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

Both used for copying files and directories, but have different functionalities.

`shutil.copy()` is used to copy a single file from one location to another. Syntax:

**shutil.copy(src\_file, dst\_file)**

Where, `src\_file` is source directory and ‘dst\_file` is destination directory. If destination file already exists, `shutil.copy()` overwrites it.

shutil.copytree() is used to copy a directory and its contents recursively to a new location. Syntax:

**shutil.copytree(src\_dir, dst\_dir)**

If the destination directory does not exist, shutil.copytree() creates it. If the destination directory already exists, shutil.copytree() raises an error.

In **summary**, **shutil.copy()** is used to **copy a single file**, while **shutil.copytree()** is used to copy a **directory** and **its** **contents**.

1. What function is used to rename files??

The `**os.rename()`** function is used to rename files. It takes two arguments: the current name of the file, and the new name that you want to give to the file. Here's an example:

**import os**

# Rename a file named 'old\_file.txt' to 'new\_file.txt'

**os.rename('old\_file.txt', 'new\_file.txt')**

This will rename the file old\_file.txt to new\_file.txt. **Note** that if the file new\_file.txt already exists, it will be overwritten by the renamed file.

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

In shutil module, we use `os.remove()` and `os.rmdir()` functions to permanently delete files and directories, respectively.

send2trash module sends the file or directory to the system trash or recycle bin instead of permanently deleting it.

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 method equivalent to File objects' open() method is **ZipFile()** which creates a new ZipFile object.

**import zipfile**

**with zipfile.ZipFile('example.zip', 'r') as zip:**

# do something with the ZipFile object

In this code, the ZipFile() method is used to create a new ZipFile object for the file 'example.zip' in read mode. The with statement ensures that the ZipFile object is properly closed after the code block is executed.

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**

# Set the source and destination directories

**src\_dir = '/path/to/source/folder'**

**dst\_dir = '/path/to/destination/folder'**

# Create the destination directory if it doesn't already exist

**if not os.path.exists(dst\_dir):**

**os.makedirs(dst\_dir)**

# Iterate through all the files in the source directory

**for filename in os.listdir(src\_dir):**

# Check if the file has the ".txt" extension

**if filename.endswith('.txt'):**

# Get the full path of the source file

**src\_path = os.path.join(src\_dir, filename)**

# Get the full path of the destination file

**dst\_path = os.path.join(dst\_dir, filename)**

# Copy the file to the destination directory

**shutil.copy(src\_path, dst\_path)**