Nama : Defa Raffy Zanuar R

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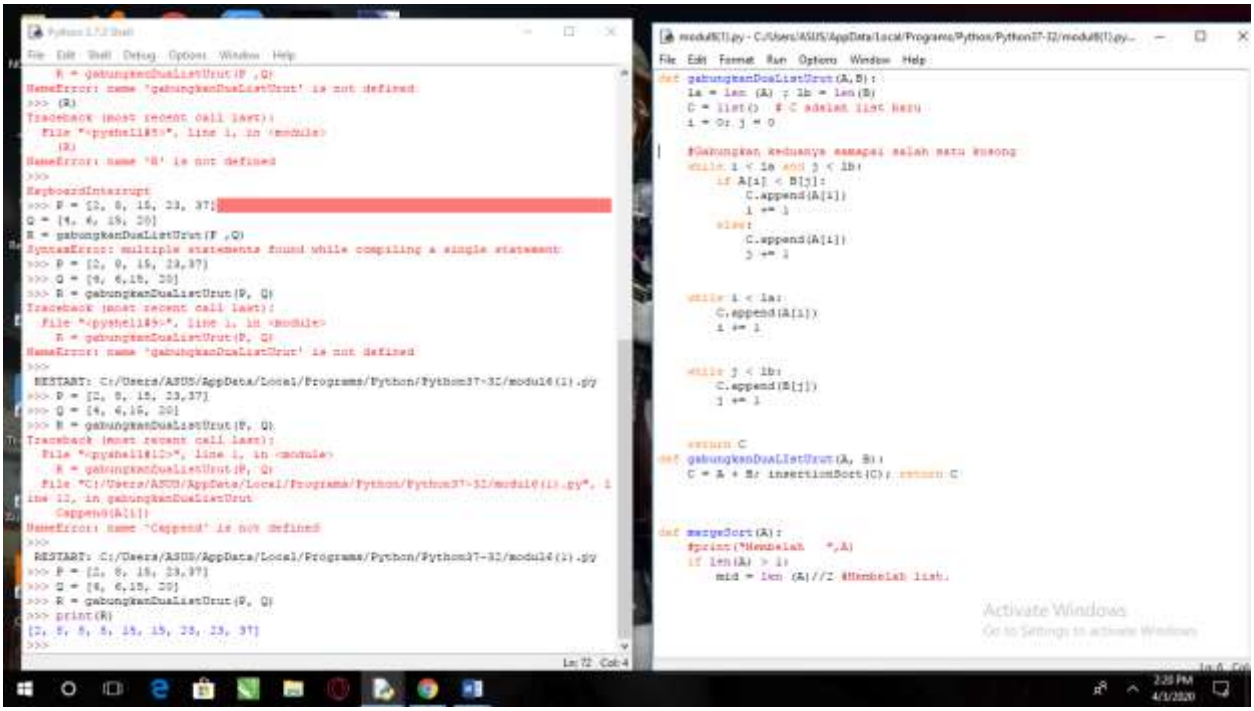
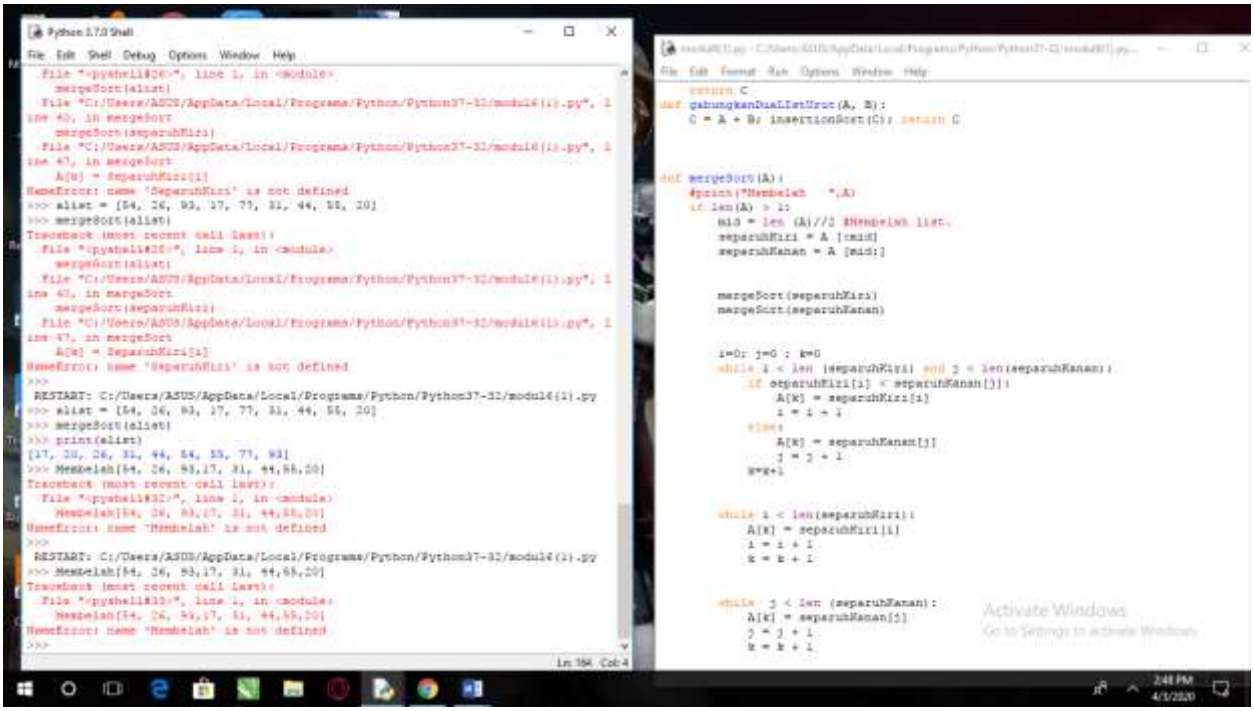
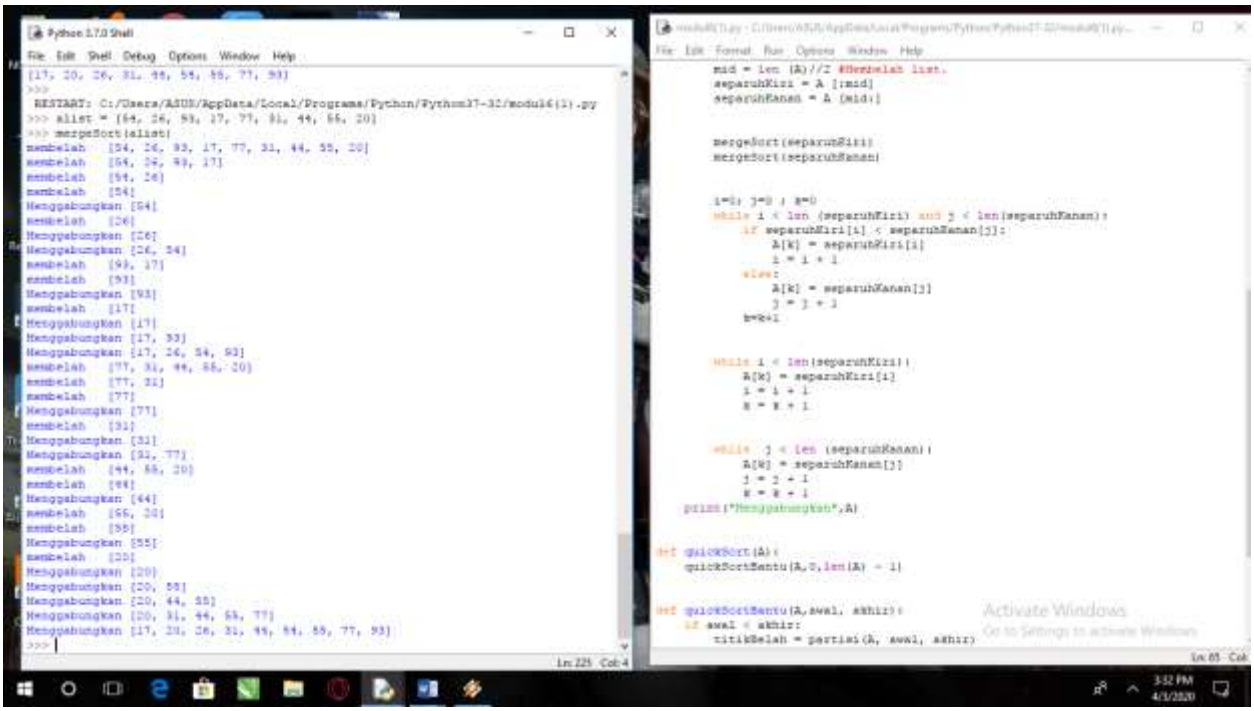
Kelas : C

Modul 6

Praktikum

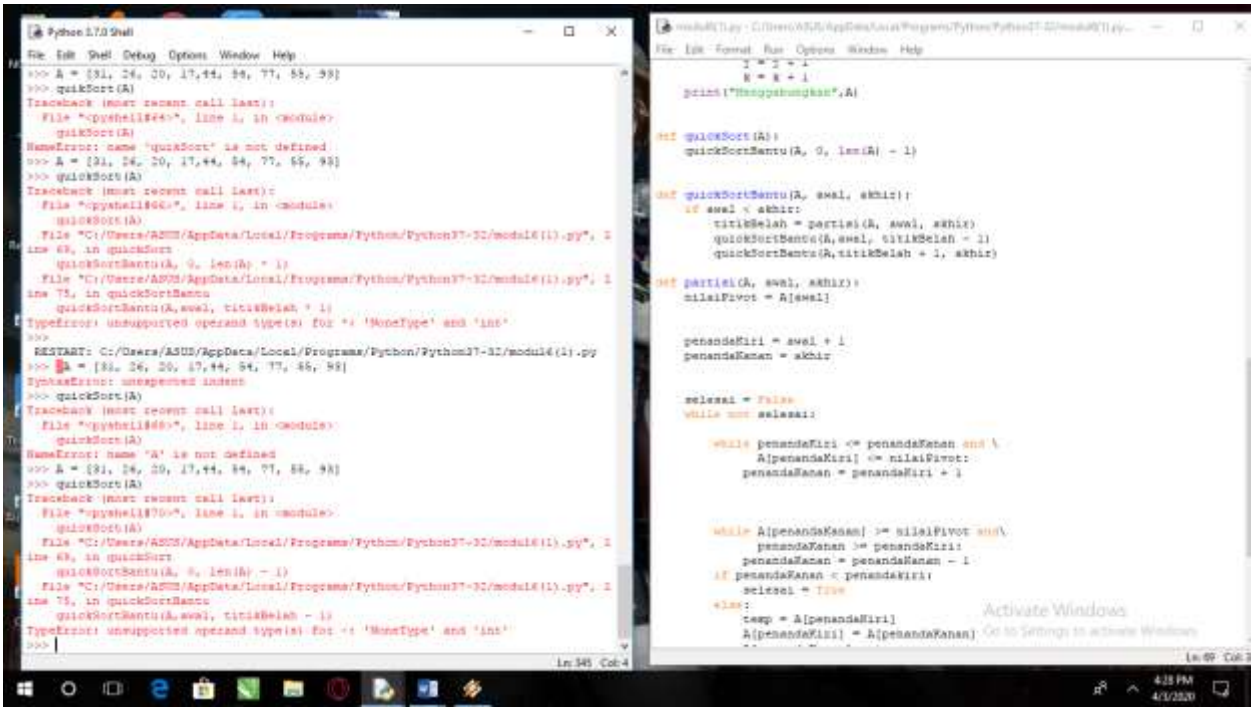






```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
[17, 20, 26, 31, 44, 54, 55, 77, 93]
>>>
 RESTART: C:/Users/ASUS/AppData/Local/Programs/Python/Python37-32/module6(1).py
>>> alist = [54, 26, 93, 17, 77, 31, 44, 55, 20]
>>> mergeSort(alist)
membelah  [54, 26, 93, 17, 77, 31, 44, 55, 20]
membelah  [54, 26, 93, 17]
membelah  [54, 26]
membelah  [54]
Menggabungkan [54]
membelah  [26]
Menggabungkan [26]
Menggabungkan [26, 54]
membelah  [93, 17]
membelah  [93]
Menggabungkan [93]
membelah  [17]
Menggabungkan [17]
Menggabungkan [17, 93]
Menggabungkan [17, 26, 54, 93]
membelah  [77, 31, 44, 55, 20]
membelah  [77, 31]
membelah  [77]
Menggabungkan [77]
membelah  [31]
Menggabungkan [31]
Menggabungkan [31, 77]
membelah  [44, 55, 20]
membelah  [44]
Menggabungkan [44]
membelah  [55, 20]
membelah  [55]
Menggabungkan [55]
membelah  [20]
Menggabungkan [20]
Menggabungkan [20, 55]
Menggabungkan [20, 44, 55]
Menggabungkan [20, 31, 44, 55, 77]
Menggabungkan [17, 20, 26, 31, 44, 54, 55, 77, 93]
>>>
```

```
        mid = len (A)//2 #Membelah list.
        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
    print("Menggabungkan",A)


def quickSort(A):
    quickSortBantu(A,0,len(A) - 1)


def quickSortBantu(A,awal, akhir):
    if awal < akhir:
        titikBelah = partisi(A, awal, akhir)
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>> A = [31, 26, 20, 17,44, 54, 77, 55, 93]
>>> quickSort(A)
Traceback (most recent call last):
  File "<pyshell#44>", line 1, in <module>
    quickSort(A)
NameError: name 'quickSort' is not defined
>>> A = [31, 26, 20, 17,44, 54, 77, 55, 93]
>>> quickSort(A)
Traceback (most recent call last):
  File "<pyshell#46>", line 1, in <module>
    quickSort(A)
  File "C:/Users/ASUS/AppData/Local/Programs/Python/Python37-32/module6(1).py", l
ine 69, in quickSort
    quickSortBantu(A, 0, len(A) - 1)
  File "C:/Users/ASUS/AppData/Local/Programs/Python/Python37-32/module6(1).py", l
ine 75, in quickSortBantu
    quickSortBantu(A,awal, titikBelah - 1)
TypeError: unsupported operand type(s) for -: 'NoneType' and 'int'
>>>
 RESTART: C:/Users/ASUS/AppData/Local/Programs/Python/Python37-32/module6(1).py
>>> A = [31, 26, 20, 17,44, 54, 77, 55, 93]
SyntaxError: unexpected indent
>>> quickSort(A)
Traceback (most recent call last):
  File "<pyshell#48>", line 1, in <module>
    quickSort(A)
NameError: name 'A' is not defined
>>> A = [31, 26, 20, 17,44, 54, 77, 55, 93]
>>> quickSort(A)
Traceback (most recent call last):
  File "<pyshell#50>", line 1, in <module>
    quickSort(A)
  File "C:/Users/ASUS/AppData/Local/Programs/Python/Python37-32/module6(1).py", l
ine 69, in quickSort
    quickSortBantu(A, 0, len(A) - 1)
  File "C:/Users/ASUS/AppData/Local/Programs/Python/Python37-32/module6(1).py", l
ine 75, in quickSortBantu
    quickSortBantu(A,awal, titikBelah - 1)
TypeError: unsupported operand type(s) for -: 'NoneType' and 'int'
>>>
```

```
            j = j + 1
            k = k + 1
    print("Menggabungkan",A)


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:
            penandaKanan = 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]
```