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

2. What function is used to rename files??

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

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

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.

**ANS:  
1. `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. The `os.rename()` function is used to rename files in Python.**

**3. The delete functions in the `send2trash` and `shutil` modules differ in their behavior:**

**- `send2trash`: Sends files or directories to the system trash or recycle bin instead of permanently deleting them. This allows for potential recovery of deleted items.**

**- `shutil`: Provides functions like `shutil.rmtree()` to recursively delete directories and their contents or `shutil.remove()` to delete individual files permanently.**

**4. The equivalent method in ZipFile objects to File objects' `open()` method is `ZipFile()` itself. You use `ZipFile()` to create a new ZipFile object, just like you use `open()` to create a new File object.**

**5. Below is a Python program that searches a folder tree for files with a specific file extension and copies them to a new folder:**

**```python**

**import os**

**import shutil**

**def copy\_files\_with\_extension(source\_folder, destination\_folder, extension):**

**# Create the destination folder if it doesn't exist**

**if not os.path.exists(destination\_folder):**

**os.makedirs(destination\_folder)**

**# Traverse the folder tree**

**for foldername, subfolders, filenames in os.walk(source\_folder):**

**for filename in filenames:**

**# Check if the file has the desired extension**

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

**source\_file = os.path.join(foldername, filename)**

**# Copy the file to the destination folder**

**shutil.copy(source\_file, destination\_folder)**

**print(f"Copied '{filename}' to '{destination\_folder}'")**

**# Example usage:**

**source\_folder = "/path/to/source/folder"**

**destination\_folder = "/path/to/destination/folder"**

**extension = ".pdf" # Change this to the desired file extension**

**copy\_files\_with\_extension(source\_folder, destination\_folder, extension)**

**```**

**Replace `"/path/to/source/folder"` with the path to the folder where you want to start the search, `"/path/to/destination/folder"` with the path to the folder where you want to copy the files, and `".pdf"` with the desired file extension.**