In [62]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
```

In [146…
```
do_1 = pd.read_csv('domestic_visitors_2016.csv')
do_2 = pd.read_csv('domestic_visitors_2017.csv')
do_3 = pd.read_csv('domestic_visitors_2018.csv')
do_4 = pd.read_csv('domestic_visitors_2019.csv')
do_v1 = pd.merge(do_1,do_2,how='outer')
do_v2 = pd.merge(do_3,do_4,how='outer')
do_v =  pd.merge(do_v1,do_v2,how='outer')
do_v=do_v.dropna()
do_v
```

Out[146]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016.0	792136.0
1	Adilabad	01/02/16	February	2016.0	937820.0
2	Adilabad	01/03/16	March	2016.0	582946.0
3	Adilabad	01/04/16	April	2016.0	341948.0
4	Adilabad	01/05/16	May	2016.0	252887.0
…	…	…	…	…	…
8569	Siddipet	01/08/19	August	2019.0	190750.0
8570	Siddipet	01/09/19	September	2019.0	122550.0
8571	Siddipet	01/10/19	October	2019.0	191330.0
8572	Siddipet	01/11/19	November	2019.0	209130.0
8573	Siddipet	01/12/19	December	2019.0	217930.0

1122 rows × 5 columns

In [159…
```
fo_1 = pd.read_csv('foreign_visitors_2016.csv')
fo_2 = pd.read_csv('foreign_visitors_2017.csv')
fo_3 = pd.read_csv('foreign_visitors_2018.csv')
fo_4 = pd.read_csv('foreign_visitors_2019.csv')
fo_v1 = pd.merge(fo_1,fo_2,how='outer')
fo_v2 = pd.merge(fo_3,fo_4,how='outer')
fo_v =  pd.merge(fo_v1,fo_v2,how='outer')
fo_v = fo_v.dropna()
fo_v
```

Out[159]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016	2.0
1	Adilabad	01/03/16	March	2016	2.0
2	Adilabad	01/08/16	August	2016	2.0
3	Jangaon	01/11/16	November	2016	2.0
4	Adilabad	01/07/16	July	2016	4.0
...	...	...	...	...	...
285	Hyderabad	01/10/19	October	2019	28706.0
286	Hyderabad	01/11/19	November	2019	32762.0
287	Hyderabad	01/09/19	September	2019	34018.0
288	Hyderabad	01/12/19	December	2019	34084.0
289	Hyderabad	01/01/19	January	2019	35920.0

290 rows × 5 columns

In [154…
```
do_v.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 1122 entries, 0 to 8573
Data columns (total 5 columns):
 #   Column    Non-Null Count  Dtype  
---  ------    --------------  -----  
 0   district  1122 non-null   object 
 1   date      1122 non-null   object 
 2   month     1122 non-null   object 
 3   year      1122 non-null   float64
 4   visitors  1122 non-null   float64
dtypes: float64(2), object(3)
memory usage: 52.6+ KB
```

In [66]:
```
do_v['visitors'] = do_v['visitors'].astype('int')
```

In [67]:
```
do_v['year'] = do_v['year'].astype('int')
```

In [68]:
```
do_v.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 1122 entries, 0 to 8573
Data columns (total 5 columns):
 #   Column    Non-Null Count  Dtype 
---  ------    --------------  ----- 
 0   district  1122 non-null   object
 1   date      1122 non-null   object
 2   month     1122 non-null   object
 3   year      1122 non-null   int64 
 4   visitors  1122 non-null   int64 
dtypes: int64(2), object(3)
memory usage: 52.6+ KB
```

In [69]:
```
do_v
```

Out[69]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016	792136
1	Adilabad	01/02/16	February	2016	937820
2	Adilabad	01/03/16	March	2016	582946
3	Adilabad	01/04/16	April	2016	341948
4	Adilabad	01/05/16	May	2016	252887
...	...	...	...	...	...
8569	Siddipet	01/08/19	August	2019	190750
8570	Siddipet	01/09/19	September	2019	122550
8571	Siddipet	01/10/19	October	2019	191330
8572	Siddipet	01/11/19	November	2019	209130
8573	Siddipet	01/12/19	December	2019	217930

1122 rows × 5 columns

In [70]:
```
do_v.describe()
```

Out[70]:

	year	visitors
count	1122.000000	1.122000e+03
mean	2017.700535	3.138152e+05
std	1.027447	9.384033e+05
min	2016.000000	0.000000e+00
25%	2017.000000	1.368050e+04
50%	2018.000000	1.237330e+05
75%	2019.000000	3.209355e+05
max	2019.000000	2.070378e+07

In [71]:
```
do_v.sort_values('visitors', ascending=False).head(10)
```

Out[71]:

	district	date	month	year	visitors
148	Warangal (Urban)	01/02/16	February	2016	20703778
20	Hyderabad	01/06/16	June	2016	12032661
8279	Bhadradri Kothagudem	01/06/19	June	2019	9761776
7999	Jayashankar Bhoopalpally	01/02/18	February	2018	8626250
7998	Jayashankar Bhoopalpally	01/01/18	January	2018	6519850
8538	Rajanna Sircilla	01/01/19	January	2019	6188298
7649	Hyderabad	01/12/17	December	2017	4871416
8251	Yadadri Bhongir	01/02/18	February	2018	3073872
8252	Yadadri Bhongir	01/03/18	March	2018	2836580
7641	Hyderabad	01/04/17	April	2017	2366793

In [72]:
```
do_v1 = do_v
do_v1
```

Out[72]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016	792136
1	Adilabad	01/02/16	February	2016	937820
2	Adilabad	01/03/16	March	2016	582946
3	Adilabad	01/04/16	April	2016	341948
4	Adilabad	01/05/16	May	2016	252887
...	...	...	...	...	...
8569	Siddipet	01/08/19	August	2019	190750
8570	Siddipet	01/09/19	September	2019	122550
8571	Siddipet	01/10/19	October	2019	191330
8572	Siddipet	01/11/19	November	2019	209130
8573	Siddipet	01/12/19	December	2019	217930

1122 rows × 5 columns

In [73]:
```
del do_v1['month']
del do_v1['date']
del do_v1['year']
do_v1
```

Out[73]:

	district	visitors
0	Adilabad	792136
1	Adilabad	937820
2	Adilabad	582946
3	Adilabad	341948
4	Adilabad	252887
...	...	...
8569	Siddipet	190750
8570	Siddipet	122550
8571	Siddipet	191330
8572	Siddipet	209130
8573	Siddipet	217930

1122 rows × 2 columns

In [74]:
```
do_v2 = do_v1.groupby(['district'])
list_do = do_v2.sum()
list_do
```

Out[74]:

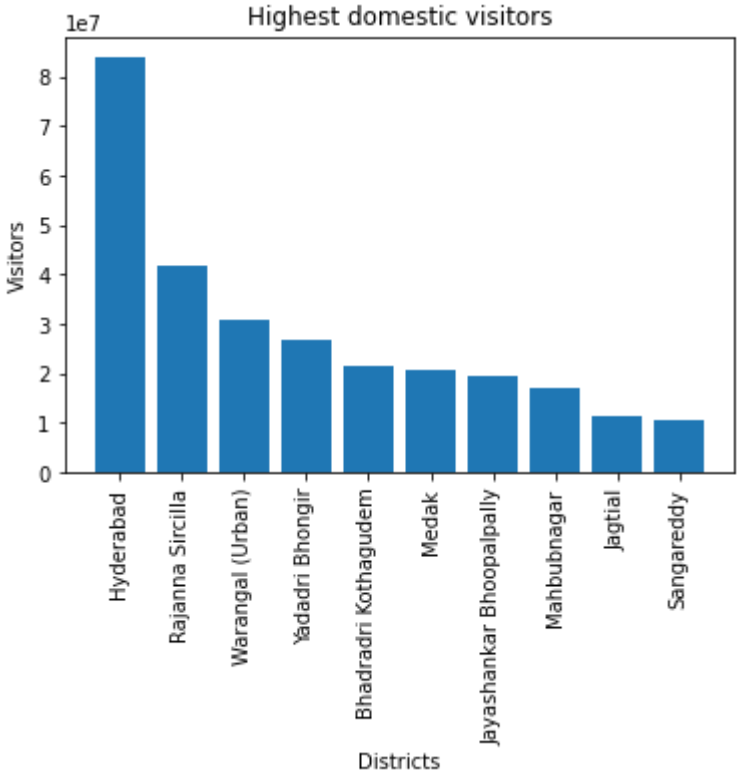
district	visitors
Adilabad	7321575
Bhadradri Kothagudem	21600962
Hyderabad	83900960
Jagtial	11303514
Jangaon	826280
Jayashankar Bhoopalpally	19632865
Jogulamba Gadwal	6813340
Kamareddy	1773
Karimnagar	9462383
Khammam	9378315
Komaram Bheem Asifabad	92734
Mahabubabad	600697
Mahbubnagar	17180118
Mancherial	867242
Medak	20542639
Mulugu	1819800
Nagarkurnool	7424355
Nalgonda	6401933
Nirmal	9499018
Nizamabad	81214
Peddapalli	56977
Rajanna Sircilla	41763276
Sangareddy	10424510
Siddipet	5775285
Wanaparthy	890078
Warangal (Rural)	819162
Warangal (Urban)	30726603
Yadadri Bhongir	26893080

In [75]:
```
list_do.sort_values('visitors', ascending=False).head(10) #highest domestic
```

Out[75]:

district	visitors
Hyderabad	83900960
Rajanna Sircilla	41763276
Warangal (Urban)	30726603
Yadadri Bhongir	26893080
Bhadradri Kothagudem	21600962
Medak	20542639
Jayashankar Bhoopalpally	19632865
Mahbubnagar	17180118
Jagtial	11303514
Sangareddy	10424510

In [76]:
```
# Create the table
data = {'district': ['Hyderabad', 'Rajanna Sircilla', 'Warangal (Urban)', 'Y
                     'Medak', 'Jayashankar Bhoopalpally', 'Mahbubnagar', 'Ja
        'visitors': [83900960, 41763276, 30726603, 26893080, 21600962, 20542

df = pd.DataFrame(data)

# Create a bar chart using the table
plt.bar(df['district'], df['visitors'])

# Add a title
plt.title("Highest domestic visitors")

# Rotate x-axis labels for better readability
plt.xticks(rotation=90)

# Add axis labels
plt.xlabel("Districts")
plt.ylabel("Visitors")

# Display the graph
plt.show()
```



In [77]:
```
import matplotlib.pyplot as plt
plt.bar(list_do['district'],['visitors'])
plt.title("Highest domestic visitors")
plt.xticks(rotation=45)
plt.xlabel("Districts")
plt.ylabel("Visitors")
plt.show()
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
File ~/opt/anaconda3/lib/python3.9/site-packages/pandas/core/indexes/base.p
y:3621, in Index.get_loc(self, key, method, tolerance)
   3620 try:
-> 3621     return self._engine.get_loc(casted_key)
   3622 except KeyError as err:

File ~/opt/anaconda3/lib/python3.9/site-packages/pandas/_libs/index.pyx:136,
in pandas._libs.index.IndexEngine.get_loc()

File ~/opt/anaconda3/lib/python3.9/site-packages/pandas/_libs/index.pyx:163,
in pandas._libs.index.IndexEngine.get_loc()

File pandas/_libs/hashtable_class_helper.pxi:5198, in pandas._libs.hashtabl
e.PyObjectHashTable.get_item()

File pandas/_libs/hashtable_class_helper.pxi:5206, in pandas._libs.hashtabl
e.PyObjectHashTable.get_item()

KeyError: 'district'

The above exception was the direct cause of the following exception:

KeyError                                  Traceback (most recent call last)
Input In [77], in <cell line: 2>()
      1 import matplotlib.pyplot as plt
----> 2 plt.bar(list_do['district'],['visitors'])
      3 plt.title("Highest domestic visitors")
      4 plt.xticks(rotation=45)

File ~/opt/anaconda3/lib/python3.9/site-packages/pandas/core/frame.py:3505,
in DataFrame.__getitem__(self, key)
   3503 if self.columns.nlevels > 1:
   3504     return self._getitem_multilevel(key)
-> 3505 indexer = self.columns.get_loc(key)
   3506 if is_integer(indexer):
   3507     indexer = [indexer]

File ~/opt/anaconda3/lib/python3.9/site-packages/pandas/core/indexes/base.p
y:3623, in Index.get_loc(self, key, method, tolerance)
   3621     return self._engine.get_loc(casted_key)
   3622 except KeyError as err:
-> 3623     raise KeyError(key) from err
   3624 except TypeError:
   3625     # If we have a listlike key, _check_indexing_error will raise
   3626     #  InvalidIndexError. Otherwise we fall through and re-raise
   3627     #  the TypeError.
   3628     self._check_indexing_error(key)

KeyError: 'district'
```

In [78]:
```
list_do.sort_values('visitors', ascending=True).head(10)
```

Out[78]:

district	visitors
Kamareddy	1773
Peddapalli	56977
Nizamabad	81214
Komaram Bheem Asifabad	92734
Mahabubabad	600697
Warangal (Rural)	819162
Jangaon	826280
Mancherial	867242
Wanaparthy	890078
Mulugu	1819800

In [79]:
```
fo_v.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 290 entries, 0 to 289
Data columns (total 5 columns):
 #   Column    Non-Null Count  Dtype  
---  ------    --------------  -----  
 0   district  290 non-null    object 
 1   date      290 non-null    object 
 2   month     290 non-null    object 
 3   year      290 non-null    int64  
 4   visitors  290 non-null    float64
dtypes: float64(1), int64(1), object(3)
memory usage: 13.6+ KB
```

In [80]:
```
fo_v['visitors'] = fo_v['visitors'].astype('int')
fo_v['year'] = fo_v['year'].astype('int')
```

In [81]:
```
fo_v.info()
fo_v
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 290 entries, 0 to 289
Data columns (total 5 columns):
 #   Column    Non-Null Count  Dtype 
---  ------    --------------  ----- 
 0   district  290 non-null    object
 1   date      290 non-null    object
 2   month     290 non-null    object
 3   year      290 non-null    int64 
 4   visitors  290 non-null    int64 
dtypes: int64(2), object(3)
memory usage: 13.6+ KB
```

Out[81]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016	2
1	Adilabad	01/03/16	March	2016	2
2	Adilabad	01/08/16	August	2016	2
3	Jangaon	01/11/16	November	2016	2
4	Adilabad	01/07/16	July	2016	4
...	...	...	...	...	...
285	Hyderabad	01/10/19	October	2019	28706
286	Hyderabad	01/11/19	November	2019	32762
287	Hyderabad	01/09/19	September	2019	34018
288	Hyderabad	01/12/19	December	2019	34084
289	Hyderabad	01/01/19	January	2019	35920

290 rows × 5 columns

In [82]:
```
total_2016 = do_1.merge(fo_1, how='outer')
```

In [83]:
```
total_2016
```

Out[83]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016.0	792136.0
1	Adilabad	01/02/16	February	2016.0	937820.0
2	Adilabad	01/03/16	March	2016.0	582946.0
3	Adilabad	01/04/16	April	2016.0	341948.0
4	Adilabad	01/05/16	May	2016.0	252887.0
...	...	...	...	...	...
414	Hyderabad	01/03/16	March	2016.0	13019.0
415	Hyderabad	01/01/16	January	2016.0	15865.0
416	Hyderabad	01/07/16	July	2016.0	17142.0
417	Hyderabad	01/12/16	December	2016.0	17620.0
418	Hyderabad	01/02/16	February	2016.0	29646.0

419 rows × 5 columns

In [84]:
```
total_2016 = total_2016.dropna()
```

In [85]:
```
total_2016
```

Out[85]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016.0	792136.0
1	Adilabad	01/02/16	February	2016.0	937820.0
2	Adilabad	01/03/16	March	2016.0	582946.0
3	Adilabad	01/04/16	April	2016.0	341948.0
4	Adilabad	01/05/16	May	2016.0	252887.0
...	...	...	...	...	...
414	Hyderabad	01/03/16	March	2016.0	13019.0
415	Hyderabad	01/01/16	January	2016.0	15865.0
416	Hyderabad	01/07/16	July	2016.0	17142.0
417	Hyderabad	01/12/16	December	2016.0	17620.0
418	Hyderabad	01/02/16	February	2016.0	29646.0

212 rows × 5 columns

In [86]:
```
total_2016
total_2016.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 212 entries, 0 to 418
Data columns (total 5 columns):
 #   Column    Non-Null Count  Dtype  
---  ------    --------------  -----  
 0   district  212 non-null    object 
 1   date      212 non-null    object 
 2   month     212 non-null    object 
 3   year      212 non-null    float64
 4   visitors  212 non-null    float64
dtypes: float64(2), object(3)
memory usage: 9.9+ KB
```

In [87]:
```
total_2016 = total_2016.groupby('district').agg({'visitors':'sum'})
total_2016.dropna()
```

Out[87]:

district	visitors
Adilabad	5075567.0
Bhadradri Kothagudem	889030.0
Hyderabad	23558336.0
Jagtial	623077.0
Jangaon	2.0
Jangaon	40660.0
Jayashankar Bhoopalpally	243486.0
Jogulamba Gadwal	45.0
Jogulamba Gadwal	523401.0
Kamareddy	127.0
Karimnagar	9167468.0
Khammam	5005031.0
Komaram Bheem Asifabad	0.0
Mahabubabad	140002.0
Mahbubnagar	8305634.0
Mancherial	7802.0
Medak	3463200.0
Nagarkurnool	29.0
Nagarkurnool	588473.0
Nalgonda	5858461.0
Nirmal	916610.0
Nizamabad	6442.0
Peddapalli	3244.0
Rajanna Sircilla	2176801.0
Sangareddy	778000.0
Siddipet	358400.0
Wanaparthy	60138.0
Warangal (Rural)	19400.0
Warangal (Urban)	25789934.0
Yadadri Bhongir	1728600.0

In [88]:
```
total_2016.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 30 entries, Adilabad to Yadadri Bhongir
Data columns (total 1 columns):
 #   Column    Non-Null Count  Dtype  
---  ------    --------------  -----  
 0   visitors  30 non-null     float64
dtypes: float64(1)
memory usage: 480.0+ bytes
```

In [89]:
```
A=total_2016.sort_values('visitors', ascending=False).head(10) # 2016 visitc
A
```

Out[89]:

district	visitors
Warangal (Urban)	25789934.0
Hyderabad	23558336.0
Karimnagar	9167468.0
Mahbubnagar	8305634.0
Nalgonda	5858461.0
Adilabad	5075567.0
Khammam	5005031.0
Medak	3463200.0
Rajanna Sircilla	2176801.0
Yadadri Bhongir	1728600.0

In [90]:
```
A.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 10 entries, Warangal (Urban) to Yadadri Bhongir
Data columns (total 1 columns):
 #   Column    Non-Null Count  Dtype  
---  ------    --------------  -----  
 0   visitors  10 non-null     float64
dtypes: float64(1)
memory usage: 160.0+ bytes
```

In [91]:
```
total_2017 = do_2.merge(fo_2, how='outer')
total_2017 = total_2017.dropna()
total_2017 = total_2017.groupby('district').agg({'visitors':'sum'})
B=total_2017.sort_values('visitors', ascending=False).head(10)
B
# 2017 data
```

Out[91]:

district	visitors
Hyderabad	27407421.0
Rajanna Sircilla	11919347.0
Medak	7726869.0
Yadadri Bhongir	7001728.0
Nirmal	4405083.0
Bhadradri Kothagudem	4094317.0
Jagtial	3641401.0
Mahbubnagar	3488749.0
Sangareddy	2823450.0
Nagarkurnool	2653645.0

In [92]:
```
total_2018 = do_3.merge(fo_3, how='outer')
total_2018 = total_2018.dropna()
total_2018 = total_2018.groupby('district').agg({'visitors':'sum'})
C = total_2018.sort_values('visitors', ascending=False).head(10)
C
# 2018 data
```

Out[92]:

district	visitors
Hyderabad	19858439.0
Jayashankar Bhoopalpally	16896464.0
Yadadri Bhongir	13673378.0
Rajanna Sircilla	10834231.0
Nirmal	4177327.0
Jagtial	3952921.0
Medak	3900000.0
Bhadradri Kothagudem	3799878.0
Mahbubnagar	2852762.0
Sangareddy	2269900.0

In [93]:
```
total_2019 = do_4.merge(fo_4, how='outer')
total_2019 = total_2019.dropna()
total_2019 = total_2019.groupby('district').agg({'visitors':'sum'})
D=total_2019.sort_values('visitors', ascending=False).head(10)
D
E = total_2019.sort_values('visitors', ascending=False)
# 2019
# A+B+C+D jitu data hai tuk sort kori deh
```

In [94]:
```
A
```

Out[94]:

district	visitors
Warangal (Urban)	25789934.0
Hyderabad	23558336.0
Karimnagar	9167468.0
Mahbubnagar	8305634.0
Nalgonda	5858461.0
Adilabad	5075567.0
Khammam	5005031.0
Medak	3463200.0
Rajanna Sircilla	2176801.0
Yadadri Bhongir	1728600.0

In [95]:
```
B
```

Out[95]:

district	visitors
Hyderabad	27407421.0
Rajanna Sircilla	11919347.0
Medak	7726869.0
Yadadri Bhongir	7001728.0
Nirmal	4405083.0
Bhadradri Kothagudem	4094317.0
Jagtial	3641401.0
Mahbubnagar	3488749.0
Sangareddy	2823450.0
Nagarkurnool	2653645.0

In [96]:
```
C
```

Out[96]:

district	visitors
Hyderabad	19858439.0
Jayashankar Bhoopalpally	16896464.0
Yadadri Bhongir	13673378.0
Rajanna Sircilla	10834231.0
Nirmal	4177327.0
Jagtial	3952921.0
Medak	3900000.0
Bhadradri Kothagudem	3799878.0
Mahbubnagar	2852762.0
Sangareddy	2269900.0

In [97]:
```
D
```

Out[97]:

district	visitors
Rajanna Sircilla	16832897.0
Hyderabad	14121662.0
Bhadradri Kothagudem	12817737.0
Medak	5452570.0
Sangareddy	4553160.0
Yadadri Bhongir	4489374.0
Jagtial	3086115.0
Siddipet	2987864.0
Mahbubnagar	2535255.0
Nagarkurnool	2093312.0

In [98]:
```
debu=pd.concat([A,B])
debu1=pd.concat([C,D])
top_3=pd.concat([debu,debu1])
top_3
```

Out[98]:

district	visitors
Warangal (Urban)	25789934.0
Hyderabad	23558336.0
Karimnagar	9167468.0
Mahbubnagar	8305634.0
Nalgonda	5858461.0
Adilabad	5075567.0
Khammam	5005031.0
Medak	3463200.0
Rajanna Sircilla	2176801.0
Yadadri Bhongir	1728600.0
Hyderabad	27407421.0
Rajanna Sircilla	11919347.0
Medak	7726869.0
Yadadri Bhongir	7001728.0
Nirmal	4405083.0
Bhadradri Kothagudem	4094317.0
Jagtial	3641401.0
Mahbubnagar	3488749.0
Sangareddy	2823450.0
Nagarkurnool	2653645.0
Hyderabad	19858439.0
Jayashankar Bhoopalpally	16896464.0
Yadadri Bhongir	13673378.0
Rajanna Sircilla	10834231.0
Nirmal	4177327.0
Jagtial	3952921.0
Medak	3900000.0
Bhadradri Kothagudem	3799878.0
Mahbubnagar	2852762.0
Sangareddy	2269900.0
Rajanna Sircilla	16832897.0
Hyderabad	14121662.0
Bhadradri Kothagudem	12817737.0
Medak	5452570.0
Sangareddy	4553160.0
Yadadri Bhongir	4489374.0
Jagtial	3086115.0

district	visitors
Siddipet	2987864.0
Mahbubnagar	2535255.0
Nagarkurnool	2093312.0

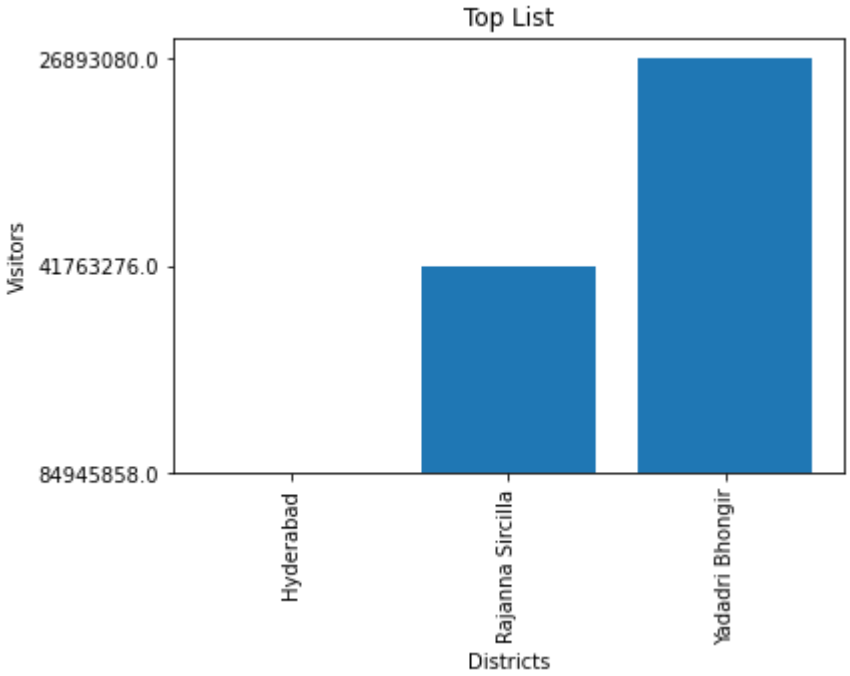
In [99]:
```
top_3 = top_3.groupby('district').agg({'visitors':'sum'})
top_3 = top_3.sort_values('visitors', ascending=False).head(3)
top_3       # top list
```

Out[99]:

district	visitors
Hyderabad	84945858.0
Rajanna Sircilla	41763276.0
Yadadri Bhongir	26893080.0

In [100…
```
district = ['Hyderabad','Rajanna Sircilla','Yadadri Bhongir']
visitors = ['84945858.0','41763276.0','26893080.0']
plt.bar(district, visitors)
plt.title("Top List")
plt.xlabel("Districts")
plt.ylabel("Visitors")
plt.xticks(rotation=90)
plt.show
```

Out[100]:
```
<function matplotlib.pyplot.show(close=None, block=None)>
```



In [101…
```
a=total_2016.sort_values('visitors', ascending=True).head(10)
b=total_2017.sort_values('visitors', ascending=True).head(10)
c = total_2018.sort_values('visitors', ascending=True).head(10)
d=total_2019.sort_values('visitors', ascending=True).head(10)
```

In [102…
```
a
```

Out[102]:

district	visitors
Komaram Bheem Asifabad	0.0
Jangaon	2.0
Nagarkurnool	29.0
Jogulamba Gadwal	45.0
Kamareddy	127.0
Peddapalli	3244.0
Nizamabad	6442.0
Mancherial	7802.0
Warangal (Rural)	19400.0
Jangaon	40660.0

In [103…

```
b
```

Out[103]:

district	visitors
Jogulamba Gadwal	305.0
Nagarkurnool	311.0
Kamareddy	540.0
Peddapalli	14898.0
Nizamabad	21951.0
Komaram Bheem Asifabad	50991.0
Karimnagar	123976.0
Mahabubabad	141815.0
Warangal (Rural)	144556.0
Jangaon	165708.0

In [104…

```
c
```

Out[104]:

district	visitors
Nagarkurnool	222.0
Jogulamba Gadwal	300.0
Kamareddy	572.0
Peddapalli	22254.0
Komaram Bheem Asifabad	22554.0
Nizamabad	41425.0
Karimnagar	93448.0
Nalgonda	160638.0
Mahabubabad	165995.0
Wanaparthy	286600.0

In [105…

```
d
```

Out[105]:

district	visitors
Narayanpet	5.0
Nagarkurnool	199.0
Jogulamba Gadwal	295.0
Kamareddy	534.0
Nizamabad	11401.0
Peddapalli	16581.0
Komaram Bheem Asifabad	19189.0
Karimnagar	77491.0
Nalgonda	140918.0
Mahabubabad	152885.0

In [106…

```
debu2=pd.concat([a,b])
debu3=pd.concat([c,d])
bottom_3=pd.concat([debu2,debu3])
bottom_3
```

Out[106]:

district	visitors
Komaram Bheem Asifabad	0.0
Jangaon	2.0
Nagarkurnool	29.0
Jogulamba Gadwal	45.0
Kamareddy	127.0
Peddapalli	3244.0
Nizamabad	6442.0
Mancherial	7802.0
Warangal (Rural)	19400.0
Jangaon	40660.0
Jogulamba Gadwal	305.0
Nagarkurnool	311.0
Kamareddy	540.0
Peddapalli	14898.0
Nizamabad	21951.0
Komaram Bheem Asifabad	50991.0
Karimnagar	123976.0
Mahabubabad	141815.0
Warangal (Rural)	144556.0
Jangaon	165708.0
Nagarkurnool	222.0
Jogulamba Gadwal	300.0
Kamareddy	572.0
Peddapalli	22254.0
Komaram Bheem Asifabad	22554.0
Nizamabad	41425.0
Karimnagar	93448.0
Nalgonda	160638.0
Mahabubabad	165995.0
Wanaparthy	286600.0
Narayanpet	5.0
Nagarkurnool	199.0
Jogulamba Gadwal	295.0
Kamareddy	534.0
Nizamabad	11401.0
Peddapalli	16581.0
Komaram Bheem Asifabad	19189.0

district	visitors
Karimnagar	77491.0
Nalgonda	140918.0
Mahabubabad	152885.0

In [107…
```
bottom_3 = bottom_3.groupby('district').agg({'visitors':'sum'})
bottom_3 = bottom_3.sort_values('visitors', ascending=True).head(3)
bottom_3   # bootom list
```

Out[107]:

district	visitors
Jangaon	2.0
Narayanpet	5.0
Nagarkurnool	761.0

In [108…
```
total_hy = do_v.merge(fo_v, how='outer')
total_hy
```

Out[108]:

	district	visitors	date	month	year
0	Adilabad	792136	NaN	NaN	NaN
1	Adilabad	937820	NaN	NaN	NaN
2	Adilabad	582946	NaN	NaN	NaN
3	Adilabad	341948	NaN	NaN	NaN
4	Adilabad	252887	NaN	NaN	NaN
...	...	...	...	...	...
1407	Hyderabad	28706	01/10/19	October	2019.0
1408	Hyderabad	32762	01/11/19	November	2019.0
1409	Hyderabad	34018	01/09/19	September	2019.0
1410	Hyderabad	34084	01/12/19	December	2019.0
1411	Hyderabad	35920	01/01/19	January	2019.0

1412 rows × 5 columns

In [109…
```
total_hy = total_hy[total_hy["district"]== 'Hyderabad']
total_hy.dropna()
```

Out[109]:

	district	visitors	date	month	year
1192	Hyderabad	8084	01/11/16	November	2016.0
1193	Hyderabad	8402	01/04/16	April	2016.0
1194	Hyderabad	8522	01/05/16	May	2016.0
1195	Hyderabad	9397	01/09/16	September	2016.0
1196	Hyderabad	10284	01/06/16	June	2016.0
1197	Hyderabad	12808	01/10/16	October	2016.0
1198	Hyderabad	12842	01/08/16	August	2016.0
1199	Hyderabad	13019	01/03/16	March	2016.0
1200	Hyderabad	15865	01/01/16	January	2016.0
1201	Hyderabad	17142	01/07/16	July	2016.0
1202	Hyderabad	17620	01/12/16	December	2016.0
1203	Hyderabad	29646	01/02/16	February	2016.0
1204	Hyderabad	12486	01/06/17	June	2017.0
1205	Hyderabad	12983	01/05/17	May	2017.0
1206	Hyderabad	12996	01/04/17	April	2017.0
1207	Hyderabad	13875	01/03/17	March	2017.0
1208	Hyderabad	16985	01/08/17	August	2017.0
1209	Hyderabad	18097	01/02/17	February	2017.0
1210	Hyderabad	18144	01/07/17	July	2017.0
1211	Hyderabad	19286	01/01/17	January	2017.0
1212	Hyderabad	26368	01/10/17	October	2017.0
1213	Hyderabad	27856	01/09/17	September	2017.0
1214	Hyderabad	29170	01/11/17	November	2017.0
1215	Hyderabad	38933	01/12/17	December	2017.0
1361	Hyderabad	17456	01/07/18	July	2018.0
1362	Hyderabad	20830	01/04/18	April	2018.0
1363	Hyderabad	21554	01/05/18	May	2018.0
1364	Hyderabad	22809	01/09/18	September	2018.0
1365	Hyderabad	23487	01/11/18	November	2018.0
1366	Hyderabad	24677	01/06/18	June	2018.0
1367	Hyderabad	27535	01/03/18	March	2018.0
1368	Hyderabad	29358	01/12/18	December	2018.0
1369	Hyderabad	30072	01/10/18	October	2018.0
1370	Hyderabad	30414	01/02/18	February	2018.0
1371	Hyderabad	31217	01/08/18	August	2018.0
1372	Hyderabad	35379	01/01/18	January	2018.0
1400	Hyderabad	17317	01/05/19	May	2019.0
1401	Hyderabad	18267	01/04/19	April	2019.0

	district	visitors	date	month	year
1402	Hyderabad	20077	01/06/19	June	2019.0
1403	Hyderabad	21929	01/03/19	March	2019.0
1404	Hyderabad	22725	01/08/19	August	2019.0
1405	Hyderabad	25621	01/02/19	February	2019.0
1406	Hyderabad	27874	01/07/19	July	2019.0
1407	Hyderabad	28706	01/10/19	October	2019.0
1408	Hyderabad	32762	01/11/19	November	2019.0
1409	Hyderabad	34018	01/09/19	September	2019.0
1410	Hyderabad	34084	01/12/19	December	2019.0
1411	Hyderabad	35920	01/01/19	January	2019.0

In [110…
```
total_hy = total_hy.groupby('month').agg({'visitors':'sum'})
```

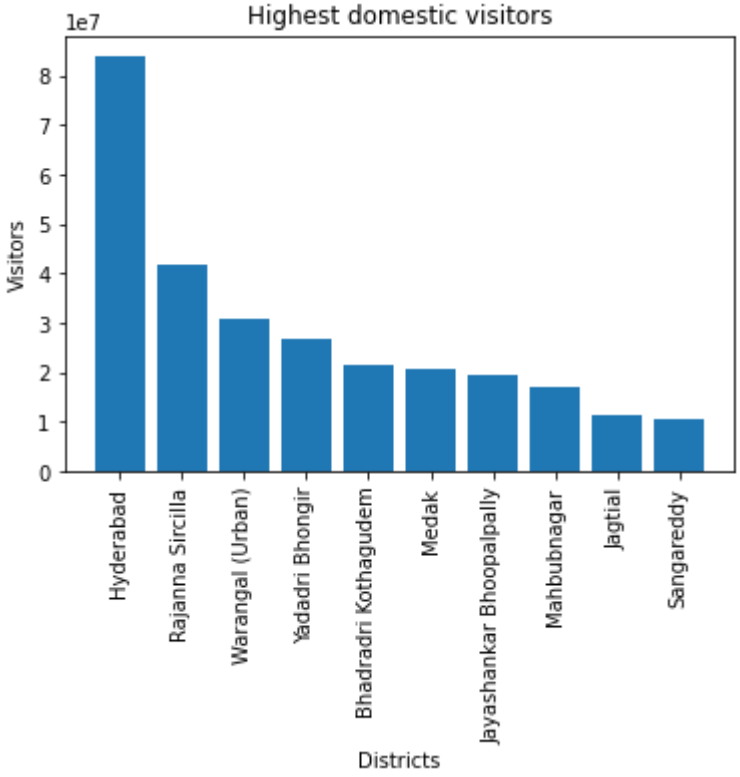
In [111…
```
total_hy=total_hy.sort_values('visitors', ascending=False)
total_hy   # months where hydrabad had lots of visitors
```

Out[111]:

month	visitors
December	119995
January	106450
February	103778
October	97954
September	94080
November	93503
August	83769
July	80616
March	76358
June	67524
April	60495
May	60376

In [112…
```
# Create the table
data = {'district': ['Hyderabad', 'Rajanna Sircilla', 'Warangal (Urban)', 'Y
                     'Medak', 'Jayashankar Bhoopalpally', 'Mahbubnagar', 'Ja
        'visitors': [83900960, 41763276, 30726603, 26893080, 21600962, 20542

df = pd.DataFrame(data)

# Create a bar chart using the table
plt.bar(df['district'], df['visitors'])

# Add a title
plt.title("Highest domestic visitors")

# Rotate x-axis labels for better readability
```

```
plt.xticks(rotation=90)

# Add axis labels
plt.xlabel("Districts")
plt.ylabel("Visitors")

# Display the graph
plt.show()
```



In [113…
```
do_vv = do_v
fo_vv = fo_v
```

In [114…
```
do_vv = do_vv.groupby('district').agg({'visitors':'sum'})
do_vv = do_vv.sort_values('visitors', ascending=False)
do_vv
```

Out[114]:

district	visitors
Hyderabad	83900960
Rajanna Sircilla	41763276
Warangal (Urban)	30726603
Yadadri Bhongir	26893080
Bhadradri Kothagudem	21600962
Medak	20542639
Jayashankar Bhoopalpally	19632865
Mahbubnagar	17180118
Jagtial	11303514
Sangareddy	10424510
Nirmal	9499018
Karimnagar	9462383
Khammam	9378315
Nagarkurnool	7424355
Adilabad	7321575
Jogulamba Gadwal	6813340
Nalgonda	6401933
Siddipet	5775285
Mulugu	1819800
Wanaparthy	890078
Mancherial	867242
Jangaon	826280
Warangal (Rural)	819162
Mahabubabad	600697
Komaram Bheem Asifabad	92734
Nizamabad	81214
Peddapalli	56977
Kamareddy	1773

In [115…

```
fo_vv = fo_vv.groupby('district').agg({'visitors':'sum'})
fo_vv = fo_vv.sort_values('visitors', ascending=False)
fo_vv
```

Out[115]:

district	visitors
Hyderabad	1044898
Warangal (Urban)	8821
Mahbubnagar	2282
Jayashankar Bhoopalpally	1252
Jogulamba Gadwal	945
Nagarkurnool	761
Mulugu	575
Warangal (Rural)	306
Adilabad	21
Mancherial	10
Narayanpet	5
Nizamabad	5
Jangaon	2
Nirmal	2

In [116…

```
ratio_t = pd.merge(do_vv,fo_vv,on='district')
ratio_t
```

Out[116]:

district	visitors_x	visitors_y
Hyderabad	83900960	1044898
Warangal (Urban)	30726603	8821
Jayashankar Bhoopalpally	19632865	1252
Mahbubnagar	17180118	2282
Nirmal	9499018	2
Adilabad	7321575	21
Mulugu	1819800	575
Mancherial	867242	10
Warangal (Rural)	819162	306
Nizamabad	81214	5

In [117…

```
ratio_t['ratio']=ratio_t['visitors_x']/ratio_t['visitors_y']
ratio_t
```

Out[117]:

district	visitors_x	visitors_y	ratio
Hyderabad	83900960	1044898	8.029584e+01
Warangal (Urban)	30726603	8821	3.483347e+03
Jayashankar Bhoopalpally	19632865	1252	1.568120e+04
Mahbubnagar	17180118	2282	7.528535e+03
Nirmal	9499018	2	4.749509e+06
Adilabad	7321575	21	3.486464e+05
Mulugu	1819800	575	3.164870e+03
Mancherial	867242	10	8.672420e+04
Warangal (Rural)	819162	306	2.677000e+03
Nizamabad	81214	5	1.624280e+04

In [118…
```
ratio_t.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 10 entries, Hyderabad to Nizamabad
Data columns (total 3 columns):
 #   Column      Non-Null Count  Dtype  
---  ------      --------------  -----  
 0   visitors_x  10 non-null     int64  
 1   visitors_y  10 non-null     int64  
 2   ratio       10 non-null     float64
dtypes: float64(1), int64(2)
memory usage: 320.0+ bytes
```

In [119…
```
ratio_t['ratio']=ratio_t['ratio'].astype('int')
```

In [120…
```
ratio_h= ratio_t.sort_values('ratio', ascending=False).head(3)
```

In [121…
```
ratio_h  #above ratio
```

Out[121]:

district	visitors_x	visitors_y	ratio
Nirmal	9499018	2	4749509
Adilabad	7321575	21	348646
Mancherial	867242	10	86724

In [122…
```
ratio_b= ratio_t.sort_values('ratio', ascending=True).head(3)
ratio_b  # below ratio
```

Out[122]:

district	visitors_x	visitors_y	ratio
Hyderabad	83900960	1044898	80
Warangal (Rural)	819162	306	2677
Mulugu	1819800	575	3164

SECONDARY QUESTION

In [123…
```
do_44=do_4
do_44.dropna()
```

Out[123]:

	district	date	month	year	visitors
0	Adilabad	01/01/19	January	2019.0	25071.0
1	Adilabad	01/02/19	February	2019.0	406177.0
2	Adilabad	01/03/19	March	2019.0	14347.0
3	Adilabad	01/04/19	April	2019.0	9972.0
4	Adilabad	01/05/19	May	2019.0	6997.0
…	…	…	…	…	…
307	Siddipet	01/08/19	August	2019.0	190750.0
308	Siddipet	01/09/19	September	2019.0	122550.0
309	Siddipet	01/10/19	October	2019.0	191330.0
310	Siddipet	01/11/19	November	2019.0	209130.0
311	Siddipet	01/12/19	December	2019.0	217930.0

312 rows × 5 columns

In [124…
```
fo_44=fo_4
fo_44.dropna()
```

Out[124]:

	district	date	month	year	visitors
0	Nizamabad	01/02/19	February	2019	1.0
1	Adilabad	01/02/19	February	2019	2.0
2	Adilabad	01/08/19	August	2019	2.0
3	Adilabad	01/11/19	November	2019	2.0
4	Nagarkurnool	01/10/19	October	2019	3.0
…	…	…	…	…	…
73	Hyderabad	01/10/19	October	2019	28706.0
74	Hyderabad	01/11/19	November	2019	32762.0
75	Hyderabad	01/09/19	September	2019	34018.0
76	Hyderabad	01/12/19	December	2019	34084.0
77	Hyderabad	01/01/19	January	2019	35920.0

78 rows × 5 columns

In [125…
```
total_2019= pd.concat([do_vv,fo_vv])
```

In [126…
```
total_2019
```

Out[126]:

district	visitors
Hyderabad	83900960
Rajanna Sircilla	41763276
Warangal (Urban)	30726603
Yadadri Bhongir	26893080
Bhadradri Kothagudem	21600962
Medak	20542639
Jayashankar Bhoopalpally	19632865
Mahbubnagar	17180118
Jagtial	11303514
Sangareddy	10424510
Nirmal	9499018
Karimnagar	9462383
Khammam	9378315
Nagarkurnool	7424355
Adilabad	7321575
Jogulamba Gadwal	6813340
Nalgonda	6401933
Siddipet	5775285
Mulugu	1819800
Wanaparthy	890078
Mancherial	867242
Jangaon	826280
Warangal (Rural)	819162
Mahabubabad	600697
Komaram Bheem Asifabad	92734
Nizamabad	81214
Peddapalli	56977
Kamareddy	1773
Hyderabad	1044898
Warangal (Urban)	8821
Mahbubnagar	2282
Jayashankar Bhoopalpally	1252
Jogulamba Gadwal	945
Nagarkurnool	761
Mulugu	575
Warangal (Rural)	306
Adilabad	21

district	visitors
Mancherial	10
Narayanpet	5
Nizamabad	5
Jangaon	2
Nirmal	2

In [127…
```
total_sum = total_2019['visitors'].sum()
total_sum
```

Out[127]:
```
353160573
```

In [128…
```
total_all = pd.concat([do_v,fo_v])

del total_all['month']
del total_all['year']
del total_all['date']
total_all=total_all.groupby('district').agg({'visitors':'sum'})
total_all
```

Out[128]:

district	visitors
Adilabad	7321596
Bhadradri Kothagudem	21600962
Hyderabad	84945858
Jagtial	11303514
Jangaon	2
Jangaon	826280
Jayashankar Bhoopalpally	19634117
Jogulamba Gadwal	945
Jogulamba Gadwal	6813340
Kamareddy	1773
Karimnagar	9462383
Khammam	9378315
Komaram Bheem Asifabad	92734
Mahabubabad	600697
Mahbubnagar	17182400
Mancherial	867252
Medak	20542639
Mulugu	1820375
Nagarkurnool	761
Nagarkurnool	7424355
Nalgonda	6401933
Narayanpet	5
Nirmal	9499020
Nizamabad	81219
Peddapalli	56977
Rajanna Sircilla	41763276
Sangareddy	10424510
Siddipet	5775285
Wanaparthy	890078
Warangal (Rural)	819468
Warangal (Urban)	30735424
Yadadri Bhongir	26893080

In [129…

```
all_sum= total_all['visitors'].sum()
all_sum
```

Out[129]:

```
353160573
```

In [147…
```
do_v
```

Out[147]:

	district	date	month	year	visitors
0	Adilabad	01/01/16	January	2016.0	792136.0
1	Adilabad	01/02/16	February	2016.0	937820.0
2	Adilabad	01/03/16	March	2016.0	582946.0
3	Adilabad	01/04/16	April	2016.0	341948.0
4	Adilabad	01/05/16	May	2016.0	252887.0
...	...	...	...	...	...
8569	Siddipet	01/08/19	August	2019.0	190750.0
8570	Siddipet	01/09/19	September	2019.0	122550.0
8571	Siddipet	01/10/19	October	2019.0	191330.0
8572	Siddipet	01/11/19	November	2019.0	209130.0
8573	Siddipet	01/12/19	December	2019.0	217930.0

1122 rows × 5 columns

In [148…
```
do_hyde=do_v[do_v["district"]== 'Hyderabad']
do_hyde
```

Out[148]:

	district	date	month	year	visitors
15	Hyderabad	01/01/16	January	2016.0	1122510.0
16	Hyderabad	01/02/16	February	2016.0	778748.0
17	Hyderabad	01/03/16	March	2016.0	1017794.0
18	Hyderabad	01/04/16	April	2016.0	1127738.0
19	Hyderabad	01/05/16	May	2016.0	1287181.0
20	Hyderabad	01/06/16	June	2016.0	12032661.0
21	Hyderabad	01/07/16	July	2016.0	1096754.0
22	Hyderabad	01/08/16	August	2016.0	1061137.0
23	Hyderabad	01/09/16	September	2016.0	832987.0
24	Hyderabad	01/10/16	October	2016.0	901960.0
25	Hyderabad	01/11/16	November	2016.0	909733.0
26	Hyderabad	01/12/16	December	2016.0	1225502.0
7638	Hyderabad	01/01/17	January	2017.0	1924695.0
7639	Hyderabad	01/02/17	February	2017.0	1886698.0
7640	Hyderabad	01/03/17	March	2017.0	1783903.0
7641	Hyderabad	01/04/17	April	2017.0	2366793.0
7642	Hyderabad	01/05/17	May	2017.0	2266793.0
7643	Hyderabad	01/06/17	June	2017.0	2007060.0
7644	Hyderabad	01/07/17	July	2017.0	1890870.0
7645	Hyderabad	01/08/17	August	2017.0	1976980.0
7646	Hyderabad	01/09/17	September	2017.0	2011280.0
7647	Hyderabad	01/10/17	October	2017.0	2202316.0
7648	Hyderabad	01/11/17	November	2017.0	1971438.0
7649	Hyderabad	01/12/17	December	2017.0	4871416.0
7962	Hyderabad	01/01/18	January	2018.0	1978396.0
7963	Hyderabad	01/02/18	February	2018.0	1365837.0
7964	Hyderabad	01/03/18	March	2018.0	1415938.0
7965	Hyderabad	01/04/18	April	2018.0	1586375.0
7966	Hyderabad	01/05/18	May	2018.0	1189492.0
7967	Hyderabad	01/06/18	June	2018.0	1595067.0
7968	Hyderabad	01/07/18	July	2018.0	1470042.0
7969	Hyderabad	01/08/18	August	2018.0	1591470.0
7970	Hyderabad	01/09/18	September	2018.0	1508086.0
7971	Hyderabad	01/10/18	October	2018.0	2207478.0
7972	Hyderabad	01/11/18	November	2018.0	1671320.0
7973	Hyderabad	01/12/18	December	2018.0	1964150.0
8286	Hyderabad	01/01/19	January	2019.0	1426500.0
8287	Hyderabad	01/02/19	February	2019.0	983147.0

	district	date	month	year	visitors
8288	Hyderabad	01/03/19	March	2019.0	1009991.0
8289	Hyderabad	01/04/19	April	2019.0	1045933.0
8290	Hyderabad	01/05/19	May	2019.0	1305748.0
8291	Hyderabad	01/06/19	June	2019.0	1262995.0
8292	Hyderabad	01/07/19	July	2019.0	1094861.0
8293	Hyderabad	01/08/19	August	2019.0	1121380.0
8294	Hyderabad	01/09/19	September	2019.0	959930.0
8295	Hyderabad	01/10/19	October	2019.0	1240643.0
8296	Hyderabad	01/11/19	November	2019.0	1073665.0
8297	Hyderabad	01/12/19	December	2019.0	1277569.0

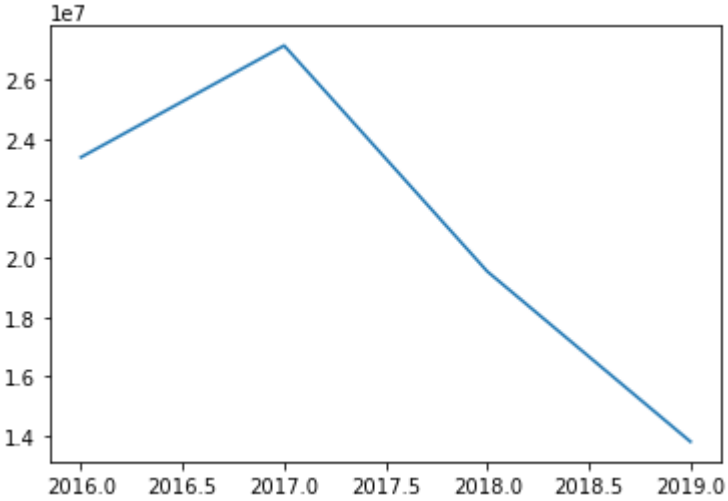
In [149…
```
do_hyde = do_hyde.groupby('year').agg({'visitors':'sum'})
do_hyde.sort_values('visitors', ascending=False)
```

Out[149]:

	visitors
year	
2017.0	27160242.0
2016.0	23394705.0
2018.0	19543651.0
2019.0	13802362.0

In [150…
```
plt.plot(do_hyde)
```

Out[150]:
```
[<matplotlib.lines.Line2D at 0x7f9f0e664910>]
```



In [161…
```
fo_hyde=fo_v[fo_v["district"]== 'Hyderabad']
fo_hyde
```

Out[161]:

	district	date	month	year	visitors
38	Hyderabad	01/11/16	November	2016	8084.0
39	Hyderabad	01/04/16	April	2016	8402.0
40	Hyderabad	01/05/16	May	2016	8522.0
41	Hyderabad	01/09/16	September	2016	9397.0
42	Hyderabad	01/06/16	June	2016	10284.0
43	Hyderabad	01/10/16	October	2016	12808.0
44	Hyderabad	01/08/16	August	2016	12842.0
45	Hyderabad	01/03/16	March	2016	13019.0
46	Hyderabad	01/01/16	January	2016	15865.0
47	Hyderabad	01/07/16	July	2016	17142.0
48	Hyderabad	01/12/16	December	2016	17620.0
49	Hyderabad	01/02/16	February	2016	29646.0
50	Hyderabad	01/06/17	June	2017	12486.0
51	Hyderabad	01/05/17	May	2017	12983.0
52	Hyderabad	01/04/17	April	2017	12996.0
53	Hyderabad	01/03/17	March	2017	13875.0
54	Hyderabad	01/08/17	August	2017	16985.0
55	Hyderabad	01/02/17	February	2017	18097.0
56	Hyderabad	01/07/17	July	2017	18144.0
57	Hyderabad	01/01/17	January	2017	19286.0
58	Hyderabad	01/10/17	October	2017	26368.0
59	Hyderabad	01/09/17	September	2017	27856.0
60	Hyderabad	01/11/17	November	2017	29170.0
61	Hyderabad	01/12/17	December	2017	38933.0
200	Hyderabad	01/07/18	July	2018	17456.0
201	Hyderabad	01/04/18	April	2018	20830.0
202	Hyderabad	01/05/18	May	2018	21554.0
203	Hyderabad	01/09/18	September	2018	22809.0
204	Hyderabad	01/11/18	November	2018	23487.0
205	Hyderabad	01/06/18	June	2018	24677.0
206	Hyderabad	01/03/18	March	2018	27535.0
207	Hyderabad	01/12/18	December	2018	29358.0
208	Hyderabad	01/10/18	October	2018	30072.0
209	Hyderabad	01/02/18	February	2018	30414.0
210	Hyderabad	01/08/18	August	2018	31217.0
211	Hyderabad	01/01/18	January	2018	35379.0
278	Hyderabad	01/05/19	May	2019	17317.0
279	Hyderabad	01/04/19	April	2019	18267.0

	district	date	month	year	visitors
280	Hyderabad	01/06/19	June	2019	20077.0
281	Hyderabad	01/03/19	March	2019	21929.0
282	Hyderabad	01/08/19	August	2019	22725.0
283	Hyderabad	01/02/19	February	2019	25621.0
284	Hyderabad	01/07/19	July	2019	27874.0
285	Hyderabad	01/10/19	October	2019	28706.0
286	Hyderabad	01/11/19	November	2019	32762.0
287	Hyderabad	01/09/19	September	2019	34018.0
288	Hyderabad	01/12/19	December	2019	34084.0
289	Hyderabad	01/01/19	January	2019	35920.0

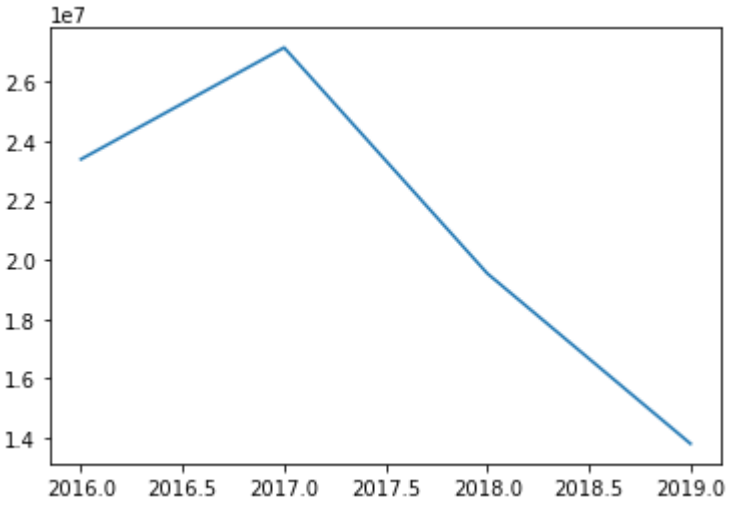
In [162…
```
fo_hyde = do_hyde.groupby('year').agg({'visitors':'sum'})
fo_hyde.sort_values('visitors', ascending=False)
```

Out[162]:

	visitors
year	
2017.0	27160242.0
2016.0	23394705.0
2018.0	19543651.0
2019.0	13802362.0

In [163…
```
plt.plot(fo_hyde)
```

Out[163]:
```
[<matplotlib.lines.Line2D at 0x7f9f0e8a8340>]
```



In [135…
```
D
```

Out[135]:

district	visitors
Rajanna Sircilla	16832897.0
Hyderabad	14121662.0
Bhadradri Kothagudem	12817737.0
Medak	5452570.0
Sangareddy	4553160.0
Yadadri Bhongir	4489374.0
Jagtial	3086115.0
Siddipet	2987864.0
Mahbubnagar	2535255.0
Nagarkurnool	2093312.0

In [136…
```
D['ratio']=D['visitors']/38472769
```

In [137…
```
D.head(5)
```

Out[137]:

district	visitors	ratio
Rajanna Sircilla	16832897.0	0.437528
Hyderabad	14121662.0	0.367056
Bhadradri Kothagudem	12817737.0	0.333164
Medak	5452570.0	0.141725
Sangareddy	4553160.0	0.118348

In [138…
```
E=E.sort_values('visitors', ascending=True)
```

In [139…
```
E['ratio']=E['visitors']/38472769
```

In [140…
```
E.sort_values('ratio',ascending=False)
```

Out[140]:

district	visitors	ratio
Rajanna Sircilla	16832897.0	4.375276e-01
Hyderabad	14121662.0	3.670560e-01
Bhadradri Kothagudem	12817737.0	3.331639e-01
Medak	5452570.0	1.417254e-01
Sangareddy	4553160.0	1.183476e-01
Yadadri Bhongir	4489374.0	1.166897e-01
Jagtial	3086115.0	8.021557e-02
Siddipet	2987864.0	7.766179e-02
Mahbubnagar	2535255.0	6.589739e-02
Nagarkurnool	2093312.0	5.441022e-02
Jogulamba Gadwal	2007995.0	5.219263e-02
Mulugu	1820375.0	4.731593e-02
Warangal (Urban)	1797680.0	4.672604e-02
Khammam	1413440.0	3.673871e-02
Adilabad	775901.0	2.016754e-02
Jayashankar Bhoopalpally	662575.0	1.722192e-02
Warangal (Rural)	353500.0	9.188317e-03
Jangaon	328890.0	8.548644e-03
Wanaparthy	298639.0	7.762347e-03
Mancherial	269820.0	7.013272e-03
Mahabubabad	152885.0	3.973850e-03
Nalgonda	140918.0	3.662798e-03
Karimnagar	77491.0	2.014178e-03
Komaram Bheem Asifabad	19189.0	4.987684e-04
Peddapalli	16581.0	4.309802e-04
Nizamabad	11401.0	2.963395e-04
Kamareddy	534.0	1.387995e-05
Jogulamba Gadwal	295.0	7.667761e-06
Nagarkurnool	199.0	5.172490e-06
Narayanpet	5.0	1.299621e-07

In [164…

```
fo_hyde
```

Out[164]:

year	visitors
2016.0	23394705.0
2017.0	27160242.0
2018.0	19543651.0
2019.0	13802362.0

In [ ]: