PyCharm
PyCharm is python IDE (Integrated Development Environment), it is code editor provided by JetBrains
PyCharm provide good environment for developing python desktop applications/standalone applications and web applications
PyCharm is a editor, it is not python software
To work with pycharm, system required python software

How to download and install pycharm?
https://www.jetbrains.com/pycharm/download/#section=windows
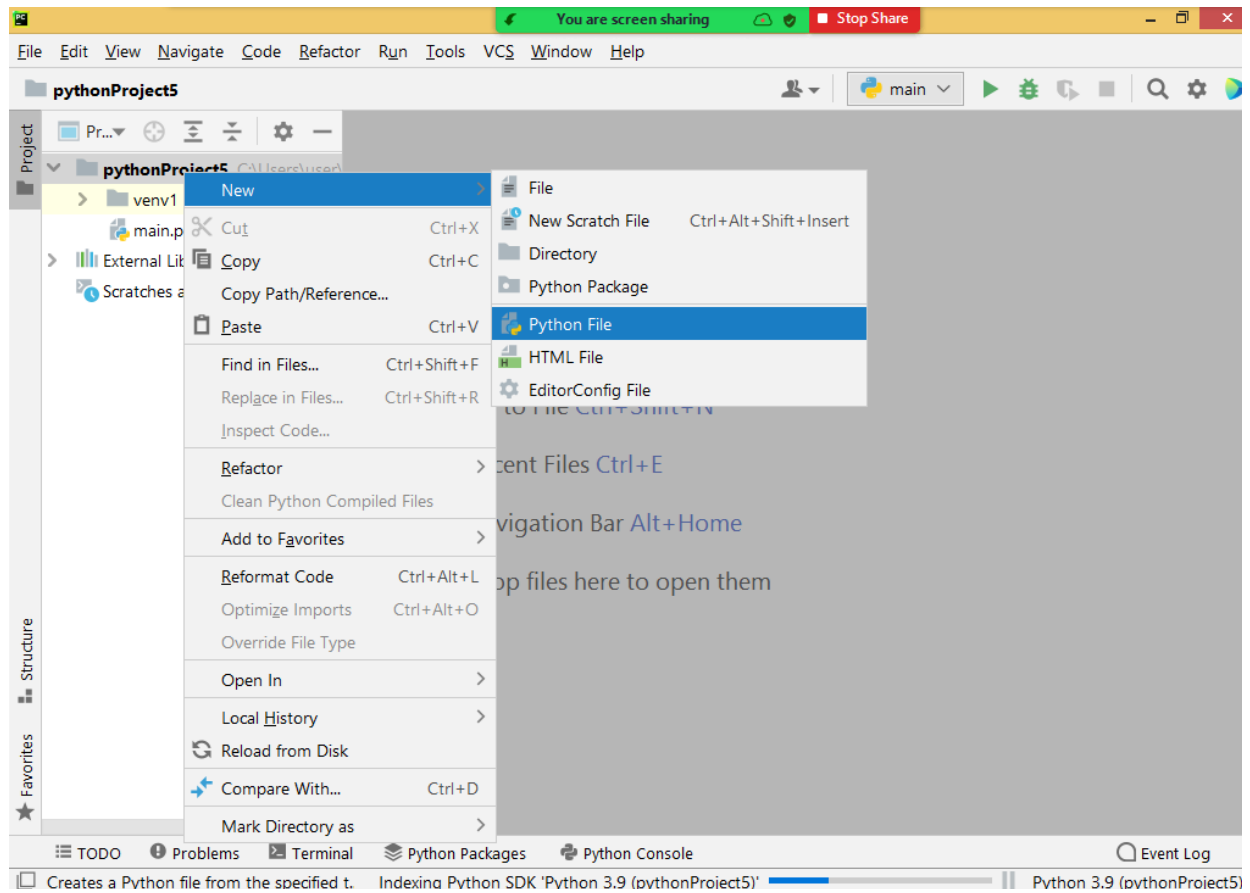

What is project?
A Project is collection of python programs/modules, packages and runtime environment (libraries, python software)

How to add python program into project?
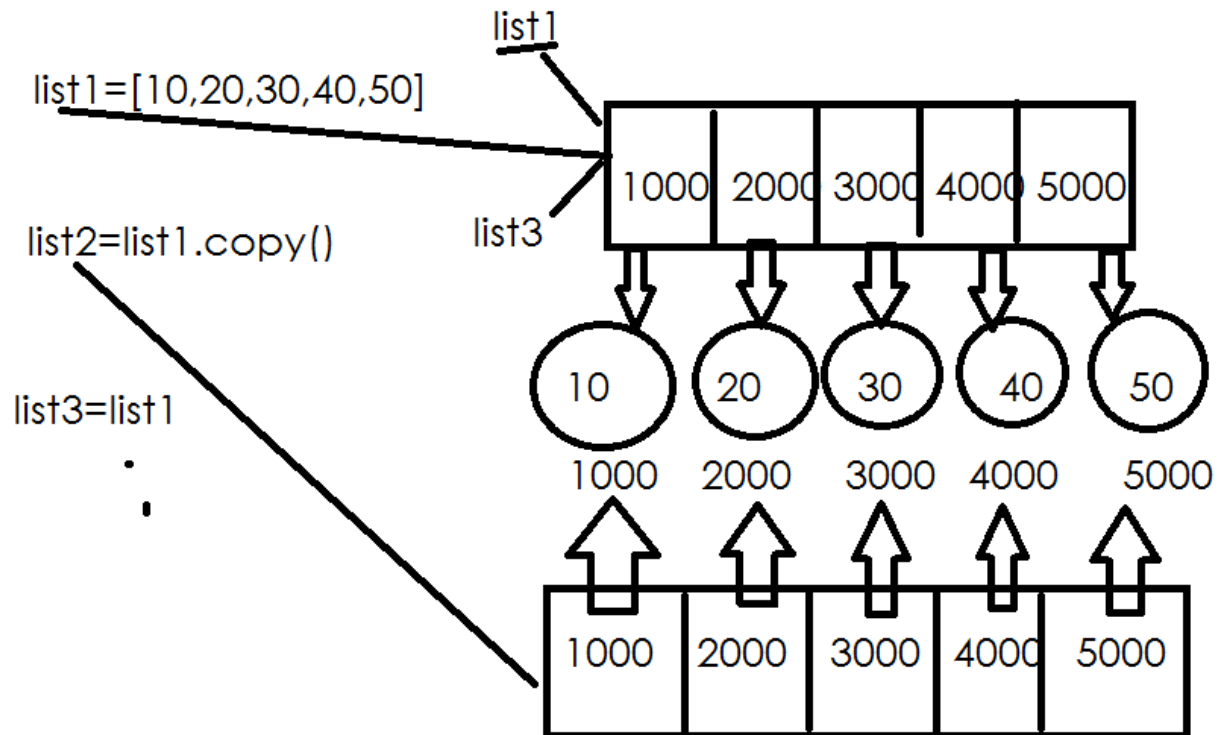
How to run the program?
Run ➔ Run (Alt+Shift+F10)

Copy

| s.copy() | creates a shallow copy of *s* |

1. Shallow copy
2. Deep Copy

What is shallow copy?
Shallow copy is a reference copy
It will create copy of the list by copying references of objects

list1=[10,20,30,40,50]

list2=list1.copy()

list3=list1

list1

list3

In shallow copy if there is any change done in list that changes reflect to another list

Example:
list1=[10,20,30,40,50]
list2=list1.copy()
print(list1,list2)

l1=[[10,20],30,40]
l2=l1.copy()
l1[0].append(50)
print(l1)
print(l2)
l2[0][0]=99
print(l1)
print(l2)

Output:
[10, 20, 30, 40, 50] [10, 20, 30, 40, 50]
[[10, 20, 50], 30, 40]
[[10, 20, 50], 30, 40]
[[99, 20, 50], 30, 40]
[[99, 20, 50], 30, 40]

Deep copy
Deep copy is object copy