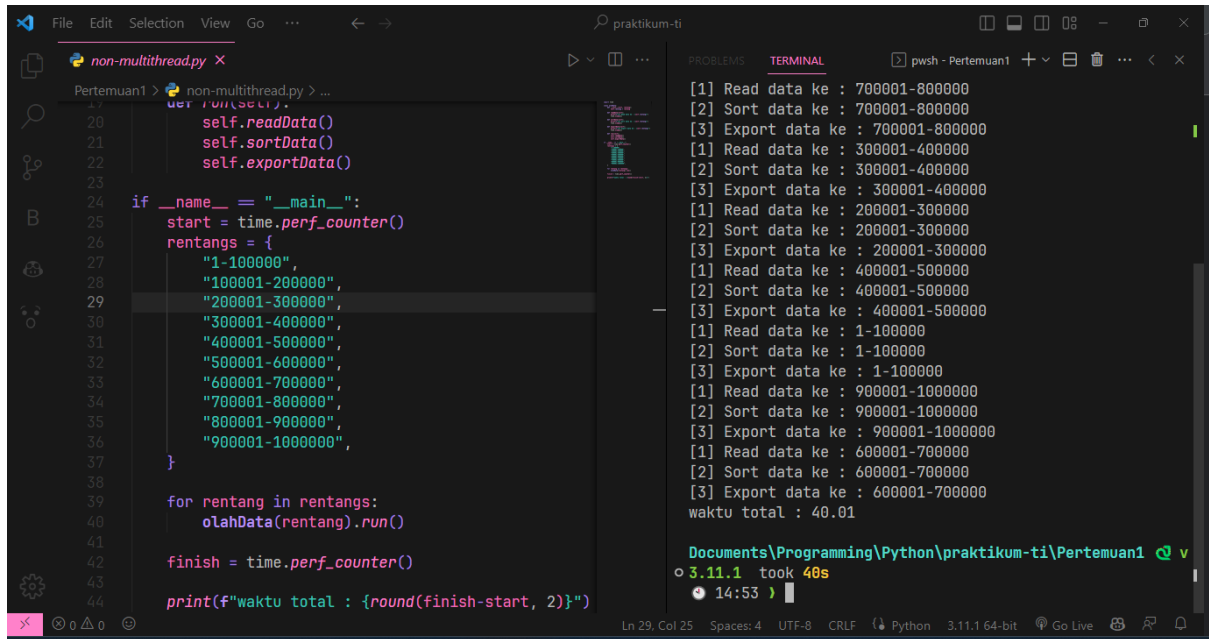


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## Non-Multithread

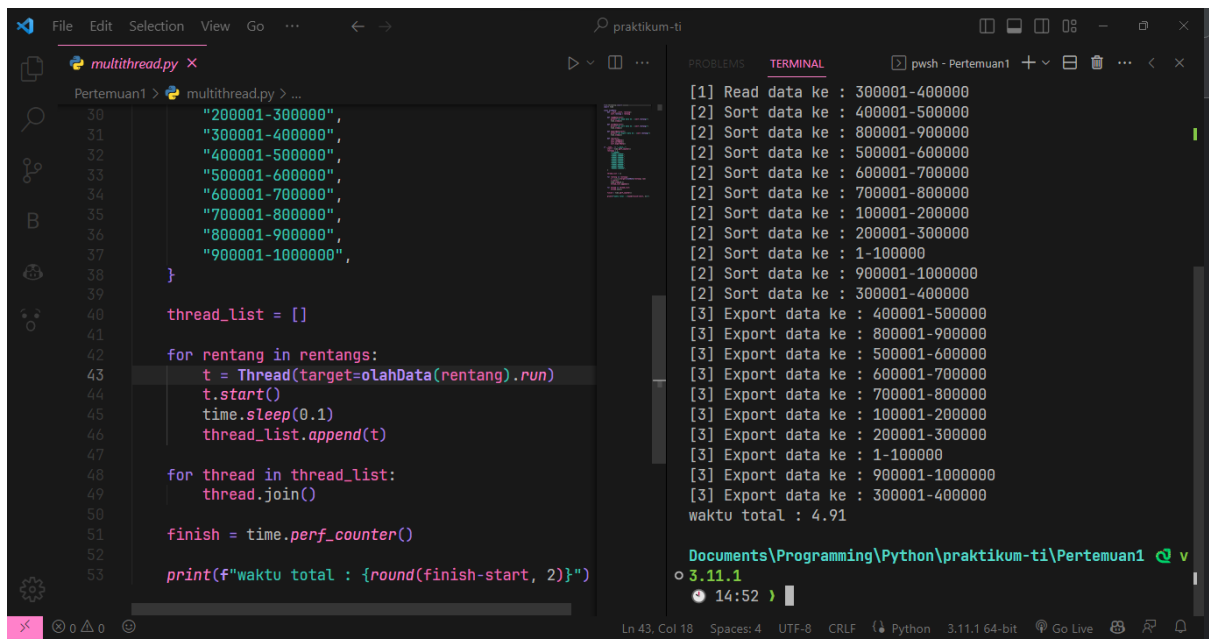


```
File Edit Selection View Go ... praktikum-ti
non-multithread.py x
Pertemuan1 > non-multithread.py > ...
20 def run(self):
21     self.readData()
22     self.sortData()
23     self.exportData()
24
25 if __name__ == "__main__":
26     start = time.perf_counter()
27     rentangs = {
28         "1-100000",
29         "100001-200000",
30         "200001-300000",
31         "300001-400000",
32         "400001-500000",
33         "500001-600000",
34         "600001-700000",
35         "700001-800000",
36         "800001-900000",
37         "900001-1000000",
38     }
39     for rentang in rentangs:
40         olahData(rentang).run()
41
42     finish = time.perf_counter()
43
44     print(f"waktu total : {round(finish-start, 2)}")

[1] Read data ke : 700001-800000
[2] Sort data ke : 700001-800000
[3] Export data ke : 700001-800000
[1] Read data ke : 300001-400000
[2] Sort data ke : 300001-400000
[3] Export data ke : 300001-400000
[1] Read data ke : 200001-300000
[2] Sort data ke : 200001-300000
[3] Export data ke : 200001-300000
[1] Read data ke : 400001-500000
[2] Sort data ke : 400001-500000
[3] Export data ke : 400001-500000
[1] Read data ke : 1-100000
[2] Sort data ke : 1-100000
[3] Export data ke : 1-100000
[1] Read data ke : 900001-1000000
[2] Sort data ke : 900001-1000000
[3] Export data ke : 900001-1000000
[1] Read data ke : 600001-700000
[2] Sort data ke : 600001-700000
[3] Export data ke : 600001-700000
waktu total : 40.01

Documents\Programming\Python\praktikum-ti\Pertemuan1 v
3.11.1 took 40s
14:53
```

## Multithread



```
File Edit Selection View Go ... praktikum-ti
multithread.py x
Pertemuan1 > multithread.py > ...
30     "200001-300000",
31     "300001-400000",
32     "400001-500000",
33     "500001-600000",
34     "600001-700000",
35     "700001-800000",
36     "800001-900000",
37     "900001-1000000",
38 }
39
40 thread_list = []
41
42 for rentang in rentangs:
43     t = Thread(target=olahData(rentang).run)
44     t.start()
45     time.sleep(0.1)
46     thread_list.append(t)
47
48 for thread in thread_list:
49     thread.join()
50
51 finish = time.perf_counter()
52
53 print(f"waktu total : {round(finish-start, 2)}")

[1] Read data ke : 300001-400000
[2] Sort data ke : 400001-500000
[2] Sort data ke : 800001-900000
[2] Sort data ke : 500001-600000
[2] Sort data ke : 600001-700000
[2] Sort data ke : 700001-800000
[2] Sort data ke : 100001-200000
[2] Sort data ke : 200001-300000
[2] Sort data ke : 1-100000
[2] Sort data ke : 900001-1000000
[2] Sort data ke : 300001-400000
[3] Export data ke : 400001-500000
[3] Export data ke : 800001-900000
[3] Export data ke : 500001-600000
[3] Export data ke : 600001-700000
[3] Export data ke : 700001-800000
[3] Export data ke : 100001-200000
[3] Export data ke : 200001-300000
[3] Export data ke : 1-100000
[3] Export data ke : 900001-1000000
[3] Export data ke : 300001-400000
waktu total : 4.91

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3.11.1
14:52
```