

PDC Assignment 3

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aswin@ubuntu: ~
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.ossssssssssssssssssssdmmMNysssso.
/sssSSSSSSSSSSSSSSSSSSSShdmmNNmyNMMMMhSSSSSSS/
+ssssssssssshmycMMMMMMMMNddddySSSSSSSSS+
/sssSSSSSSSSSSSSSSSSSSSShNMMMyhhyyyhNMMMMNhSSSSSSSSS/
.sssssssssssdmmMNhSSSSSSSSSSSShNMMMdSSSSSSSSS.
+ssssshhhyNMMMNySSSSSSSSSSSSsyNMMMySSSSSSSS+
ossyNMMMNyMMhSSSSSSSSSSSSSSshmmmhSSSSSSSSo
ossyNMMMNyMMhSSSSSSSSSSSSSSshmmmhSSSSSSSSo
+ssssshhhyNMMMNySSSSSSSSSSSSsyNMMMySSSSSSSS+
.sssssssssssdmmMNhSSSSSSSSSSSShNMMMdSSSSSSSSS.
/sssSSSSSSSSSSSSSSSSSSSShNMMMyhhyyyhdNMMMMNhSSSSSSSSS/
+sssssssssssdmycMMMMMMMMNddddySSSSSSSSS+
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OS: Ubuntu 23.04 x86_64
Host: HP Pavilion Notebook
Kernel: 6.2.0-35-generic
Uptime: 25 mins
Packages: 2000 (dpkg), 13 (snap)
Shell: bash 5.2.15
Resolution: 1920x1080
DE: GNOME 44.3
WM: Mutter
WM Theme: Adwaita
Theme: Yaru-olive-dark [GTK2/3]
Icons: Papyrus-Light [GTK2/3]
Terminal: gnome-terminal
CPU: Intel i5-5200U (4) @ 2.700GHz
GPU: NVIDIA GeForce 940M
GPU: Intel HD Graphics 5500
Memory: 3260MiB / 15913MiB

aswin@ubuntu: ~$

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Single Processor with values , 10^4 , 10^5 , 10^6 and 10^7

```
aswin@ubuntu: ~/Desktop/F23/PDC/hw3/hw3_prime_template
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin s 10000
Sequential
0.00122229 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin s 100000
Sequential
0.02462948 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin s 1000000
Sequential
0.47450982 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin s 10000000
Sequential
11.46622954 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$
```

1 Thread with values , 10^4 , 10^5 , 10^6 and 10^7

```
aswin@ubuntu: ~/Desktop/F23/PDC/hw3/hw3_prime_template
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 1 10000
Parallel
0.00187044 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 1 100000
Parallel
0.02625662 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 1 1000000
Parallel
0.45620416 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 1 10000000
Parallel
11.40288220 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$
```

2 Threads with values , 10^4 , 10^5 , 10^6 and 10^7

```
aswin@ubuntu: ~/Desktop/F23/PDC/hw3/hw3_prime_template
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 2 10000
Parallel
0.00212631 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 2 100000
Parallel
0.02406520 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 2 1000000
Parallel
0.31016888 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 2 10000000
Parallel
6.29020050 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$
```

4 Threads with values , 10^4 , 10^5 , 10^6 and 10^7

```
aswin@ubuntu: ~/Desktop/F23/PDC/hw3/hw3_prime_template
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 4 10000
Parallel
0.00214362 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 4 100000
Parallel
0.01891320 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 4 1000000
Parallel
0.27183303 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 4 10000000
Parallel
6.03149141 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$
```

6 Threads with values , 10^4 , 10^5 , 10^6 and 10^7

```
aswin@ubuntu: ~/Desktop/F23/PDC/hw3/hw3_prime_template
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 6 10000
Parallel
0.00241961 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 6 100000
Parallel
0.01825596 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 6 1000000
Parallel
0.26669976 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 6 10000000
Parallel
6.03315761 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$
```

8 Threads with values 10^4 , 10^5 , 10^6 and 10^7

```
aswin@ubuntu: ~/Desktop/F23/PDC/hw3/hw3_prime_template
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 8 10000
Parallel
0.00224642 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 8 100000
Parallel
0.01886731 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 8 1000000
Parallel
0.26718344 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$ ./prime_finder.bin m 8 10000000
Parallel
6.03685383 [s]
aswin@ubuntu:~/Desktop/F23/PDC/hw3/hw3_prime_template$
```