untitled-1

[9]:
```
import pandas as pd
import matplotlib as plt
```

[10]:
```
df=pd.read_csv(r'C:\Users\HP\Desktop\prodigyinfotech\only_road_accidents_data3.csv')
```

[11]:
```
print(df)
```

```
          STATE/UT  YEAR  0-3 hrs.  (Night)  3-6 hrs.  (Night)  6-9 hrs (Day)  \
0    A & N Islands  2001                 2                 6             29
1    A & N Islands  2002                 2                 6             22
2    A & N Islands  2003                 2                 8             31
3    A & N Islands  2004                 2                 5             29
4    A & N Islands  2005                 0                 8             27
..             ...   ...               ...               ...            ...
485     West Bengal  2010              1241              1397           1721
486     West Bengal  2011              1200              1493           1687
487     West Bengal  2012              1346              1511           1837
488     West Bengal  2013              1442              1911           2136
489     West Bengal  2014              1455              1634           2022

     9-12 hrs (Day)  12-15 hrs (Day)  15-18 hrs (Day)  18-21 hrs (Night)  \
0                40               39               40                 18
1                41               33               33                 23
2                35               28               36                 25
3                42               43               43                 37
4                28               38               42                 50
..              ...              ...              ...                ...
485            2508             2272             2296               1831
486            2553             2182             2196               1812
487            2831             2328             2268               1966
488            2900             2246             2366               2137
489            2998             2570             2458               2132

     21-24 hrs (Night)  Total
0                    7    181
1                    8    168
2                   15    180
```

```
3                    14    215
4                    13    206
..                  ...    ...
485                1459  14725
486                1345  14468
487                1521  15608
488                1411  16549
489                1836  17105

[490 rows x 11 columns]
```

[12]:
```
df.head()
```

[12]:
```
        STATE/UT  YEAR  0-3 hrs.  (Night)  3-6 hrs.  (Night)  6-9 hrs (Day)  \
0  A & N Islands  2001                 2                 6             29
1  A & N Islands  2002                 2                 6             22
2  A & N Islands  2003                 2                 8             31
3  A & N Islands  2004                 2                 5             29
4  A & N Islands  2005                 0                 8             27

   9-12 hrs (Day)  12-15 hrs (Day)  15-18 hrs (Day)  18-21 hrs (Night)  \
0              40                39               40                 18
1              41                33               33                 23
2              35                28               36                 25
3              42                43               43                 37
4              28                38               42                 50

   21-24 hrs (Night)  Total
0                  7    181
1                  8    168
2                 15    180
3                 14    215
4                 13    206
```

[13]:
```
df.tail()
```

[13]:
```
        STATE/UT  YEAR  0-3 hrs.  (Night)  3-6 hrs.  (Night)  6-9 hrs (Day)  \
485  West Bengal  2010                1241              1397           1721
486  West Bengal  2011                1200              1493           1687
487  West Bengal  2012                1346              1511           1837
488  West Bengal  2013                1442              1911           2136
489  West Bengal  2014                1455              1634           2022

     9-12 hrs (Day)  12-15 hrs (Day)  15-18 hrs (Day)  18-21 hrs (Night)  \
485            2508             2272             2296               1831
486            2553             2182             2196               1812
487            2831             2328             2268               1966
```

```
488            2900            2246            2366            2137
489            2998            2570            2458            2132

     21-24 hrs (Night)  Total
485                1459  14725
486                1345  14468
487                1521  15608
488                1411  16549
489                1836  17105
```

```
df.info()
```

[14]:
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 490 entries, 0 to 489
Data columns (total 11 columns):
 #   Column              Non-Null Count  Dtype
---  ------              --------------  -----
 0   STATE/UT            490 non-null    object
 1   YEAR                490 non-null    int64
 2   0-3 hrs. (Night)    490 non-null    int64
 3   3-6 hrs. (Night)    490 non-null    int64
 4   6-9 hrs (Day)       490 non-null    int64
 5   9-12 hrs (Day)      490 non-null    int64
 6   12-15 hrs (Day)     490 non-null    int64
 7   15-18 hrs (Day)     490 non-null    int64
 8   18-21 hrs (Night)   490 non-null    int64
 9   21-24 hrs (Night)   490 non-null    int64
 10  Total               490 non-null    int64
dtypes: int64(10), object(1)
memory usage: 42.2+ KB
```

```
df.describe()
```

[15]:

[15]:
```
              YEAR  0-3 hrs. (Night)  3-6 hrs. (Night)  6-9 hrs (Day)  \
count   490.000000        490.000000        490.000000     490.00000
mean   2007.500000        796.320408        969.236735    1371.15102
std       4.035249       1210.999326       1415.984501    1864.19157
min    2001.000000          0.000000          0.000000       0.00000
25%    2004.000000         10.000000         15.000000      36.00000
50%    2007.500000        200.000000        251.500000     498.50000
75%    2011.000000       1114.250000       1355.250000    2073.75000
max    2014.000000       6020.000000       6545.000000    8241.00000

       9-12 hrs (Day)  12-15 hrs (Day)  15-18 hrs (Day)  18-21 hrs (Night)  \
count      490.000000       490.000000       490.000000         490.000000
mean      1753.967347      1681.814286      1850.283673        1782.918367
```

std	2400.593532	2326.251665	2643.765262	2587.452453

```
min          0.000000        0.000000        0.000000        0.000000
25%         51.250000       59.250000       59.000000       50.000000
50%        678.000000      679.500000      669.000000      517.000000
75%       2680.500000     2265.500000     2289.000000     2072.000000
max      14568.000000    11089.000000    13789.000000    13927.000000

       21-24 hrs (Night)          Total
count         490.000000     490.000000
mean         1228.810204   11434.502041
std          1836.242850   15948.689470
min             0.000000       0.000000
25%            25.250000     357.750000
50%           343.500000    4174.500000
75%          1594.750000   16463.500000
max         10364.000000   75480.000000
```

[18]:
```
df.isnull().sum()
```

[18]:
```
STATE/UT              0
YEAR                  0
0-3 hrs.  (Night)     0
3-6 hrs.  (Night)     0
6-9 hrs (Day)         0
9-12 hrs (Day)        0
12-15 hrs (Day)       0
15-18 hrs (Day)       0
18-21 hrs (Night)     0
21-24 hrs (Night)     0
Total                 0
dtype: int64
```

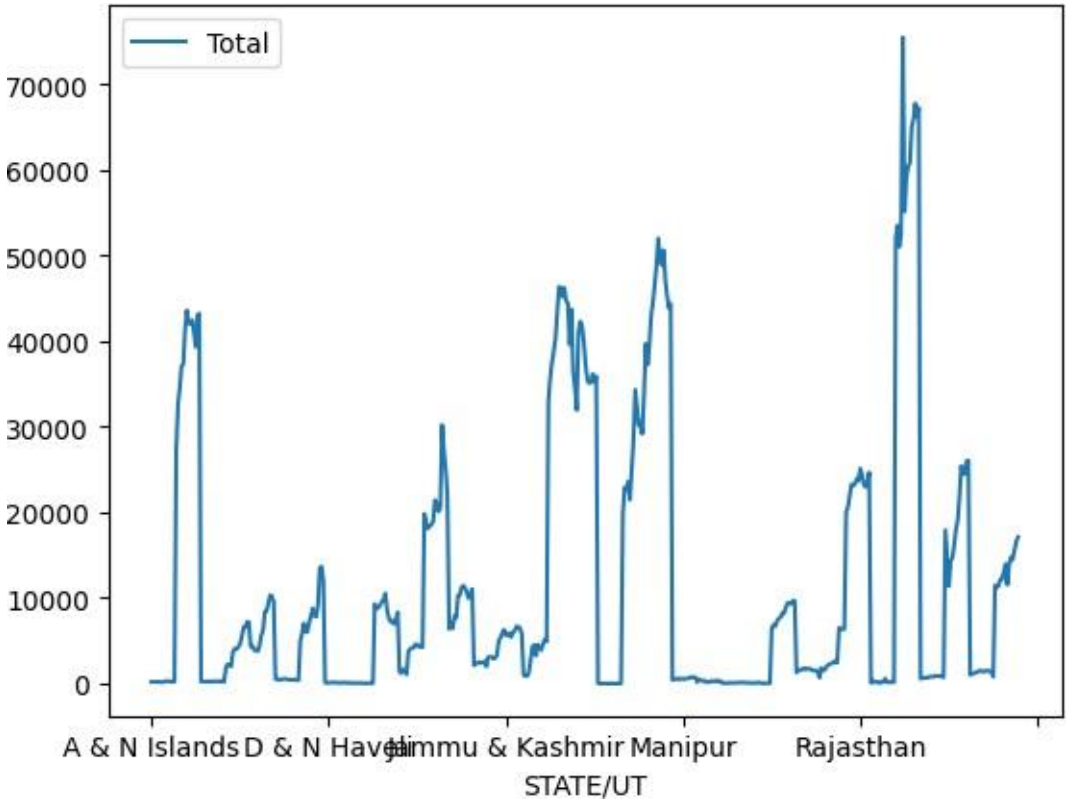
[19]:
```
df.nunique()
```

[19]:
```
STATE/UT              35
YEAR                  14
0-3 hrs.  (Night)    316
3-6 hrs.  (Night)    334
6-9 hrs (Day)        381
9-12 hrs (Day)       390
12-15 hrs (Day)      390
15-18 hrs (Day)      389
18-21 hrs (Night)    387
21-24 hrs (Night)    361
Total                454
dtype: int64
```

[31]:
```
x='STATE/UT'
y='Total'

df.plot(x,y)
```

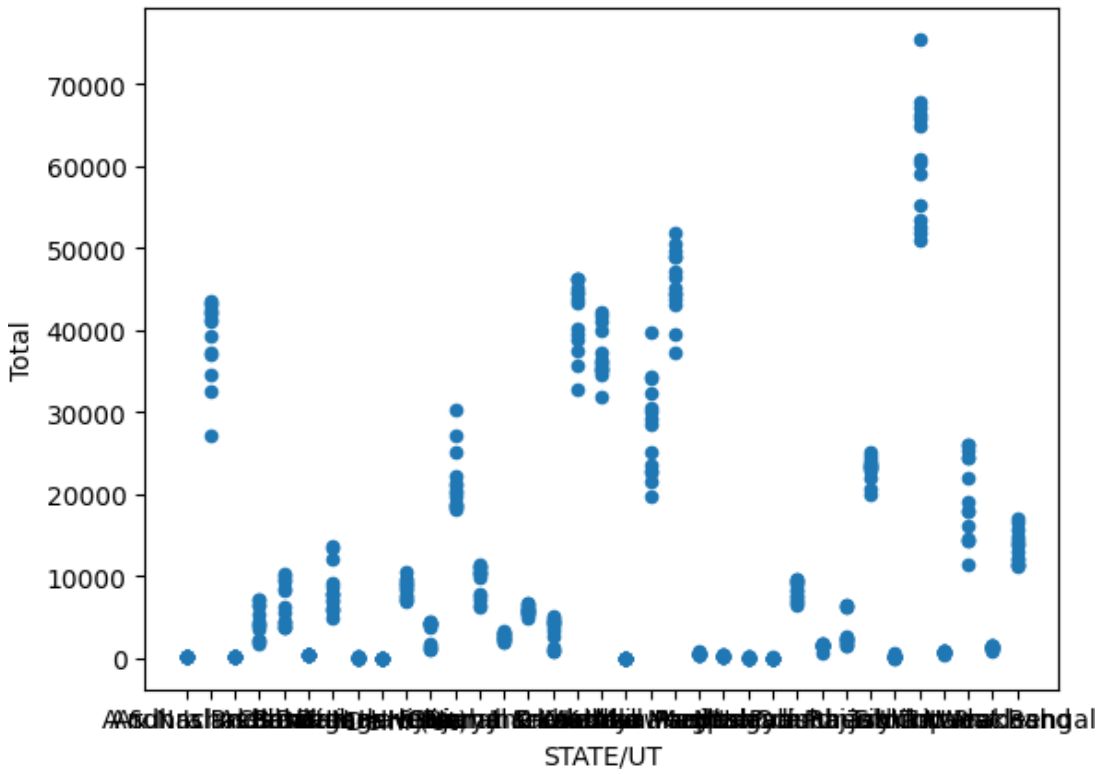
[31]: <Axes: xlabel='STATE/UT'>



[39]:
```
df1=pd.DataFrame(df)
```

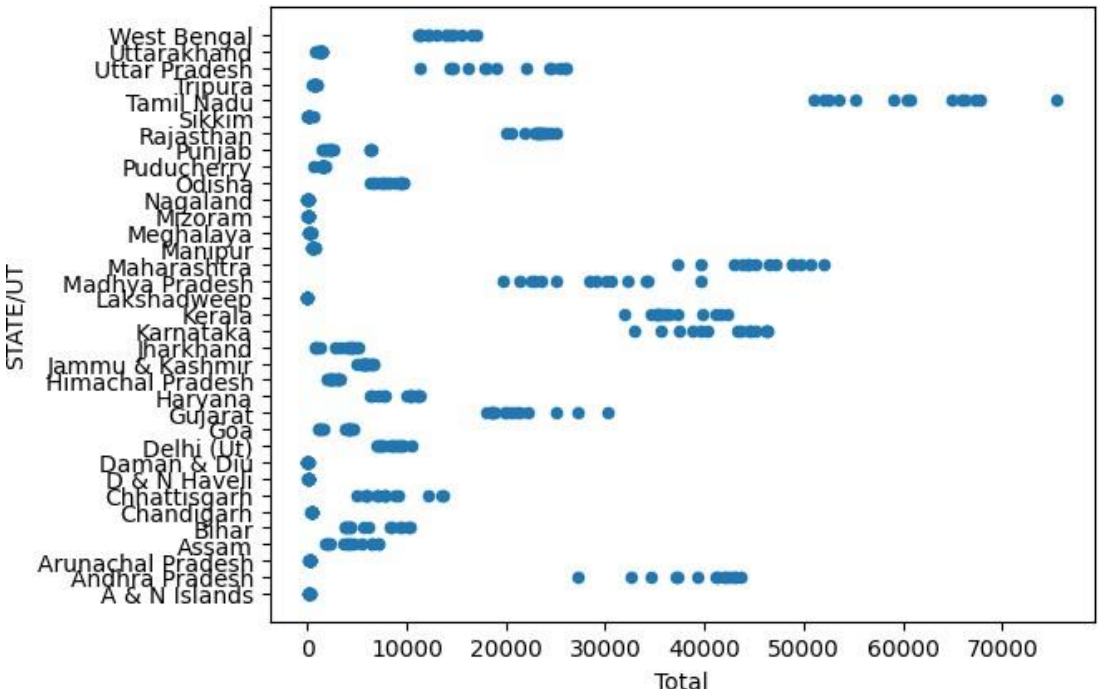
[57]:
```
df1.plot.scatter(x,y)
```

[57]: <Axes: xlabel='STATE/UT', ylabel='Total'>



[58]:
```
y='STATE/UT'
x='Total'
df1.plot.scatter(x,y)
```

[58]: <Axes: xlabel='Total', ylabel='STATE/UT'>


West Bengal
Uttarakhand
Uttar Pradesh
Tripura
Tamil Nadu
Sikkim
Rajasthan
Punjab
Puducherry
Odisha
Nagaland
Mizoram
Meghalaya
Manipur
Maharashtra
Madhya Pradesh
Lakshadweep
Kerala
Karnataka
Jharkhand
Jammu & Kashmir
Himachal Pradesh
Haryana
Gujarat
Goa
Delhi (Ut)
Daman & Diu
D & N Haveli
Chhattisgarh
Chandigarh
Bihar
Assam
Arunachal Pradesh
Andhra Pradesh
A & N Islands
STATE/UT
0
10000
20000
30000
40000
50000
60000
70000
Total