Assignment 10 Solutions

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

ANS: shutil.copy() method is used to copy the contents of a file from one file to another file/folder, it primary takes two arguments **src**,**dest**,**src** represents the file to be copied where as destination refers to the file/folder to where the **src** data should be copied, if **dest** is a folder name the **src** will be copied to **dest** where **dest** retains it name.

shutil.copytree() function is used to copy the entire contents of a folder to other folder. it also takes two arguments **src** & **dest**, it copies all the content recursively and stores it in **dest**. the important catch here is **dest** must not exist prior to this and it will be created during the copy operation.Permissions and times of directories are copied with **shutil.copystat()** and individual files are copied using **shutil.copy2()** by default which can be modified using **copy_function** atrribute.

2. What function is used to rename files??

ANS: os.rename() function is used to rename files or directories using a python program, this function takes two arguments **src** and **dest**, **src** represents the name file/directory which we want to rename, whereas **dest** represents the new name of the file/directory.

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

ANS: Shutil module provides a function called as **shutil.rmtree()** which deletes a directory and all its contents. The other functions with similar functionality are **os.remove()** -> removes a file,**os.rmdir()** removes a empty directory.The problem with these functions is once a file is deleted.it will be lost permanently,if a file is deleted accidentally using these methods there is no way we can recover the deleted file

Where as send2trash module provides a function called **send2trash.send2trash()** to delete a file/directory. these methods moves the files/directories to trash folder insted of permanently deleting them. hence if a file/folder is deleted accidentally it can be still recoverd from trash folder,if is deleted using the **send2trash.send2trash()** function.**send2trash** is not included with python standard libary like **os.** & **shutil** modules.it needs to be installed explicitly using the command **!pip install send2trash**

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

ANS: ZipFile Module provides a method called as **zipfile.ZipFile()** to read and write to zipFiles.it takes arguments lile filename and mode etc

zipfile.Zipfile('filename', mode = 'r')

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

In [2]:

```
import os
import shutil

def search_and_copy(source,destination,extensions):
    source = os.path.abspath(source)
    destination = os.path.abspath(destination)
    for foldername, subfolder, filenames in os.walk(source):
        print(f'Folder Name → {foldername}',end='\n\n')
        print(f'Sub Folders → {subfolder}',end='\n\n')
        print(f'Files → {filenames}',end='\n\n')
        for filename in filenames:
            fileName,extension = os.path.splitext(filename)
            if extension in extensions:
                targetFile = foldername+os.path.sep+fileName+extension
                shutil.copy(targetFile, destination)
        print(f'Files copied successfully from {source} to {destination}')

extensions = ['.pdf','.jpg','.ipynb']
source = 'Dummy Source'
destination = 'Dummy Destination'
search_and_copy(source, destination, extensions)
```