Python basics assignments-10

1. The **shutil.copy()** function is used to copy a single file, while **shutil.copytree()** is used to copy an entire directory, including all subdirectories and files contained within it.
2. The **os.rename()** function is used to rename a file.
3. The **send2trash** module's **send2trash()** function moves files or directories to the trash, while **shutil.rmtree()** deletes a directory and all subdirectories and files contained within it. **shutil.rmtree()** is more permanent and does not allow for recovery, while **send2trash()** allows for recovery (depending on the system's trash implementation).
4. The **ZipFile.open()** method is equivalent to the **open()** method for File objects. It allows you to open a file within the zip archive for reading or writing.
5. Here is an example of a program that searches a folder tree for files with a certain file extension and copies them to a new folder:

import os

import shutil

def search\_and\_copy(src\_dir, dest\_dir, file\_ext):

# Walk the directory tree

for root, dirs, files in os.walk(src\_dir):

# Search for files with the specified extension

for file in files:

if file.endswith(file\_ext):

# Construct the full path to the file

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

# Copy the file to the destination directory

shutil.copy(src\_path, dest\_dir)

# Example usage: search for .pdf files in the '/src/docs' directory and copy them to '/dest/pdfs'

search\_and\_copy('/src/docs', '/dest/pdfs', '.pdf')