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.

ANSWER

1. `shutil.copy(src, dst)` is used to copy a single file from the source (`src`) to the destination (`dst`). It does not create directories. `shutil.copytree(src, dst)` is used to recursively copy an entire directory tree from the source directory to the destination directory, including all files and subdirectories.

2. The function used to rename files is `os.rename(src, dst)`. It renames the file or directory specified by `src` to the name specified by `dst`.

3. The difference between the delete functions in the `send2trash` and `shutil` modules is in their behavior:

- `send2trash` is a module that sends files or directories to the system's trash or recycle bin, allowing for potential recovery. It is safer for user files, as items are not immediately deleted.

- `shutil` provides methods like `shutil.rmtree()` to delete directories and `os.remove()` to delete files. These functions permanently delete files and directories without sending them to the trash or recycle bin.

4. ZipFile objects' `close()` method is used to close the ZIP file, just like the `close()` method of File objects. The equivalent to File objects' `open()` method for ZipFile objects is the `zipfile.ZipFile(file, mode)` constructor, which is used to open a ZIP file.

5. Here's a Python program that searches for files with a specific file extension (e.g., `.pdf` or `.jpg`) in a folder tree and copies them to a new folder:

```python

import os

import shutil

# Source folder to search in

source\_folder = "source\_folder\_path"

# Destination folder to copy matching files

destination\_folder = "destination\_folder\_path"

# File extension to search for

file\_extension = ".pdf" # Change to the desired extension

# Create the destination folder if it doesn't exist

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

os.makedirs(destination\_folder)

# Recursively search for files with the specified extension

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

for filename in filenames:

if filename.endswith(file\_extension):

file\_path = os.path.join(foldername, filename)

# Copy the matching file to the destination folder

shutil.copy(file\_path, destination\_folder)

```

Make sure to replace `"source\_folder\_path"`, `"destination\_folder\_path"`, and `".pdf"` with your specific source folder, destination folder, and file extension. This program uses `os.walk()` to traverse the directory tree and `shutil.copy()` to copy matching files to the destination folder.