ASSIGNMENT - 10(PYTHON)

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

shutil.copy() and shutil.copytree() are both functions in Python's shutil module used for copying files and directories respectively, but they serve different purposes:

shutil.copy():

This function is used to copy a single file from one location to another.
Syntax: shutil.copy(src, dst, *, follow_symlinks=True)
Parameters:
src: The path to the source file.
dst: The path to the destination file or directory.
follow_symlinks: If True, symbolic links are followed. Default is True.

shutil.copytree():

This function is used to recursively copy an entire directory tree from one location to another.
Syntax: shutil.copytree(src, dst, symlinks=False, ignore=None, copy_function=copy2, ignore_dangling_symlinks=False, dirs_exist_ok=False)
Parameters:
src: The path to the source directory.
dst: The path to the destination directory.
symlinks: If True, symbolic links are copied as symbolic links. Default is False.
ignore: A callable that will receive the directory being visited by copytree() and a list of its contents, including the names of directories and files, as arguments.
copy_function: The function used to copy each file. Default is copy2().
ignore_dangling_symlinks: If True, dangling symbolic links (symlinks that point to non-existent files) will be ignored. Default is False.
dirs_exist_ok: If True, ignore the FileExistsError raised if dst already exists and is a directory. Default is False.

2. What function is used to rename files??

The function used to rename files in Python is os.rename().

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

The difference lies in the behavior of these functions:

send2trash module: The send2trash module provides a cross-platform Python interface to send files and folders to the operating system's recycle bin or trash. The send2trash.send2trash() function moves files or directories to the recycle bin/trash, allowing for potential recovery.

shutil module: The shutil module contains the shutil.rmtree() function, which is used to delete an entire directory tree permanently, without the possibility of recovery.

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

The equivalent method in `ZipFile` objects to the `open()` method in file objects is the `ZipFile()` constructor. It is used to open or create a zip file.

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 copy_files_with_extension(src_folder, dest_folder, file_extension):
# Create the destination folder if it doesn't exist
if not os.path.exists(dest_folder):
os.makedirs(dest_folder)

# Walk through the source folder tree
for root, dirs, files in os.walk(src_folder):
for file in files:
# Check if file has the desired extension
if file.endswith(file_extension):
# Get the full path of the source file
src_file_path = os.path.join(root, file)
# Construct the destination file path
dest_file_path = os.path.join(dest_folder, file)
# Copy the file to the destination folder
```

```
            shutil.copy2(src_file_path, dest_file_path)
            print(f"Copied: {src_file_path} to {dest_file_path}")

# Example usage:
source_folder = "/path/to/source/folder"
destination_folder = "/path/to/destination/folder"
file_extension = ".pdf"  # Change to the desired file extension

copy_files_with_extension(source_folder, destination_folder, file_extension)
```