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import os

# print the path of the current file directory
print(os.getcwd())

# to change the current working directory
os.chdir(r"C:\Users\YOUSSEF\Desktop")

# =====

# print the files that exist in current working directory
print(os.listdir())

# print the files that exist in a specific path
print(os.listdir(r"D:\\"))

# =====

# create a new folder
os.mkdir("C:\\Users\\YOUSSEF\\Desktop\\Pythons")

# to create some folders [nested folders]
os.makedirs(r"C:\Users\YOUSSEF\Desktop\Hassan\Osama")

# =====

# to remove folders
os.rmdir(r"C:\\Users\\YOUSSEF\\Desktop\\Python")

# remove all folders that specified on the path
os.removedirs(r"C:\\Osama")

# =====

# create new folder
os.mkdir(r'C:\\Users\\YOUSSEF\\Desktop\\test')

# change the current working directory
os.chdir(r"C:\\Users\\YOUSSEF\\Desktop\\test")

# create folder in other folder
os.mkdir(r'C:\\Users\\YOUSSEF\\Desktop\\test\\Osama')

# Rename the folder
os.rename('Osama', "Hassan")

# =====

# create new folder
os.mkdir(r"C:\\Users\\YOUSSEF\\Desktop\\test")

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# change the current working directory
os.chdir(r"C:\\Users\\YOUSSEF\\Desktop\\test")

# to know information about text file
# info can be [file_size, file_mode, date_of_file]
print(os.stat("text.txt"))

# =====

import os

# this return Tuple: that contains 3 values:
# [1] path
# [2] all folders that exist in the path [and folders of all path]
# [3] files that exist in the folder [and files of the folders of all path]

for path, folders, files in os.walk(f"D:\\Applications"):
    print(f"Path ==> {path}")
    print(f"folders ==> {folders}")
    print(f"files ==> {files}")
    print("="*88)

# =====

import os

# create new folder
os.mkdir(r"C:\\Users\\YOUSSEF\\Desktop\\test")

# change the directory to the new folder
os.chdir(r"C:\\Users\\YOUSSEF\\Desktop\\test")

the_folder_name = input("enter the folder name: ")

# join method take 2 arguments
# [1] path
# [2] the new folder that will added

#join: used to join paths, or filenames
folder_name = os.path.join(os.getcwd(), the_folder_name)

# create new folder that take the path and the folder name
os.mkdir(folder_name)

# =====

import os

# True : folder exist
# False: folder not exist
# check if the folder exist or not
print(os.path.exists(r"C:\\Users\\YOUSSEF\\Desktop\\test\\osama"))

```

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# =====

import os

# False: not file
# True: is file
# check if the path is file or not
print(os.path.isfile(r"C:\\Users\\YOUSSEF\\Desktop\\test"))

# =====

import os

# False: folder
# True: not folder
# check if the path is folder or not
print(os.path.isdir(r"C:\\Users\\YOUSSEF\\Desktop\\test"))

# =====

import os

# to know more about os

# print all methods in os module
print(dir(os))

print("="*88)

# print all methods in os.path [path method]
print(dir(os.path))

print("="*88)

# if you want to know about spesific method
print(help(os.path.abspath))    # Return the absolute version of a path.

print("="*88)

# if you want to know about spesific method
print(help(os.path.relpath))    # Return a relative version of a path.

print("="*88)

# =====

```