

# **PYTHON ASSIGNMENT 10**

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

Shutil module in Python: It provides many functions of high-level operations on files and collections of files under Python's standard utility modules. It helps in automating the process of copying and removal of files and directories.

`shutil.copy()` method in Python: It is employed to repeat the content of source file to destination file or directory. It also preserves the file's permission mode but other metadata of the file just like the file's creation and modification times isn't preserved.

The source must represent a file but destination is often a file or a directory. If the destination may be a directory then the file is going to be copied into the destination using the bottom filename from the source. Also, a destination must be writable. If destination may be a file and already exists then it'll get replaced with the source file otherwise a replacement file is going to be created.

Syntax: `shutil.copy(source, destination, *, follow_symlinks = True)`

Python `shutil.copytree()` method

`shutil.copytree()` method recursively copies a whole directory tree rooted at source (src) to the destination directory. The destination directory, named by (dst) must not exist already. it'll be created during copying.

Permissions and times of directories are copied using `copystat()`.

Individual files are copied using `shutil.copy2()`.

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

Renaming files in Python is done using `os.rename()` function in the OS module. It takes two arguments: the current name of the file or directory and the new name.

The following is the fundamental syntax:

```
os.rename(current_file_name, new_file_name)
```

It should be noted that the `os.rename()` function only works with files and folders in the same directory. If you want to rename a file or directory in another directory, include the entire path to the file or directory in both the current and new file name parameters.

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

The `send2trash` functions will move a file or folder to the recycle bin, while `shutil` functions will permanently delete files and folders.

- 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.ZipFile() function is equivalent to the open() function; the first argument is the filename, and the second argument is the mode to open the ZIP file in (read, write, or append).

- 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, shutil
```

```
sourcePath = input('Enter the absolute path of the source folder: ')
```

```
fileExtType = input('Enter the type of file to copy (such as .pdf or .jpg): ').lower()
```

```
destPath = input('Enter the absolute path of the destination folder: ')
```

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

```
    for filename in filenames:
```

```
        if filename.lower().endswith(fileExtType):
```

```
            #print(foldername + '\\ ' + filename)
```

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

```
            #print(copySourcePath)
```

```
            shutil.copy(copySourcePath, destPath)
```

```
        else:
```

```
            continue
```