

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.

Answers:

1. The shutil.copy() function is used to copy a single file from one location to another, while shutil.copytree() function is used to copy an entire directory and its contents to a new location.
2. The os.rename() function is used to rename files in Python.
3. The delete function in the shutil module permanently deletes files and folders, while the send2trash module sends files and folders to the system trash or recycle bin instead of permanently deleting them.
4. The equivalent ZipFile method to File objects' open() method is the ZipFile() function. It is used to open a ZIP archive and returns a ZipFile object.
5. Here is an example program that searches a folder tree for files with the .txt extension and copies them to a new folder:

```
python
import os
import shutil

def find_and_copy_files(source_folder, dest_folder, extension):
    # Create destination folder if it doesn't exist
    if not os.path.exists(dest_folder):
        os.mkdir(dest_folder)
    # Walk through source folder and its subdirectories
    for root, dirs, files in os.walk(source_folder):
        for file in files:
            # Check if the file has the desired extension
            if file.endswith(extension):
                # Create the full path of the file
                source_file = os.path.join(root, file)
                # Create the full path of the destination file
                dest_file = os.path.join(dest_folder, file)
                # Copy the file to the destination folder
                shutil.copy(source_file, dest_file)
                print(f"Copied {file} to {dest_folder}")
```

To use the function, call it with the source folder, destination folder, and extension as arguments. For example:

```
python
find_and_copy_files('C:\\\\Users\\\\User\\\\Documents\\\\',
'C:\\\\Users\\\\User\\\\Desktop\\\\Text_Files\\\\', '.txt')
```

This will search for all files with the .txt extension in the user's Documents folder and its subdirectories, and copy them to the Text_Files folder on the user's desktop.