

LAPORAN ACTIVITY PRAKTIKUM

Mata Praktikum : Algoritma dan Pemograman 2B

Kelas : 1IA13

Praktikum ke- : 1

Tanggal : 31 Maret 2023

Materi : Multithread (Python)

NPM : 51422161

Nama : Muhammad Tarmidzi Bariq

Ketua Asisten : Muhammad Wildan Firdausi

Paraf Asisten :

Nama Asisten : Muhammad Wildan Firdausi

Jumlah Lembar : 4 Lembar

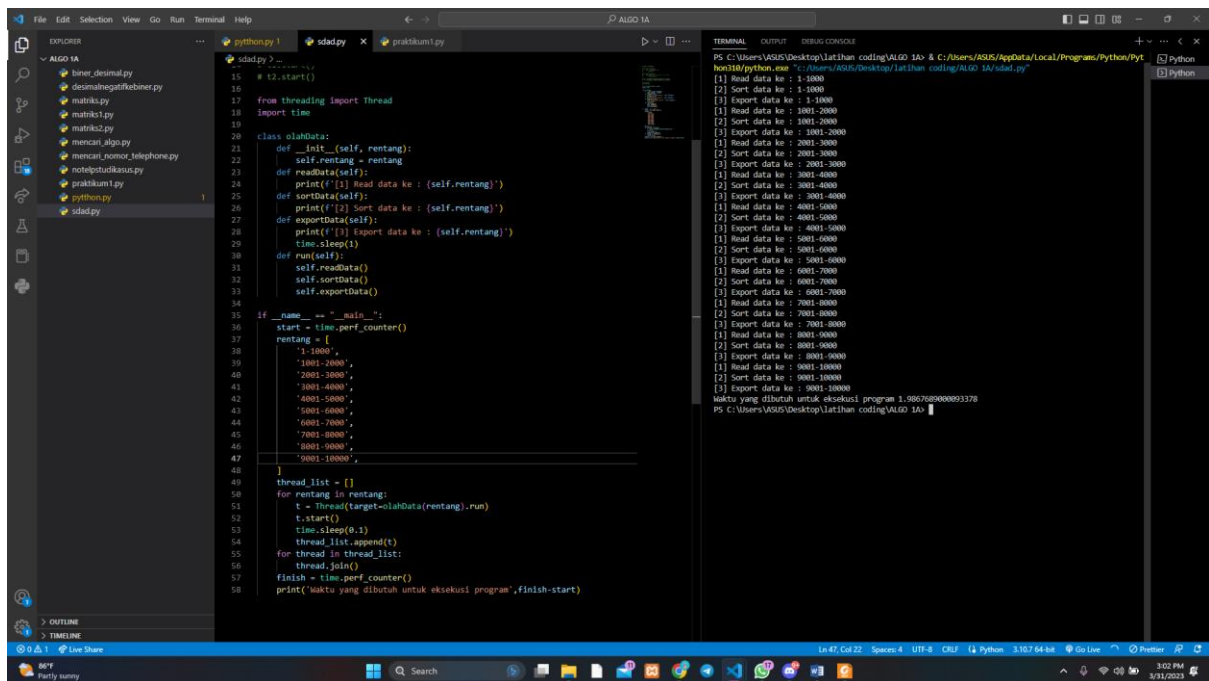
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PRAKTIKUM ALGORITMA DAN PEMROGRAMAN 2B

ACT – 1



The screenshot shows a Python IDE with a file explorer on the left, a code editor in the center, and a terminal on the right. The code defines a class `olahData` with methods `__init__`, `readData`, `sortData`, `exportData`, and `run`. The `run` method uses `threading.Thread` to process a list of data ranges. The terminal output shows the execution of the program, displaying the data ranges and the time taken for each step.

```
15 # t2.start()
16
17 from threading import Thread
18 import time
19
20 class olahData:
21     def __init__(self, rentang):
22         self.rentang = rentang
23     def readData(self):
24         print(f'[1] Read data ke : {self.rentang}')
25     def sortData(self):
26         print(f'[2] Sort data ke : {self.rentang}')
27     def exportData(self):
28         print(f'[3] Export data ke : {self.rentang}')
29         time.sleep(1)
30     def run(self):
31         self.readData()
32         self.sortData()
33         self.exportData()
34
35 if __name__ == "__main__":
36     start = time.perf_counter()
37     rentang = [
38         '1-1000',
39         '1001-2000',
40         '2001-3000',
41         '3001-4000',
42         '4001-5000',
43         '5001-6000',
44         '6001-7000',
45         '7001-8000',
46         '8001-9000',
47         '9001-10000',
48     ]
49     thread_list = []
50     for rentang in rentang:
51         t = Thread(target=olahData(rentang).run)
52         t.start()
53         time.sleep(0.1)
54         thread_list.append(t)
55     for thread in thread_list:
56         thread.join()
57     finish = time.perf_counter()
58     print("waktu yang dibutuhkan untuk eksekusi program", finish-start)
```

Terminal Output:

```
PS C:\Users\VAUS\Desktop\latihan coding\ALGO 1A> python
Python/python.exe "C:\Users\VAUS\Desktop\latihan coding\ALGO 1A\data.py"
[1] Read data ke : 1-1000
[2] Sort data ke : 1-1000
[3] Export data ke : 1-1000
[1] Read data ke : 1001-2000
[2] Sort data ke : 1001-2000
[3] Export data ke : 1001-2000
[1] Read data ke : 2001-3000
[2] Sort data ke : 2001-3000
[3] Export data ke : 2001-3000
[1] Read data ke : 3001-4000
[2] Sort data ke : 3001-4000
[3] Export data ke : 3001-4000
[1] Read data ke : 4001-5000
[2] Sort data ke : 4001-5000
[3] Export data ke : 4001-5000
[1] Read data ke : 5001-6000
[2] Sort data ke : 5001-6000
[3] Export data ke : 5001-6000
[1] Read data ke : 6001-7000
[2] Sort data ke : 6001-7000
[3] Export data ke : 6001-7000
[1] Read data ke : 7001-8000
[2] Sort data ke : 7001-8000
[3] Export data ke : 7001-8000
[1] Read data ke : 8001-9000
[2] Sort data ke : 8001-9000
[3] Export data ke : 8001-9000
[1] Read data ke : 9001-10000
[2] Sort data ke : 9001-10000
[3] Export data ke : 9001-10000
waktu yang dibutuhkan untuk eksekusi program 1.986708000093378
PS C:\Users\VAUS\Desktop\latihan coding\ALGO 1A>
```

```

17  ▾ from threading import Thread
18  import time
19
20  ▾ class olahData:
21  ▾     def __init__(self, rentang):
22  |         self.rentang = rentang
23  ▾     def readData(self):
24  |         print(f'[1] Read data ke : {self.rentang}')
25  ▾     def sortData(self):
26  |         print(f'[2] Sort data ke : {self.rentang}')
27  ▾     def exportData(self):
28  |         print(f'[3] Export data ke : {self.rentang}')
29  |         time.sleep(1)
30  ▾     def run(self):
31  |         self.readData()
32  |         self.sortData()
33  |         self.exportData()
34
35  ▾ if __name__ == "__main__":
36  |     start = time.perf_counter()
37  ▾     rentang = [
38  |         '1-1000',
39  |         '1001-2000',
40  |         '2001-3000',
41  |         '3001-4000',
42  |         '4001-5000',
43  |         '5001-6000',
44  |         '6001-7000',
45  |         '7001-8000',
46  |         '8001-9000',
47  |         '9001-10000',
48  |     ]
49     thread_list = []
50  ▾     for rentang in rentang:
51  |         t = Thread(target=olahData(rentang).run)
52  |         t.start()
53  |         time.sleep(0.1)
54  |         thread_list.append(t)
55  ▾     for thread in thread_list:
56  |         thread.join()
57     finish = time.perf_counter()
58     print('Waktu yang dibutuhkan untuk eksekusi program',finish-start)

```

```
PS C:\Users\ASUS\Desktop\latihan coding\ALGO 1A> & C:/Users/ASUS/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/ASUS/Desktop/latihan coding/ALGO 1A/sdad.py"
[1] Read data ke : 1-1000
[2] Sort data ke : 1-1000
[3] Export data ke : 1-1000
[1] Read data ke : 1001-2000
[2] Sort data ke : 1001-2000
[3] Export data ke : 1001-2000
[1] Read data ke : 2001-3000
[2] Sort data ke : 2001-3000
[3] Export data ke : 2001-3000
[1] Read data ke : 3001-4000
[2] Sort data ke : 3001-4000
[3] Export data ke : 3001-4000
[1] Read data ke : 4001-5000
[2] Sort data ke : 4001-5000
[3] Export data ke : 4001-5000
[1] Read data ke : 5001-6000
[2] Sort data ke : 5001-6000
[3] Export data ke : 5001-6000
[1] Read data ke : 6001-7000
[2] Sort data ke : 6001-7000
[3] Export data ke : 6001-7000
[1] Read data ke : 7001-8000
[2] Sort data ke : 7001-8000
[3] Export data ke : 7001-8000
[1] Read data ke : 8001-9000
[2] Sort data ke : 8001-9000
[3] Export data ke : 8001-9000
[1] Read data ke : 9001-10000
[2] Sort data ke : 9001-10000
[3] Export data ke : 9001-10000
Waktu yang dibutuhkan untuk eksekusi program 1.9867689000093378
PS C:\Users\ASUS\Desktop\latihan coding\ALGO 1A> █
```