**Python Assignment 10**

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**1. How do you distinguish between shutil.copy() and shutil.copytree()?**

* **shutil.copy(src, dst)**: This function copies the file at the path **src** to the location specified by the path **dst**. If **dst** specifies a directory, the function will use the same filename as **src** for the new file. If **dst** specifies a file, the function will overwrite the file if it already exists. The function returns the path to the new file.
* **shutil.copytree(src, dst, symlinks=False, ignore=None)**: This function recursively copies the directory at the path **src** to the location specified by the path **dst**. If **dst** already exists, the function will raise an error. If **symlinks** are True, symbolic links in the source tree are copied as symbolic links in the new tree. If **ignore** is specified, it should be a callable that takes a directory name and a list of its contents and returns a list of the contents to ignore. The function returns the path to the newly created directory.

**2. What function is used to rename files?**

In Python, the **os.rename()** function is used to rename files. This function takes two arguments: the current name of the file and the new name for the file.

Here's an example of how to use **os.rename()**:

**os.rename(“firstname.txt”,”second.txt”)**

**3. What is the difference between the delete functions in the send2trash and shutil modules?**

The **shutil** module provides the **shutil.rmtree()** function, which is used to delete a directory and all of its contents. This function permanently deletes the files and directories, and they cannot be recovered once they have been deleted. For example:

import shutil  
shutil.rmtree('/path/to/directory')

**4.ZipFile objects have a** **close() method just like File objects’** **close() method. What ZipFile method is equivalent to File objects’ open() method?**

The **ZipFile** method equivalent to the **File** object's **open()** method is **ZipFile()** itself.

Just like the **open()** method is used to open a file, the **ZipFile()** method is used to open a ZIP archive file. Here's an example:

import zipfile  
  
# open a zip file  
with zipfile.ZipFile('archive.zip', 'r') as my\_zip:  
 # do something with the zip file

In this example, we use the **ZipFile()** method to open the ZIP archive file **archive.zip**. We pass **'r'** as the mode argument to indicate that we want to open the file in read mode. We then use a **with** block to ensure that the file is closed automatically when we are done with it.

Note that **ZipFile()** can also be used to create new ZIP archives or to open existing archives in write mode. The mode argument can be **'w'** for write mode, **'a'** for append mode, or **'x'** for exclusive creation mode.

**5. Create a programme that searches a folder tree for files with a certain file extension (such as .pdf or .jpg). Copy these files from whatever location they are into a new folder.**

