

* The file that was used for demonstration of program running had 96,000 lines for 1000 traffic lights and an entry for each one every 15 minutes. This one was created for 3 traffic lights so that it would fit for OnTrack submission.

The code I used to create the data was:

```
import random
import os
NUM_TRAFFIC_LIGHTS = 3
times = []

for hr in range(24):
    for min in [0, 15, 30, 45]:
        times.append(f"{hr:02}:{min:02}")

os.remove("./data")
file_path = "./data"

with open(file_path, 'w') as file:
    for time in times:
        for i in range(1, NUM_TRAFFIC_LIGHTS + 1):
            cars = random.randint(0, 100)
            file.write(f"{time} {i} {cars}\n")
```

```
0000 1 31
0000 2 58
0000 3 14
0015 1 10
0015 2 69
0015 3 64
0030 1 9
0030 2 68
0030 3 33
0045 1 54
0045 2 31
0045 3 9
0100 1 57
0100 2 62
0100 3 7
0115 1 65
0115 2 20
0115 3 87
0130 1 2
0130 2 14
0130 3 57
0145 1 34
0145 2 13
0145 3 45
0200 1 13
0200 2 82
0200 3 8
```

0215 1 61
0215 2 0
0215 3 4
0230 1 31
0230 2 87
0230 3 23
0245 1 57
0245 2 26
0245 3 49
0300 1 55
0300 2 1
0300 3 28
0315 1 80
0315 2 60
0315 3 63
0330 1 41
0330 2 18
0330 3 27
0345 1 5
0345 2 5
0345 3 78
0400 1 66
0400 2 82
0400 3 50
0415 1 4
0415 2 31
0415 3 88
0430 1 96
0430 2 55
0430 3 63
0445 1 18
0445 2 9
0445 3 39
0500 1 54
0500 2 13
0500 3 44
0515 1 19
0515 2 62
0515 3 94
0530 1 22
0530 2 75
0530 3 43
0545 1 14
0545 2 44
0545 3 31
0600 1 36
0600 2 73
0600 3 31
0615 1 87
0615 2 100
0615 3 44
0630 1 50
0630 2 26
0630 3 90

0645 1 25
0645 2 35
0645 3 21
0700 1 36
0700 2 31
0700 3 59
0715 1 21
0715 2 36
0715 3 87
0730 1 63
0730 2 71
0730 3 25
0745 1 16
0745 2 39
0745 3 84
0800 1 81
0800 2 26
0800 3 28
0815 1 24
0815 2 13
0815 3 53
0830 1 37
0830 2 82
0830 3 9
0845 1 36
0845 2 61
0845 3 88
0900 1 53
0900 2 50
0900 3 20
0915 1 8
0915 2 92
0915 3 30
0930 1 6
0930 2 32
0930 3 66
0945 1 48
0945 2 92
0945 3 53
1000 1 87
1000 2 19
1000 3 48
1015 1 43
1015 2 36
1015 3 2
1030 1 66
1030 2 30
1030 3 29
1045 1 82
1045 2 96
1045 3 78
1100 1 34
1100 2 15
1100 3 66

1115 1 35
1115 2 13
1115 3 26
1130 1 12
1130 2 8
1130 3 34
1145 1 38
1145 2 42
1145 3 44
1200 1 77
1200 2 68
1200 3 47
1215 1 9
1215 2 84
1215 3 55
1230 1 90
1230 2 0
1230 3 4
1245 1 31
1245 2 72
1245 3 41
1300 1 82
1300 2 28
1300 3 39
1315 1 55
1315 2 27
1315 3 82
1330 1 22
1330 2 23
1330 3 92
1345 1 87
1345 2 89
1345 3 61
1400 1 7
1400 2 7
1400 3 82
1415 1 44
1415 2 8
1415 3 73
1430 1 30
1430 2 70
1430 3 33
1445 1 64
1445 2 56
1445 3 92
1500 1 44
1500 2 94
1500 3 71
1515 1 66
1515 2 8
1515 3 2
1530 1 79
1530 2 85
1530 3 16

1545 1 93
1545 2 53
1545 3 92
1600 1 69
1600 2 24
1600 3 95
1615 1 67
1615 2 96
1615 3 59
1630 1 69
1630 2 85
1630 3 81
1645 1 80
1645 2 92
1645 3 26
1700 1 61
1700 2 6
1700 3 59
1715 1 83
1715 2 1
1715 3 99
1730 1 38
1730 2 90
1730 3 29
1745 1 99
1745 2 3
1745 3 58
1800 1 35
1800 2 14
1800 3 43
1815 1 11
1815 2 79
1815 3 4
1830 1 98
1830 2 99
1830 3 13
1845 1 17
1845 2 20
1845 3 25
1900 1 69
1900 2 78
1900 3 10
1915 1 32
1915 2 26
1915 3 35
1930 1 71
1930 2 31
1930 3 17
1945 1 44
1945 2 83
1945 3 50
2000 1 58
2000 2 85
2000 3 1

2015	1	46
2015	2	0
2015	3	14
2030	1	11
2030	2	99
2030	3	96
2045	1	12
2045	2	24
2045	3	39
2100	1	41
2100	2	92
2100	3	18
2115	1	41
2115	2	26
2115	3	81
2130	1	41
2130	2	5
2130	3	13
2145	1	20
2145	2	6
2145	3	43
2200	1	20
2200	2	99
2200	3	97
2215	1	51
2215	2	89
2215	3	49
2230	1	75
2230	2	2
2230	3	99
2245	1	67
2245	2	6
2245	3	26
2300	1	73
2300	2	98
2300	3	28
2315	1	7
2315	2	25
2315	3	62
2330	1	51
2330	2	72
2330	3	25
2345	1	3
2345	2	98
2345	3	51