Assignment Title: Paper #1

File Compression Data Hiding (WinRAR

by

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<u>**File Compression Data Hiding (WinRAR)**</u>

We need first to know what Steganography is. Is the practice of concealing a file, message, image or video within another file, message, image or video. Steganography is what we are accomplishing. They are numerous ways to hide data nowadays. However, we are going to utilize How to hide data with file compression using WinRAR. This is a guide with steps to follow to hide data in file compression and to know how simple it is as well any differences to the original file.

<u>**File Compression Data Hiding (WinRAR)**</u>

Background environment: Utilizing a Windows Laptop with Windows 10 Pro version 1903. The WinRAR version is 5.80 beta 3.

We first need to create an empty folder, in which you can name anything you want (avoid using spaces in your name). I would name the folder "Hidden". Inside the created folder, you will need to add a text file. You can name your text file anything of your chosen (avoid using spaces), I will name my text file "Secret". Inside the text file, you can write anything. Finally save the text file.
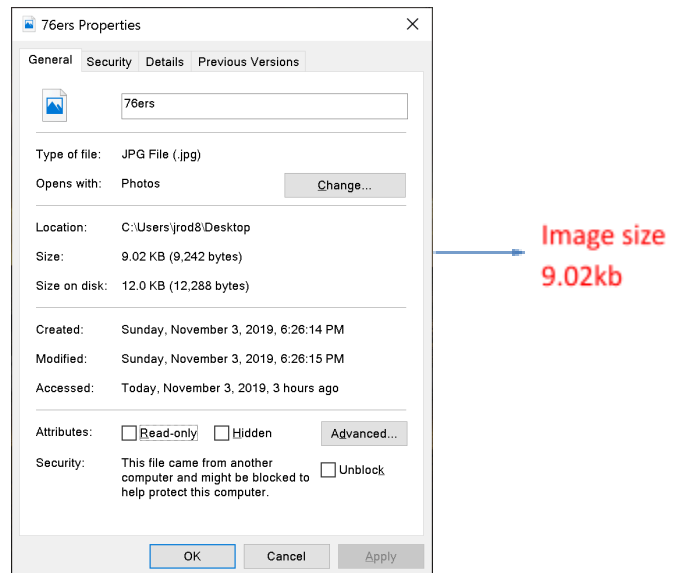
Figure 1.1
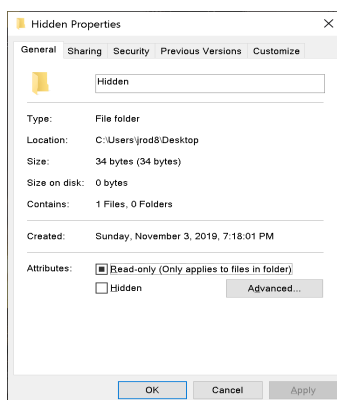
Folder size is 34 bytes

The next step is to get a JPEG picture online or one from your computer. For this purpose, I will be utilizing my favorite basketball team logo of the Philadelphia 76ers. The simplest way is to have an image save on your desktop. The image name is "76ers".

Figure 2.1 JPEG Image   Figure 2.2 JPEG Information

Next step. Open the file Compression software WinRAR.

File Compression is essentially, a compressed file is a sort of archive that contains one or more files that have been reduced in size. Since these files are smaller, they can be stored without taking up much space.

Following the step, we need to convert our folder "Hidden" to a RAR file by simply adding it in the WinRAR archives.

Figure 2.1
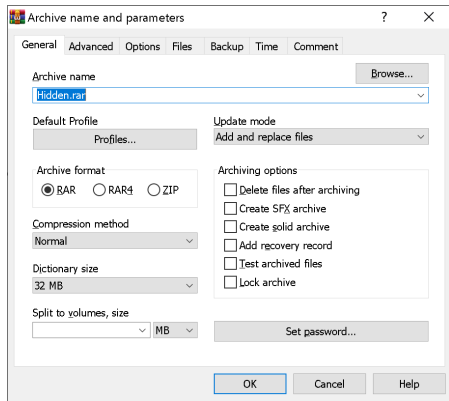
You will notice your new "Hidden" rar file on your desktop.

You will now need to launch your command prompt and write a simple command in order to place your "Hidden" file and your JPEG image together.

In the command prompt you need to first change the directory you are looking at. You can do this by typing "cd Desktop" without the quotations.

Now type in "copy /b 76ers.jpg + Hidden.rar (Hidden76ers) The last name I renamed the file for comparison reasons. You can choose not to rename the file.

Figure 3.1 command prompt
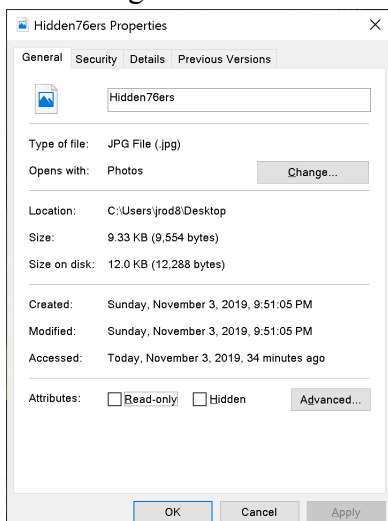

Figure 3.2 Comparison of the two images Hidden 76ers & 76ers
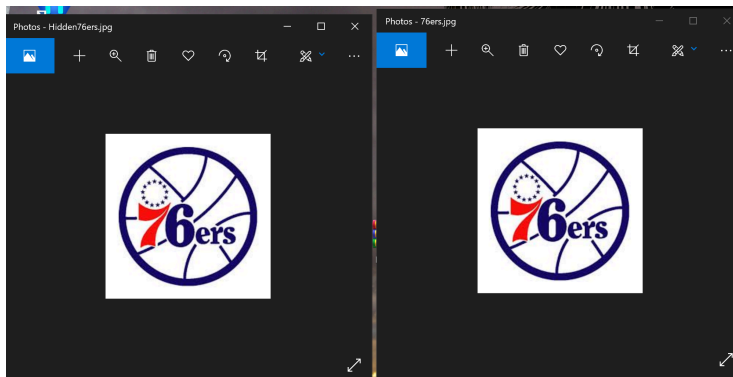
Now view the newly created steganography image properties to compare its size to the

original one.

Figure 3.3 Hidden76ers image properties

The new image size is 9.33 KB

If compare to the original which is 9.2 kb.

Now in order to view your hidden file, simply change the **file extension** from ".jpg to .rar"

A **File extension** sometimes called a file suffix or a filename extension, is the character or group of characters after the period that makes up an entire file name (Fisher,2019).

Finally, by changing the file extension you can view your hidden text you hide within the image. I

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