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

Ans. Shutil,copy() method is used to copu the contents of a file from one file to another file.older ,it primary take two arguments src and dest, src represents the file to be copied here as destination refers to the file/folder to wher the src data should be copied, if dest is a folder name the src with exact name will be copied to the dest folder, if it’s a file then the contents of src will be copied to dest where dest retains it name.

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 funciton 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 instead of permanently deleting them. hence if a file/folder is deleted accidentally it can be still recovered 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 arugments 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.

Ans.

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)