Latihan 6.1

```
 1  #Latihan 6.1
 2  def gabungkanDuaListUrut(A,B):
 3      la=len(A); lb=len(B)
 4      C=list()
 5      i=0; j=0
 6
 7      while i < la and j < lb:
 8          if A[i] < B[j]:
 9              C.append(A[i])
10              i += 1
11          else:
12              C.append(A[i])
13              j += 1
14      while i < la:
15          C.append(A[i])
16          j += 1
17      while j < lb:
18          C.append(B[j])
19          j += 1
20      return C
```

Python 2.7.15 Shell   — □ ✕

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```
======= RESTART: C:/Users/ASUS/Downloads/idlex-1.18/idlex-1.18/lat6.py =======
>>> alist=[54,26,93,17,31,44,55,20]
>>> quickSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 93]
>>>
```

Latihan 6.2

```python
22 #Latihan 6.2
23 def mergeSort(A):
24     if len(A) > 1:
25         mid=len(A)//2
26         separuhKiri=A[:mid]
27         separuhKanan=A[mid:]
28
29         mergeSort(separuhKiri)
30         mergeSort(separuhKanan)
31
32         i=0;j=0;k=0
33         while i < len(separuhKiri) and j < len(separuhKanan):
34             if separuhKiri[i] < separuhKanan[j]:
35                 A[k]=separuhKiri[i]
36                 i=i+1
37             else:
38                 A[k]=separuhKanan[j]
39                 j=j+1
40             k=k+1
41
42         while i < len(separuhKiri):
43             A[k]=separuhKiri[i]
44             i=i+1
45             k=k+1
46         while j < len(separuhKanan):
47             A[k]=separuhKanan[j]
48             j=j+1
49             k=k+1
```

Python 2.7.15 Shell — □ ×

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```
>>> alist=[54,26,93,17,31,44,55,20]
>>> mergeSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 93]
>>>
```

Latihan 6.3

```python
51 #Latihan 6.3
52 def quickSort(A):
53     quickSortBantu(A,0,len(A)-1)
54 def quickSortBantu(A, awal, akhir):
55     if awal < akhir:
56         titikBelah=partisi(A,awal,akhir)
57         quickSortBantu(A,awal,titikBelah-1)
58         quickSortBantu(A,titikBelah+1,akhir)
59 def partisi(A, awal,akhir):
60     nilaiPivot=A[awal]
61
62     penandaKiri=awal+1
63     penandaKanan=akhir
64
65     selesai=False
66     while not selesai:
67
68         while penandaKiri <= penandaKanan and A[penandaKiri] <= nilaiPivot:
69             penandaKiri=penandaKiri+1
70         while A[penandaKanan] >= nilaiPivot and penandaKanan >= penandaKiri:
71             penandaKanan=penandaKanan-1
72         if penandaKanan < penandaKiri:
73             selesai=True
74         else:
75             temp=A[penandaKiri]
76             A[penandaKiri]=A[penandaKanan]
77             A[penandaKanan]=temp
78     temp=A[awal]
79     A[awal]=A[penandaKanan]
80     A[penandaKanan]=temp
81
82     return penandaKanan
83
```

Code Browser

```
Python 2.7.15 Shell

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>>>
>>> quickSort(alist)
>>> print(alist)
[17, 20, 26, 31, 44, 54, 55, 93]
>>>
```