

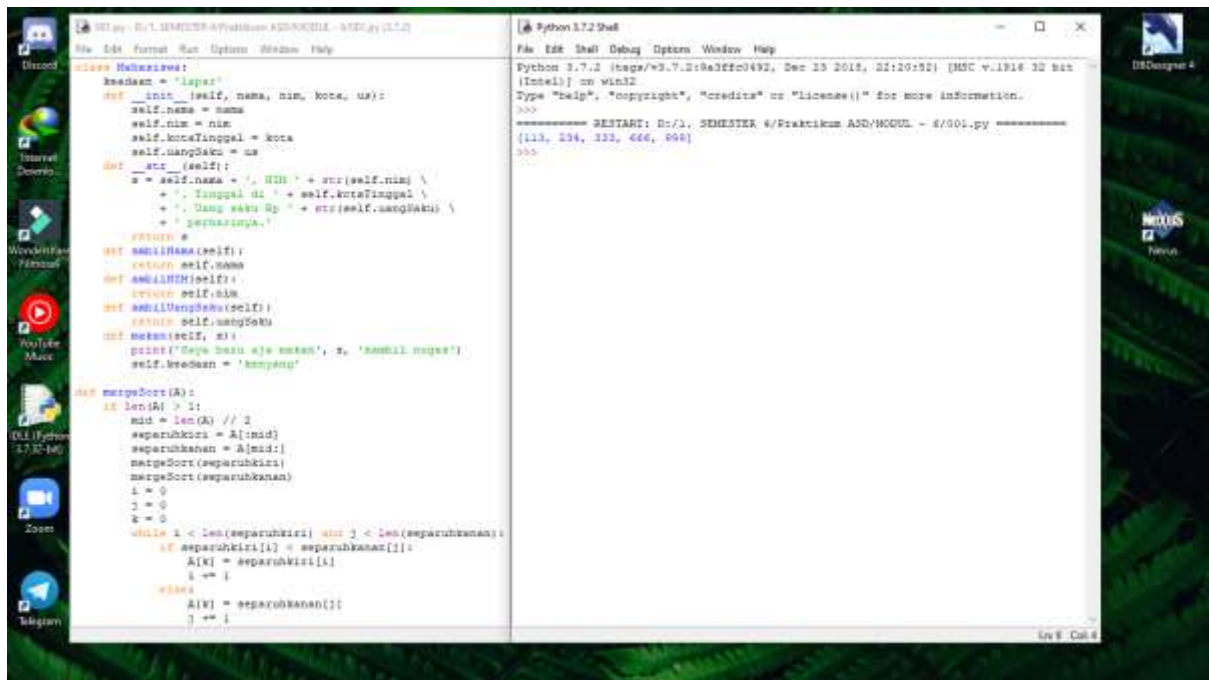
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Kelas : B

Nim : L200180031

Modul 6

Nomer 1

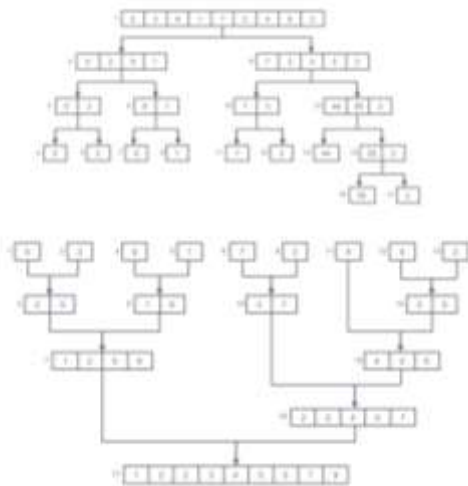


```
class Mahasiswa:
    kredoan = 'lapar'
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kotaTinggal = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', NIM ' + str(self.nim) \
            + ', tinggal di ' + self.kotaTinggal \
            + ', Uang saku Rp ' + str(self.uangSaku) \
            + ' perminggu.'
        return s
    def makan(self):
        print('Saya baru aja makan', self.kredoan)
        self.kredoan = ' kenyang'

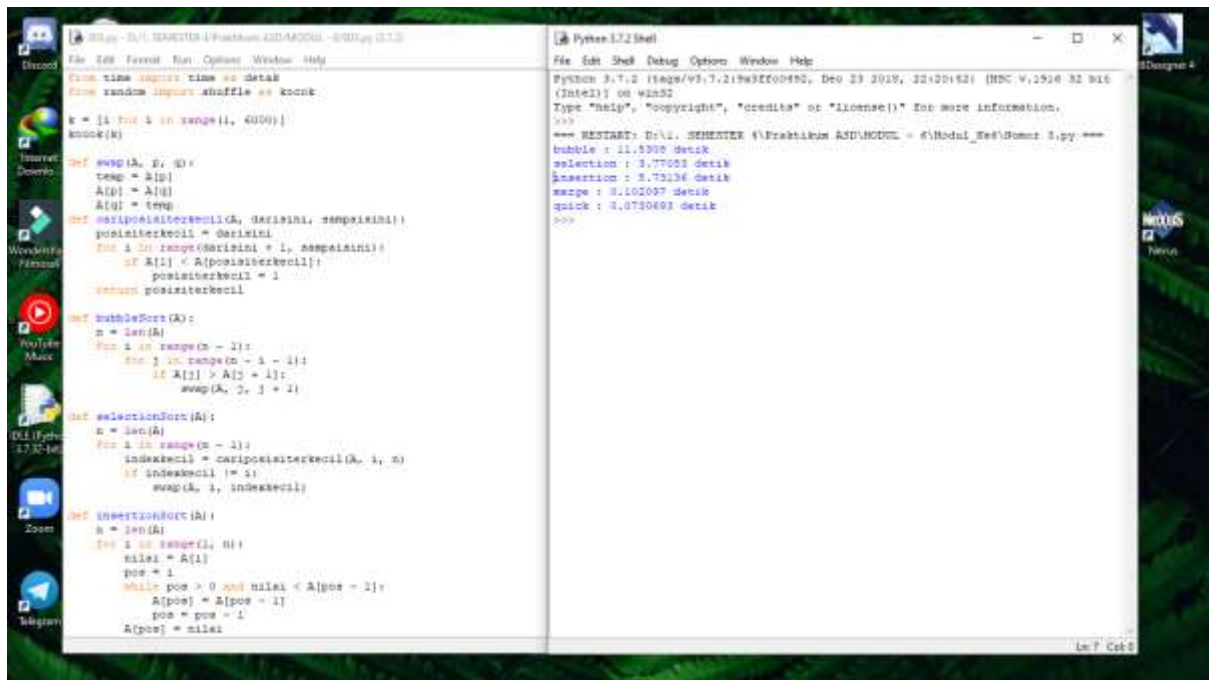
def mergeSort(A):
    if len(A) > 1:
        mid = len(A) // 2
        separuhkiri = A[:mid]
        separuhkanan = A[mid:]
        mergeSort(separuhkiri)
        mergeSort(separuhkanan)
        i = 0
        j = 0
        k = 0
        while i < len(separuhkiri) and j < len(separuhkanan):
            if separuhkiri[i] < separuhkanan[j]:
                A[k] = separuhkiri[i]
                i += 1
            else:
                A[k] = separuhkanan[j]
                j += 1
            k += 1
        A[k] = separuhkiri[i]
        j += 1
        k += 1
```

```
Python 3.7.2 Shell
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 13 2018, 21:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/1. SEMESTER 4/Praktikum ASD/Modul - 4/001.py =====
[113, 134, 133, 444, 998]
>>>
```

Nomer 2



Nomer 3



```

File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3f00490, Dec 23 2019, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: Shell ===
bubble : 11.5300 detik
selection : 3.77003 detik
insertion : 3.73136 detik
merge : 3.102097 detik
quick : 3.0730493 detik
>>>

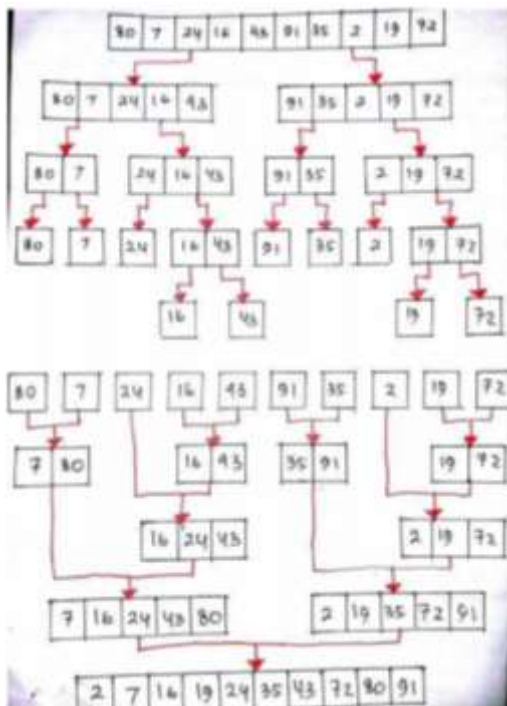
```

```

File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3f00490, Dec 23 2019, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: Shell ===
bubble : 11.5300 detik
selection : 3.77003 detik
insertion : 3.73136 detik
merge : 3.102097 detik
quick : 3.0730493 detik
>>>

```

Nomer 4



Nomer 5

```

IDGapp - D:\1. SEMESTER 4\Praktikum ASD\MODUL - 6\IDGapp (3.7.0)
File Edit Format Run Options Window Help
def _merge_sort(indices, the_list):
    start = indices[0]
    end = indices[1]
    half_way = (end - start) // 2 + start
    if start < half_way:
        _merge_sort(start, half_way), the_list
    if half_way + 1 <= end and end - start != 1:
        _merge_sort(half_way + 1, end), the_list
    sort_sub_list(the_list, indices[0], indices[1])
    return the_list

def sort_sub_list(the_list, start, end):
    orig_start = start
    initial_start_second_list = (end - start) // 2 + start + 1
    list1_first_index = initial_start_second_list
    new_list = []
    while start < initial_start_second_list and list1_first_index <= end:
        first1 = the_list[start]
        first2 = the_list[list1_first_index]
        if first1 < first2:
            new_list.append(first1)
            list1_first_index += 1
        else:
            new_list.append(first2)
            start += 1
    while start < initial_start_second_list:
        new_list.append(the_list[start])
        start += 1
    while list1_first_index <= end:
        new_list.append(the_list[list1_first_index])
        list1_first_index += 1
    i = orig_start
    the_list[orig_start : end + 1] = new_list
    orig_start += 1
    return the_list

def merge_sort(the_list):
    return _merge_sort([0, len(the_list) - 1], the_list)

Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.1:ba3f00492, Dec 23 2019, 22:30:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\1. SEMESTER 4\Praktikum ASD\MODUL - 6\006.py =====
>>> print(merge_sort([6,44,444,3,33,333]))
[3, 4, 33, 44, 333, 444]
>>>

```

Nomer 6

```

IDGapp - D:\1. SEMESTER 4\Praktikum ASD\MODUL - 6\IDGapp (3.7.0)
File Edit Format Run Options Window Help
def quickSort(A):
    quickSorthelp(A, 0, len(A)-1)

def quickSorthelp(A, low, high):
    result = 0
    if low < high:
        pivot_location, result = Partition(A, low, high)
        result += quickSorthelp(A, low, pivot_location-1)
        result += quickSorthelp(A, pivot_location+1, high)
    return result

def Partition(A, low, high):
    result = 0
    pivot, pidx = median_of_three(A, low, high)
    A[low], A[pidx] = A[pidx], A[low]
    i = low + 1
    for j in range(low + 1, high + 1):
        result += 1
        if A[j] < pivot:
            A[i], A[j] = A[j], A[i]
            i += 1
    A[low], A[i-1] = A[i-1], A[low]
    return i - 1, result

def median_of_three(A, low, high):
    mid = (low + high + 1) // 2
    a = A[low]
    b = A[mid]
    c = A[high - 1]
    if a <= b <= c:
        return b, mid
    elif c <= b <= a:
        return b, mid
    elif a <= c <= b:
        return c, high - 1
    elif b <= c <= a:
        return c, high - 1
    return a, low

def test = [13, 8, 9, 124, 17, 129, 82]

Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.1:ba3f00492, Dec 23 2019, 22:30:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\1. SEMESTER 4\Praktikum ASD\MODUL - 6\006.py =====
>>> print(quickSort(test))
[8, 9, 13, 17, 82, 124, 129]
>>>

```

Nomer 8

