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

shutil.copy(src, dst): This function is used to copy a single file from the source (src) to the destination (dst).

shutil.copytree(src, dst): This function is used to recursively copy an entire directory from the source (src) to the destination (dst).

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

The shutil module in Python provides the shutil.move(src, dst) function to rename files. Although the primary purpose of shutil.move() is to move files or directories, it can also be used to rename files by providing a new destination path with a different file name.

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

send2trash module: The send2trash module provides a safe way to delete files or directories by sending them to the operating system's recycle bin or trash rather than permanently deleting them.

shutil module: The shutil module in Python provides the shutil.rmtree() function to delete directories and their contents recursively. It permanently deletes the specified directory and all its files and subdirectories.

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

the open() method for file objects is equivalent to the ZipFile() function for ZipFile objects when it comes to opening and working with ZIP archives.

**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

import shutil

def search\_and\_copy\_files(source\_folder, destination\_folder, file\_extension):

# Create the destination folder if it doesn't exist

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

os.makedirs(destination\_folder)

# Walk through the source folder tree and copy matching files to the destination folder

for root, \_, files in os.walk(source\_folder):

for file in files:

if file.endswith(file\_extension):

source\_path = os.path.join(root, file)

destination\_path = os.path.join(destination\_folder, file)

shutil.copy2(source\_path, destination\_path)

print(f"File copied: {source\_path} -> {destination\_path}")

source\_folder = 'path/to/source/folder'

destination\_folder = 'path/to/destination/folder'

file\_extension = '.pdf'

search\_and\_copy\_files(source\_folder, destination\_folder, file\_extension)