VIRLIANA AR
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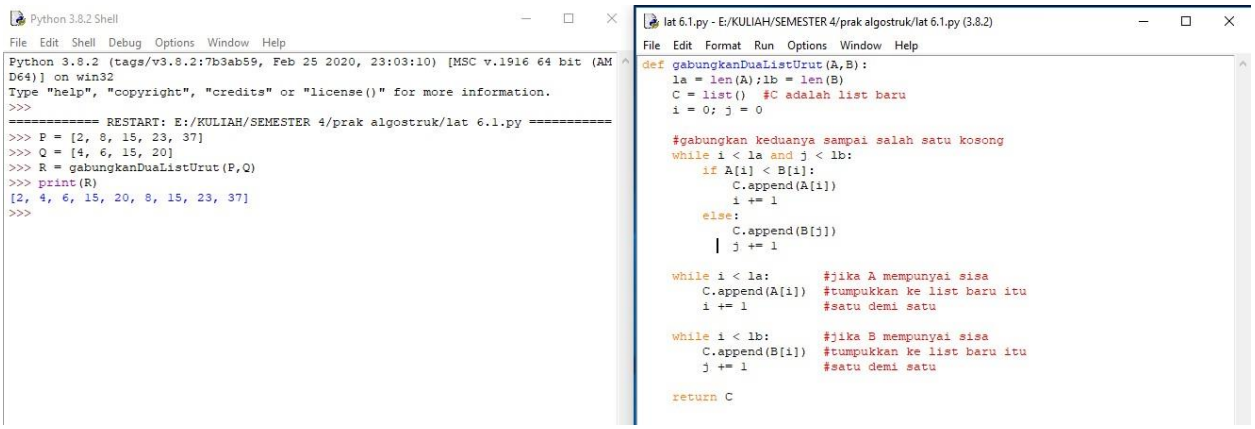
A

MODUL 6

LATIHAN

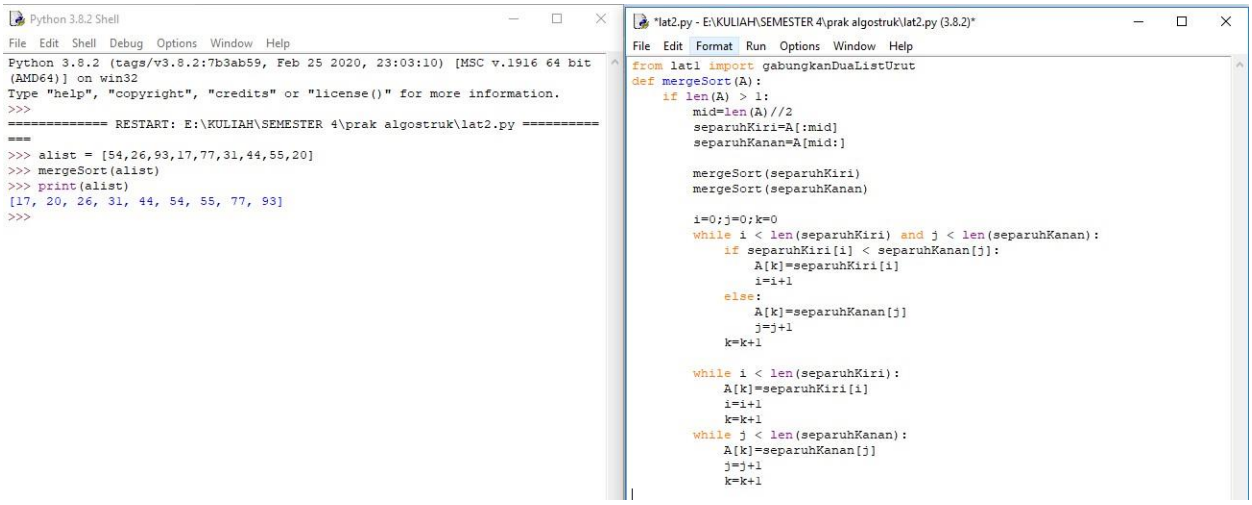
Latihan 6.1



```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:/KULIAH/SEMESTER 4/prak algostruk/lat 6.1.py ==========
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P,Q)
>>> print(R)
[2, 4, 6, 15, 20, 8, 15, 23, 37]
>>>
```

```
lat 6.1.py - E:/KULIAH/SEMESTER 4/prak algostruk/lat 6.1.py (3.8.2)
File Edit Format Run Options Window Help
def gabungkanDuaListUrut(A,B):
    la = len(A);lb = len(B)
    C = list()  #C adalah list baru
    i = 0; j = 0

    #gabungkan keduanya sampai salah satu kosong
    while i < la and j < lb:
        if A[i] < B[i]:
            C.append(A[i])
            i += 1
        else:
            C.append(B[j])
            j += 1

    while i < la:       #jika A mempunyai sisa
        C.append(A[i])  #tumpukkan ke list baru itu
        i += 1          #satu demi satu

    while i < lb:       #jika B mempunyai sisa
        C.append(B[i])  #tumpukkan ke list baru itu
        j += 1          #satu demi satu

    return C
```

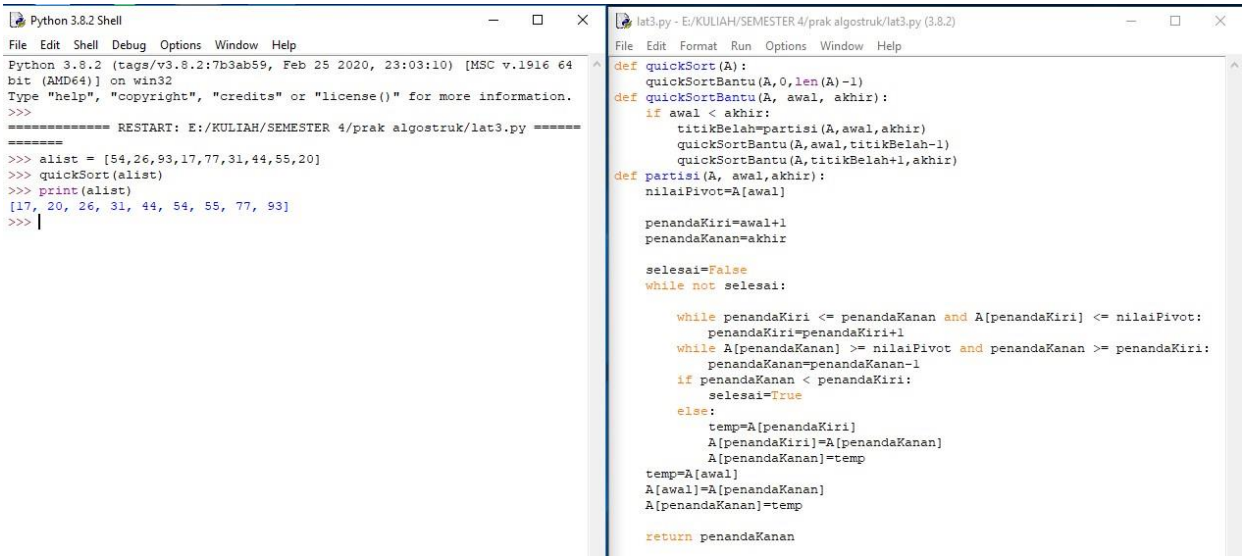
Latihan 6.2



```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\KULIAH\SEMESTER 4\prak algostruk\lat2.py ==========
===
>>> alist = [54,26,93,17,77,31,44,55,20]
>>> mergeSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 77, 93]
>>>
```

```
*lat2.py - E:\KULIAH\SEMESTER 4\prak algostruk\lat2.py (3.8.2)*
File Edit Format Run Options Window Help
from lat1 import gabungkanDuaListUrut
def mergeSort(A):
    if len(A) > 1:
        mid=len(A)//2
        separuhKiri=A[:mid]
        separuhKanan=A[mid:]

        mergeSort(separuhKiri)
        mergeSort(separuhKanan)

        i=0;j=0;k=0
        while i < len(separuhKiri) and j < len(separuhKanan):
            if separuhKiri[i] < separuhKanan[j]:
                A[k]=separuhKiri[i]
                i=i+1
            else:
                A[k]=separuhKanan[j]
                j=j+1
            k=k+1

        while i < len(separuhKiri):
            A[k]=separuhKiri[i]
            i=i+1
            k=k+1
        while j < len(separuhKanan):
            A[k]=separuhKanan[j]
            j=j+1
            k=k+1
```

Latihan 6.3



Python 3.8.2 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64
bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:/KULIAH/SEMESTER 4/prak algostruk/lat3.py ======
=======
>>> alist = [54,26,93,17,77,31,44,55,20]
>>> quickSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 77, 93]
>>>
```

lat3.py - E:/KULIAH/SEMESTER 4/prak algostruk/lat3.py (3.8.2)

File Edit Format Run Options Window Help

```
def quickSort(A):
    quickSortBantu(A,0,len(A)-1)
def quickSortBantu(A, awal, akhir):
    if awal < akhir:
        titikBelah=partisi(A,awal,akhir)
        quickSortBantu(A,awal,titikBelah-1)
        quickSortBantu(A,titikBelah+1,akhir)
def partisi(A, awal,akhir):
    nilaiPivot=A[awal]

    penandaKiri=awal+1
    penandaKanan=akhir

    selesai=False
    while not selesai:

        while penandaKiri <= penandaKanan and A[penandaKiri] <= nilaiPivot:
            penandaKiri=penandaKiri+1
        while A[penandaKanan] >= nilaiPivot and penandaKanan >= penandaKiri:
            penandaKanan=penandaKanan-1
        if penandaKanan < penandaKiri:
            selesai=True
        else:
            temp=A[penandaKiri]
            A[penandaKiri]=A[penandaKanan]
            A[penandaKanan]=temp
    temp=A[awal]
    A[awal]=A[penandaKanan]
    A[penandaKanan]=temp

    return penandaKanan
```