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## 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 detik
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 Cc
>>>
===== 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**