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root@Nestor:~# cd ~/iot
root@Nestor:~/iot# cd *3
root@Nestor:~/iot/lesson3# python3 julian.py
Calendar Date: 2023-11-22
Julian Date: 2460270.5
Modified Julian Date: 60270.0
root@Nestor:~/iot/lesson3# python3 date_example.py
Date: 2023-11-22
Date: 11-22-23
Day of Week: Wednesday
Month: November
Year: 2023
82 days after the first day of classes
22 days before the last day of classes
root@Nestor:~/iot/lesson3# python3 datetime_example.py
2023-11-22 17:36:42.625320
2023-11-22 17:36:42.625443
2023-11-22 22:36:42.625544
1700692602.625554
Wed Nov 22 17:36:42 2023
2023-11-22 17:36:42.625620
2023-11-22 22:36:42.625628
root@Nestor:~/iot/lesson3# python3 time_example
python3: can't open file '/root/iot/lesson3/time_example': [Errno 2] No such file or directory
root@Nestor:~/iot/lesson3# python3 time_example.py
Wed Nov 22 17:37:09 2023
```

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root@Nestor:~/iot/lesson3# python3 sun.py 'New York'
Information for New York/USA
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Timezone: US/Eastern
Latitude: 40.72; Longitude: -74.00
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Dawn:      2023-11-22 06:20:31.252950-05:00
Sunrise:   2023-11-22 06:50:55.812266-05:00
Noon:      2023-11-22 11:41:54-05:00
Sunset:    2023-11-22 16:32:53.676872-05:00
Dusk:      2023-11-22 17:03:17.879083-05:00
root@Nestor:~/iot/lesson3# python3 moon.py
```

```
2023-11-22 Moon Phase: 9
2023-11-23 Moon Phase: 10
2023-11-24 Moon Phase: 11
2023-11-25 Moon Phase: 12
2023-11-26 Moon Phase: 13
2023-11-27 Moon Phase: 14
2023-11-28 Moon Phase: 15
2023-11-29 Moon Phase: 15
2023-11-30 Moon Phase: 16
2023-12-01 Moon Phase: 17
2023-12-02 Moon Phase: 18
2023-12-03 Moon Phase: 19
2023-12-04 Moon Phase: 20
2023-12-05 Moon Phase: 21
```

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2023-12-07 Moon Phase: 22
2023-12-08 Moon Phase: 23
2023-12-09 Moon Phase: 24
2023-12-10 Moon Phase: 25
2023-12-11 Moon Phase: 26
2023-12-12 Moon Phase: 27
2023-12-13 Moon Phase: 0
2023-12-14 Moon Phase: 1
2023-12-15 Moon Phase: 2
2023-12-16 Moon Phase: 3
2023-12-17 Moon Phase: 4
2023-12-18 Moon Phase: 5
2023-12-19 Moon Phase: 6
2023-12-20 Moon Phase: 7
2023-12-21 Moon Phase: 8
root@Nestor:~/iot/lesson3# python3 coordinates.py 'SC Williams Library'
Berkeley County Library, US 52, Moncks Corner, Berkeley County, South Carolina, 44600, United States
(33.1879204, -79.9998833)
root@Nestor:~/iot/lesson3# python3 address.py '40.74480675, -74.02532862031404'
Stevens Institute of Technology, Castle Point Terrace, Hoboken, Hudson County, New Jersey, 07030, United States
(40.744809599999996, -74.0252392276461)
root@Nestor:~/iot/lesson3# python3 cpu.py
The number of physical cores = 10
The number of logical CPUs = 20
The utilization per second as a percentage for each CPU

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[0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 1.0]
[0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
[0.0, 0.0, 0.0, 1.0, 0.0, 0.0, 1.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
[0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
[0.0, 0.0, 0.0, 1.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 1.0, 0.0, 0.0]
^CTraceback (most recent call last):
  File "/root/iot/lesson3/cpu.py", line 15, in <module>
    cpu = psutil.cpu_percent(interval=1, percpu=True)
  File "/usr/local/lib/python3.10/dist-packages/psutil/__init__.py", line 1784, in cpu_percent
    time.sleep(interval)
KeyboardInterrupt

root@Nestor:~/iot/lesson3# python3 battery.py
sbattery(percent=77.76, secsleft=10047, power_plugged=False)
root@Nestor:~/iot/lesson3# python3 documentstats.py document.txt
Word Count: 1343
Top Ten Words: [('our', 26), ('their', 20), ('has', 20), ('he', 19), ('them', 15), ('these', 13), ('have', 11), ('we', 11), ('us', 11), ('people', 10)]
root@Nestor:~/iot/lesson3#

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