

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

`shutil.copy()` is used to copy a single file from one location to another. On the other hand, `shutil.copytree()` is used to recursively copy an entire directory tree from one location to another.

2. What function is used to rename files??

The function used to rename files is `os.rename()` in the `os` module.

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

The delete functions in the `send2trash` and `shutil` modules differ in their approach to deleting files:

`send2trash` module's `send2trash()` function sends files to the operating system's trash or recycle bin instead of permanently deleting them.

`shutil` module's `shutil.rmtree()` function removes an entire directory tree permanently, including all files and subdirectories within it.

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

The equivalent of the `File` objects' `open()` method for `ZipFile` objects is the `ZipFile()` constructor, which is used to open and manipulate zip archive files.

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 in to a new folder.

```
import os
```

```
import shutil
```

```
def copy_files_by_extension(source_folder, target_folder, extension):
```

```
    if not os.path.exists(target_folder):
```

```
        os.makedirs(target_folder)
```

```
    for foldername, subfolders, filenames in os.walk(source_folder):
```

```
        for filename in filenames:
```

```
            if filename.endswith(extension):
```

```
                source_file = os.path.join(foldername, filename)
```

```
                target_file = os.path.join(target_folder, filename)
```

```
                shutil.copy(source_file, target_file)
```