Assignment-10

1. How do you distinguish between shutil.copy() and shutil.copytree()?
   shutil.copy() is used for copying individual files,whereas shutil.copytree() is used for copying entire directory trees.

2. What function is used to rename files??
   os.rename() function can be used to rename files. This function is part of the built-in os module.

3. What is the difference between the delete functions in the send2trash and shutil modules?
   Difference between the delete functions in send2trash and shutil is that shutil permanently deletes files, while send2trash sends files to the operating system's trash or recycle bin, where they can be recovered if necessary.

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 to File objects' open() method for ZipFile objects in Python is the ZipFile() constructor.

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 into a new folder.

```
import os
import shutil

# Define the directory to search for files with a certain extension
directory = '/path/to/directory'

# Define the destination folder where the files will be copied to
destination_folder = '/path/to/destination/folder'

# Define the file extension to search for
file_extension = '.pdf'

# Create the destination folder if it doesn't already exist
if not os.path.exists(destination_folder):
    os.makedirs(destination_folder)

# Walk through the directory tree and search for files with the specified extension
for root, dirs, files in os.walk(directory):
    for file in files:
        if file.endswith(file_extension):
            # Construct the full path to the file
            file_path = os.path.join(root, file)

            # Copy the file to the destination folder
            shutil.copy(file_path, destination_folder)

            # Print a message to indicate which file was copied
            print(f"File '{file}' was copied to '{destination_folder}'")
```