Soal-soal untuk mahasiswa

Nomor 1

```
77 def urutNIM(a):
78     n=len(a)
79     for i in range(n):
80         nilai=a[i].NIM
81         pos=i
82         while pos > 0 and nilai < a[pos-1]:
83             a[pos]=a[pos-1]
84             pos=pos-1
85         a[pos] = nilai
86
```

Code Browser   Ln: 94

```
>>> urutNIM(daftar)
>>> daftar
[2, 4, 5, 13, 18, 23, 29, 31, 51, 64]
>>>
```

Nomor 2

```
88 def AB(a,b):
89     c=a+b
90     n=len(c)
91     for i in range(1,n):
92         nilai=c[i]
93         pos=i
94         while pos > 0 and nilai < c[pos-1]:
95             c[pos]=c[pos-1]
96             pos=pos-1
97         c[pos] = nilai
98     return c
99
```

Code Browser   Ln: 94

```
>>> a=[1,2,3,4,5,6,7]
>>> b=[8,9,10,11,12,13]
>>> AB(a,b)
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]
>>>
```

Nomor 3

```
101 from time import time as detak
102 from random import shuffle as kocok
103 k=range(1,6001)
104 kocok(k)
105 u_bub=k[:]
106 u_sel=k[:]
107 u_ins=k[:]
108
109 aw=detak();bubbleSort(u_bub);ak=detak();print('bubble: %g detik' %(ak-aw) );
110 aw=detak();selectionSort(u_sel);ak=detak();print('selection: %g detik' %(ak-aw)
111 aw=detak();insertionSort(u_ins);ak=detak();print('insertion: %g detik' %(ak-aw)
```

Code Browser   Ln: 102 Co

```
>>>
==================== RESTART: C:\Python27\Lib\tgs5.py ====================
bubble: 6.464 detik
selection: 2.822 detik
insertion: 2.415 detik
>>>
```

Hasil yang didapatkan dari waktu pengurutan yang tercepat diatas adalah selection sort