

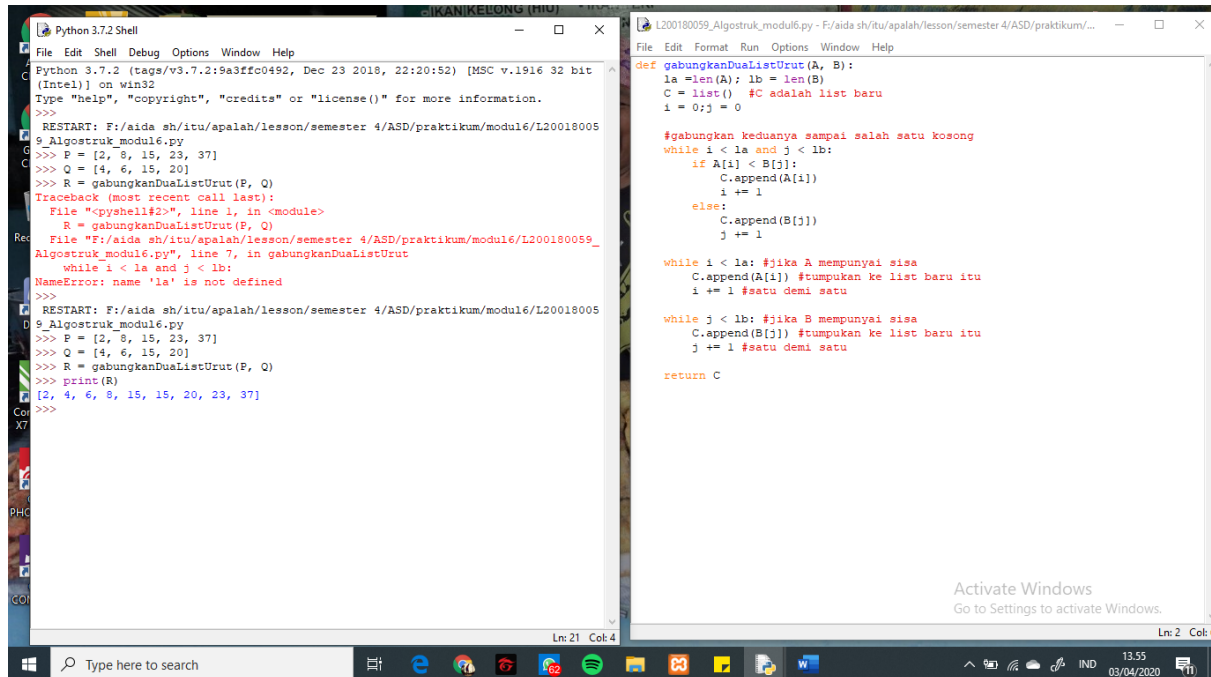
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NIM : L200180059

Kelas : C

Modul 6

1. Menggabungkan dua list yang sudahurut



The screenshot shows two windows. The left window is a Python 3.7.2 Shell with the following code and output:

```
Python 3.7.2 (tags/v3.7.2:9a3ffe0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P, Q)
Traceback (most recent call last):
  File "<pyshell#2>", line 1, in <module>
    R = gabungkanDuaListUrut(P, Q)
  File "F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
    Algostruk_modul6.py", line 7, in gabungkanDuaListUrut
    while i < la and j < lb:
NameError: name 'la' is not defined
>>>
RESTART: F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P, Q)
>>> print(R)
[2, 4, 6, 8, 15, 15, 20, 23, 37]
```

The right window shows the script `L200180059_Algostruk_modul6.py` with the following code:

```
def gabungkanDuaListUrut(A, B):
    la = len(A); lb = len(B)
    C = list() #C adalah list baru
    i = 0; j = 0

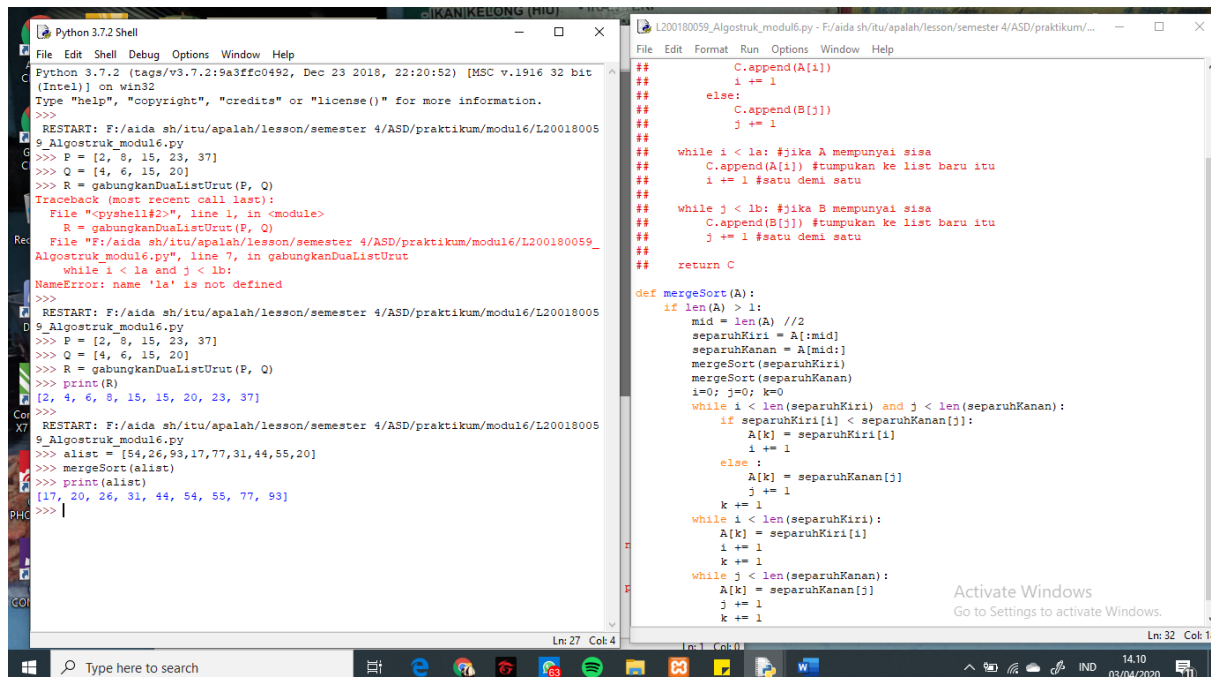
    #gabungkan keduanya sampai salah satu kosong
    while i < la and j < lb:
        if A[i] < B[j]:
            C.append(A[i])
            i += 1
        else:
            C.append(B[j])
            j += 1

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

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

    return C
```

2. Merge sort



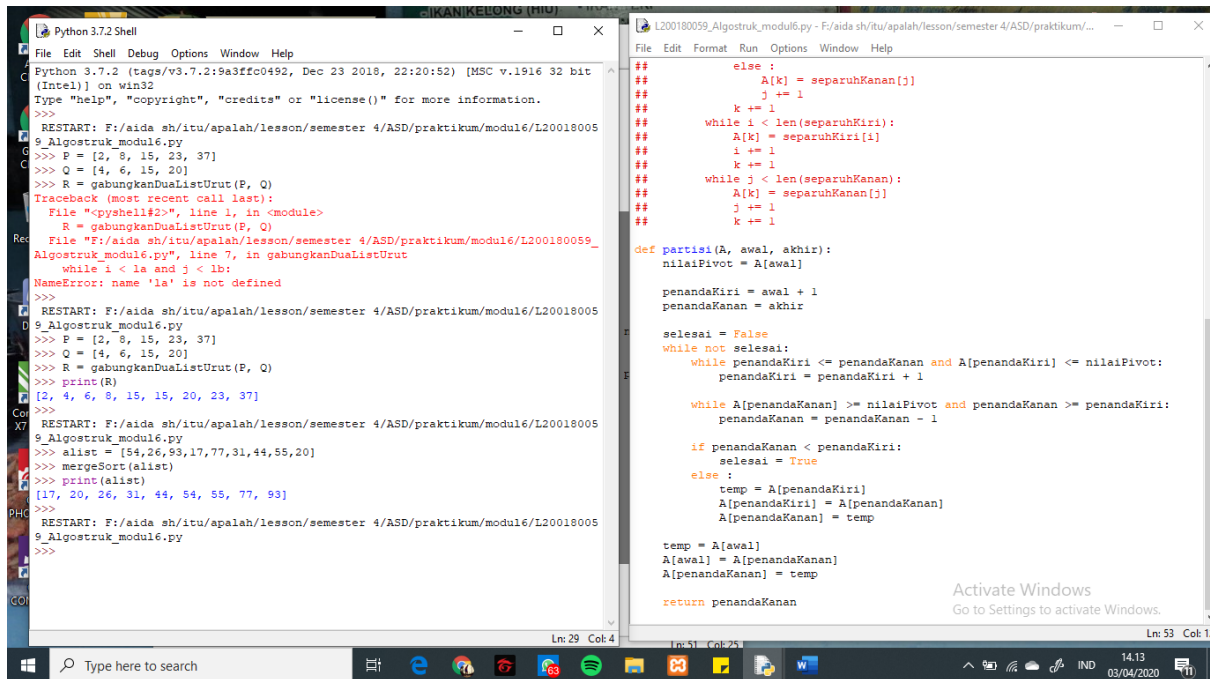
The screenshot shows two windows. The left window is a Python 3.7.2 Shell with the following code and output:

```
Python 3.7.2 (tags/v3.7.2:9a3ffe0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P, Q)
Traceback (most recent call last):
  File "<pyshell#2>", line 1, in <module>
    R = gabungkanDuaListUrut(P, Q)
  File "F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
    Algostruk_modul6.py", line 7, in gabungkanDuaListUrut
    while i < la and j < lb:
NameError: name 'la' is not defined
>>>
RESTART: F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P, Q)
>>> print(R)
[2, 4, 6, 8, 15, 15, 20, 23, 37]
>>>
RESTART: F:/aida sh/itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059
>>> alist = [54, 26, 93, 17, 77, 31, 44, 55, 20]
>>> mergeSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 77, 93]
```

The right window shows the script `L200180059_Algostruk_modul6.py` with the following code:

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

3. Quick sort



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: F:\aida sh\itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L20018005
9_Algostruk_modul6.py
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P, Q)
Traceback (most recent call last):
  File "<pyshe11#2>", line 1, in <module>
    R = gabungkanDuaListUrut(P, Q)
  File "F:\aida sh\itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L200180059_
Algostruk_modul6.py", line 7, in gabungkanDuaListUrut
    while i < la and j < lb:
NameError: name 'la' is not defined
>>>
RESTART: F:\aida sh\itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L20018005
9_Algostruk_modul6.py
>>> P = [2, 8, 15, 23, 37]
>>> Q = [4, 6, 15, 20]
>>> R = gabungkanDuaListUrut(P, Q)
>>> print(R)
[2, 4, 6, 8, 15, 15, 20, 23, 37]
>>>
RESTART: F:\aida sh\itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L20018005
9_Algostruk_modul6.py
>>> alist = [54,26,93,17,77,31,44,55,20]
>>> mergeSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 77, 93]
>>>
RESTART: F:\aida sh\itu/apalah/lesson/semester 4/ASD/praktikum/modul6/L20018005
9_Algostruk_modul6.py
>>>
```

```
L200180059_Algostruk_modul6.py - F:\aida sh\itu/apalah/lesson/semester 4/ASD/praktikum/...
File Edit Format Run Options Window Help
##
##     else :
##         A[k] = separuhKanan[j]
##         j += 1
##         k += 1
##     while i < len(separuhKiri):
##         A[k] = separuhKiri[i]
##         i += 1
##         k += 1
##     while j < len(separuhKanan):
##         A[k] = separuhKanan[j]
##         j += 1
##         k += 1
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
Activate Windows
Go to Settings to activate Windows.
```