proj 2d from YOUR NAME**".

Turning in your Project

Email the images to cnit.126sam@gmail.com with the subject line: **Proj 2 from YOUR NAME**

Last modified 2-2-16