How to use Compression.jar

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How to launch the GUI

To launch the graphical user interface double click the `Compression.jar` file or type

```
java -jar Compression.jar
```

on the command line.

How to use it from the command line

Converting an image to a wtf file

Type

```
java -jar Compression.jar [lol] [imageName] [wtfFileName]
```

on command line, where

`[lol]`	is the level of loss of the conversion
`[imageName]`	is the name of the image file to be converted
`[wtfFileName]`	is the name of the file wtf file that will be written.

Example: To convert the file `img001.bmp` to a wtf file `picture.wtf`, with the level of loss 3, type

```
java -jar Compression.jar 3 img0001.bmp picture.wtf
```

NOTICE: The level of loss must be an integer between 0 and 20. Choosing 0 will produce a lossless transform.

NOTICE: The program is made for transforming bitmap images, but by coincidence it works for jpgs and pngs too.

Converting a wtf file to a bmp image

Type

```
java -jar Compression.jar [wtfFileName] [bmpFileName]
```

on command line, where

`[wtfFileName]` is the name of the wtf file to be converted
`[bmpFileName]` is the name of the bmp file that will be written.

Example: To convert a wtf file `picture.wtf` to a bitmap `amusingCat.bmp`, type

```
java -jar Compression.jar picture.wtf amusingCat.bmp
```

NOTICE: The program finds out by itself what is the wtf file's level of loss.

Converting an image to a series of wtf files

Type

```
java -jar Compression.jar [minLol] [maxLol] [imageName] [wtfProtoName]
```

on the command line, where

`[minLol]` The smallest level of loss of the files to be written
`[maxLol` The biggest level of loss of the files to be written
`[imageName]` The name of the image to be converted
`[wtfProtoName]` The start of the name of the files to be written.

Example: Typing

```
java -jar Compression.jar 3 8 img001.bmp transform
```

will result six files named `transform3.wtf`, `transform4.wtf`, ...,`transform8.wtf` whose levels of loss are 3,4,..., 8.

Converting a series of wtf files to a series of bitmap images

To convert the wtf files of the previous operation back to bmp files, type

```
java -jar Compression.jar inv [minLol] [maxLol] [wtfProtoName] [bmpProtoName]
```

on the command line, where

`[minLol]` is the smallest level of loss in the wtf files
`[maxLol]` is the biggest level of loss in the wtf files
`[wtfProtoName]` is the start of the name of the converted wtf files
`[bmpProtoName]` is the start of the name of the written bmp files.

Example: To convert files `transform5.wtf`, `transform6.wtf`, ...,`transform9.wtf` to bmp files with names `img5.bmp`, `img6.bmp`, ...,`img9.bmp`, type

```
java -jar Compression.jar inv 5 9 transform img
```

on the command line.

NOTICE: The numbers `minLol` to `[maxLol]` don't have to be the actual levels of loss of the files to be converted, they need to be however parts of their names. The program will find out the actual level of loss out by itself, regardless of the command line arguments.

NOTICE: You have to be careful, since this produces bmp files, and they are usually biggish.

Statistics of the transform

To do a series of transforms on a picture `img001.bmp` and record the statistics of it, type

```
java -jar Compression.jar writeStats img001.bmp
```

on the command line. This will produce a file `Stats-img001.txt` on the same folder.

NOTICE: The program will create and deleted temporary files `statTempWtfFile.wtf` and `statTempBmpFile.bmp`. If there are already files with those names, they will be overwritten and deleted.

NOTICE: The name of the statistics file is determined on the first dot in the picture's file name. Thus, if you run this line first on the file `june.img0001.bmp` and then to the file `june.img002.bmp`, the latter run will overwrite the statistics of the first one.

NOTICE: You have to be in the same folder as the picture to be analyzed. OTherwise writing of the statistics file breaks.

Help

To print the program's brief help menu, type

```
java -jar Compression.jar help
```