Unzipping and Zipping Files

As you are probably aware, files can be compressed to a zip format. Often people use special programs on their computer to unzip these files, luckily for us, Python can do the same task with just a few simple lines of code.

Create Files to Compress

```
In [1]:   # slashes may need to change for MacOS or Linux
          f = open("new_file.txt",'w+')
          f.write("Here is some text")
          f.close()
```

```
In [2]:   # slashes may need to change for MacOS or Linux
          f = open("new_file2.txt",'w+')
          f.write("Here is some text")
          f.close()
```

Zipping Files

The zipfile library is built in to Python, we can use it to compress folders or files. To compress all files in a folder, just use the os.walk() method to iterate this process for all the files in a directory.

```
In [3]:   import zipfile
```

Create Zip file first , then write to it (the write step compresses the files.)

```
In [4]:   comp_file = zipfile.ZipFile('comp_file.zip','w')
```

```
In [5]:   comp_file.write("new_file.txt",compress_type=zipfile.ZIP_DEFLATED)
```

```
In [6]:   comp_file.write('new_file2.txt',compress_type=zipfile.ZIP_DEFLATED)
```

```
In [7]:   comp_file.close()
```

Extracting from Zip Files

We can easily extract files with either the extractall() method to get all the files, or just using the extract() method to only grab individual files.

```
In [8]: zip_obj = zipfile.ZipFile('comp_file.zip','r')
```

```
In [9]: zip_obj.extractall("extracted_content")
```

Using shutil library

Often you don't want to extract or archive individual files from a .zip, but instead archive everything at once. The shutil library that is built in to python has easy to use commands for this:

```
In [13]: import shutil
```

The shutil library can accept a format parameter, `format` is the archive format: one of "zip", "tar", "gztar", "bztar", or "xztar".

```
In [14]: pwd
```

```
Out[14]: 'C:\\Users\\Marcial\\Pierian-Data-Courses\\Complete-Python-3-Bootcamp\\12-Advanced Python Mod
         ules'
```

```
In [15]: directory_to_zip='C:\\Users\\Marcial\\Pierian-Data-Courses\\Complete-Python-3-Bootcamp\\12-Ad
```

```
In [16]: # Creating a zip archive
         output_filename = 'example'
         # Just fill in the output_filename and the directory to zip
         # Note this won't run as is because the variable are undefined
         shutil.make_archive(output_filename,'zip',directory_to_zip)
```

```
Out[16]: 'C:\\Users\\Marcial\\Pierian-Data-Courses\\Complete-Python-3-Bootcamp\\12-Advanced Python Mod
         ules\\example.zip'
```

```
In [ ]: # Extracting a zip archive
        # Notice how the parameter/argument order is slightly different here
        shutil.unpack_archive(output_filename,dir_for_extract_result,'zip')
```