

```
In [1]: 1 import warnings
        2 warnings.filterwarnings('ignore')
```

```
In [2]: 1 import pandas
```

```
In [3]: 1 data=pandas.read_csv("Hotel Reviews.csv")
```

```
In [4]: 1 data.head()
```

Out[4]:

	Unnamed: 0	hotel_name	city	Longitude	Latitude	Review	Cuisine	Rating
0	0	Kochi Kitchen	Kerala	76.240053	9.965683	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5
1	1	Ginger Indore	Indore	125.608086	7.128674	good choice seattle said little gem boutique h...	Finger Food	4
2	2	Hotel Chandra	Hyderabad	86.290131	26.809856	average experience rooms sixth avenue inn incl...	North Indian	2
3	3	Kismat kathiyavadi	Indore	73.183441	22.164365	surprising enjoyable stay, 3 hotels stayed tri...	Andhra, South Indian, Chinese, North Indian	4
4	4	Cafe Coffee Day Surat	Surat	72.789414	21.171268	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4

```
In [5]: 1 data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 385 entries, 0 to 384
Data columns (total 8 columns):
#   Column      Non-Null Count  Dtype
---  ---
0   Unnamed: 0   385 non-null    int64
1   hotel_name   385 non-null    object
2   city         385 non-null    object
3   Longitude    385 non-null    float64
4   Latitude     385 non-null    float64
5   Review       385 non-null    object
6   Cuisine      385 non-null    object
7   Rating       385 non-null    int64
dtypes: float64(2), int64(2), object(4)
memory usage: 24.2+ KB
```

```
In [6]: 1 data.drop(columns=['Unnamed: 0'],inplace=True)
```

In [7]: 1 data

Out[7]:

	hotel_name	city	Longitude	Latitude	Review	Cuisine	Rating
0	Kochi Kitchen	Kerala	76.240053	9.965683	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5
1	Ginger Indore	Indore	125.608086	7.128674	good choice seattle said little gem boutique h...	Finger Food	4
2	Hotel Chandra	Hyderabad	86.290131	26.809856	average experience rooms sixth avenue inn incl...	North Indian	2
3	Kismat kathiyavadi	Indore	73.183441	22.164365	surprising enjoyable stay, 3 hotels stayed tri...	Andhra, South Indian, Chinese, North Indian	4
4	Cafe Coffee Day Surat	Surat	72.789414	21.171268	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4
...
380	Hotel Grand Barrack	Raipur	90.425793	23.715133	water near pike market great hotel wonderful l...	Ice Cream, Juices	5
381	Hanwant Mahal	Chennai	73.044540	26.277195	budget booked hotel weekend november recommend...	North Indian, Mughlai, Chinese	1
382	JEWEL PALACE	Bhopal	67.027761	24.856811	average facilities need overhaul feel dated, s...	Kerala, Chinese	3
383	Hyatt Hyderabad Gachibowli	Hyderabad	78.341576	17.418403	o.k, place price recently stayed oct. 2004 4 n...	North Indian, Bengali, Oriya, Chinese	3
384	Hotel Jk Palace Allahabad (Prayagraj)	Allahabad	25.455254	81.836093	kind kimpton property tells story want cookie ...	North Indian, Chinese	4

385 rows × 7 columns

In [8]: 1 data.isnull().sum()

Out[8]: hotel_name 0
city 0
Longitude 0
Latitude 0
Review 0
Cuisine 0
Rating 0
dtype: int64

In [9]: 1 data['Place']=data['hotel_name']+ ','+data['city']

In [10]: 1 data.head()

Out[10]:

	hotel_name	city	Longitude	Latitude	Review	Cuisine	Rating	Place
0	Kochi Kitchen	Kerala	76.240053	9.965683	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5	Kochi Kitchen,Kerala
1	Ginger Indore	Indore	125.608086	7.128674	good choice seattle said little gem boutique h...	Finger Food	4	Ginger Indore,Indore
2	Hotel Chandra	Hyderabad	86.290131	26.809856	average experience rooms sixth avenue inn incl...	North Indian	2	Hotel Chandra,Hyderabad
3	Kismat kathiyavadi	Indore	73.183441	22.164365	surprising enjoyable stay, 3 hotels stayed tri...	Andhra, South Indian, Chinese, North Indian	4	Kismat kathiyavadi,Indore
4	Cafe Coffee Day Surat	Surat	72.789414	21.171268	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4	Cafe Coffee Day Surat,Surat

In [11]: 1 cities = data['Place'].unique()

In [12]: 1 cities

```
Out[12]: array(['Kochi Kitchen,Kerala', 'Ginger Indore,Indore',
               'Hotel Chandra,Hyderabad', 'Kismat kathiyavadi,Indore',
               'Cafe Coffee Day Surat,Surat', 'Hotel KRC Palace,Tezpur',
               'Galaxy Surat,Surat', 'The Coral Tree,Agra',
               'Radisson Blu Hotel,Indore', 'Domino's Surat,Surat',
               'Hotel Sheela,Agra', 'Hotel Sita Niwas,Amritsar',
               'hotel lakend,hotel lakend', 'Kashi Art Cafe,Kerala',
               'Hotel Basant,Tezpur', 'Bar b que inn,Kottayam',
               'Hotel Celebration ,Patna', 'Piccadily ,Patna',
               'Chandan Tea,Patna', 'Taj Lake Palace,Udaipur',
               'Sadda Pind,Amritsar', 'Good Vibes Cafe,Agra',
               'The Grand Bhagwati Surat,Surat', 'ramada,ramada',
               'Joey's Hostel Agra,Agra', 'Trilogi Restaurant,Kerala',
               'Hampshire Plaza Hotel,Hyderabad', 'Burger King Surat,Surat',
               'D-Cloud Guesthouse,Delhi', 'The Park,Chennai',
               'Radisson Hotel Amritsar,Amritsar', 'Coral River Resort,Delhi',
               'World Cuisine Restaurant,Indore',
               'Hotel Prayag Allahabad (Prayagraj),Allahabad',
               'Hotel Sarwan,Agra', 'Patel Rajasthan Garden,Indore',
               ...])
```

In [13]: 1 len(cities)

Out[13]: 385

```
In [14]: 1 import geopy
          2 from geopy.geocoders import Nominatim
          3 geocoder=Nominatim(user_agent="yogesh")
          4 from geopy.extra.rate_limiter import RateLimiter
          5 geocode=RateLimiter(geocoder.geocode,min_delay_seconds=1,return_value_on_exception=None)
```

```
In [15]: 1 latitude_dict = {}
          2 longitude_dict = {}
          3 for i in range(len(cities)):
          4     try:
          5         latitude_dict.update({cities[i]:geocode(cities[i]).latitude})
          6         longitude_dict.update({cities[i]:geocode(cities[i]).longitude})
          7     except:
          8         pass
```

```
In [16]: 1 data['Latitudes'] = data['Place'].map(latitude_dict)
          2 data['longitudes'] = data['Place'].map(longitude_dict)
```

```
In [17]: 1 data
```

Out[17]:

	hotel_name	city	Longitude	Latitude	Review	Cuisine	Rating	Place	Latitudes	longitudes
0	Kochi Kitchen	Kerala	76.240053	9.965683	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5	Kochi Kitchen,Kerala	9.965683	76.240053
1	Ginger Indore	Indore	125.608086	7.128674	good choice seattle said little gem boutique h...	Finger Food	4	Ginger Indore,Indore	NaN	NaN
2	Hotel Chandra	Hyderabad	86.290131	26.809856	average experience rooms sixth avenue inn incl...	North Indian	2	Hotel Chandra,Hyderabad	17.469109	78.427283
3	Kismat kathiyavadi	Indore	73.183441	22.164365	surprising enjoyable stay, 3 hotels stayed tri...	Andhra, South Indian, Chinese, North Indian	4	Kismat kathiyavadi,Indore	NaN	NaN
4	Cafe Coffee Day Surat	Surat	72.789414	21.171268	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4	Cafe Coffee Day Surat,Surat	21.171268	72.789414
...
380	Hotel Grand Barrack	Raipur	90.425793	23.715133	water near pike market great hotel wonderful l...	Ice Cream, Juices	5	Hotel Grand Barrack,Raipur	NaN	NaN
381	Hanwant Mahal	Chennai	73.044540	26.277195	budget booked hotel weekend november recommend...	North Indian, Mughlai, Chinese	1	Hanwant Mahal,Chennai	NaN	NaN
382	JEWEL PALACE	Bhopal	67.027761	24.856811	average facilities need overhaul feel dated, s...	Kerala, Chinese	3	JEWEL PALACE,Bhopal	NaN	NaN
383	Hyatt Hyderabad Gachibowli	Hyderabad	78.341576	17.418403	o.k, place price recently stayed oct. 2004 4 n...	North Indian, Bengali, Oriya, Chinese	3	Hyatt Hyderabad Gachibowli,Hyderabad	17.418403	78.341576
384	Hotel Jk Palace Allahabad (Prayagraj)	Allahabad	25.455254	81.836093	kind kimpton property tells story want cookie ...	North Indian, Chinese	4	Hotel Jk Palace Allahabad (Prayagraj),Allahabad	25.455254	81.836093

385 rows × 10 columns

```
In [18]: 1 data.isnull().sum()
```

Out[18]:

hotel_name	0
city	0
Longitude	0
Latitude	0
Review	0
Cuisine	0
Rating	0
Place	0
Latitudes	162
longitudes	162
dtype:	int64

```
In [19]: 1 data.dropna(inplace=True)
```

```
In [20]: 1 data.isnull().sum()
```

Out[20]: hotel_name 0
city 0
Longitude 0
Latitude 0
Review 0
Cuisine 0
Rating 0
Place 0
Latitudes 0
longitudes 0
dtype: int64

```
In [21]: 1 data.head()
```

Out[21]:

	hotel_name	city	Longitude	Latitude	Review	Cuisine	Rating	Place	Latitudes	longitudes
0	Kochi Kitchen	Kerala	76.240053	9.965683	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5	Kochi Kitchen,Kerala	9.965683	76.240053
2	Hotel Chandra	Hyderabad	86.290131	26.809856	average experience rooms sixth avenue inn incl...	North Indian	2	Hotel Chandra,Hyderabad	17.469109	78.427283
4	Cafe Coffee Day Surat	Surat	72.789414	21.171268	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4	Cafe Coffee Day Surat,Surat	21.171268	72.789414
5	Hotel KRC Palace	Tezpur	92.790122	26.626499	good location recently stayed 3 nights sherato...	Cafe, Fast Food	4	Hotel KRC Palace,Tezpur	26.626499	92.790122
6	Galaxy Surat	Surat	72.835225	21.200953	watch spent single night westin seattle left f...	North Indian	1	Galaxy Surat,Surat	21.200953	72.835225

```
In [22]: 1 data.drop(columns=['Longitude', 'Latitude'],inplace=True)
```

```
In [23]: 1 data.sample(5)
```

Out[23]:

	hotel_name	city	Review	Cuisine	Rating	Place	Latitudes	longitudes
42	City Hotel Allahabad (Prayagraj)	Allahabad	reservation problems thought contacting proper...	Andhra, Chinese, Biryani	2	City Hotel Allahabad (Prayagraj),Allahabad	25.441410	81.838510
157	Radisson Blu	Jaipur	lemon 1 going check recheck 2 days later asked...	North Indian, Chinese, Biryani	2	Radisson Blu,Jaipur	26.842496	75.794109
279	WOW Hotel Indore	Indore	seattle crown plaza not worth money got late h...	Kebab, Biryani	2	WOW Hotel Indore,Indore	22.748651	75.893714
57	Sheroes Hangout	Agra	not bad location unmatchable price range, simp...	Chinese	3	Sheroes Hangout,Agra	27.161864	78.040234
318	Hotel Pancharatna	Panvel	small fine really really really small room old...	North Indian, Chinese, Biryani	3	Hotel Pancharatna,Panvel	18.982618	73.113324

```
In [24]: 1 import textblob  
2 data['Sentiment']=data['Review'].apply(lambda x: textblob.TextBlob(x).sentiment.polarity)
```

```
In [25]: 1 data.head()
```

Out[25]:

	hotel_name	city	Review	Cuisine	Rating	Place	Latitudes	longitudes	Sentiment
0	Kochi Kitchen	Kerala	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5	Kochi Kitchen,Kerala	9.965683	76.240053	0.425758
2	Hotel Chandra	Hyderabad	average experience rooms sixth avenue inn incl...	North Indian	2	Hotel Chandra,Hyderabad	17.469109	78.427283	-0.029658
4	Cafe Coffee Day Surat	Surat	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4	Cafe Coffee Day Surat,Surat	21.171268	72.789414	0.288235
5	Hotel KRC Palace	Tezpur	good location recently stayed 3 nights sherato...	Cafe, Fast Food	4	Hotel KRC Palace,Tezpur	26.626499	92.790122	0.264875
6	Galaxy Surat	Surat	watch spent single night westin seattle left f...	North Indian	1	Galaxy Surat,Surat	21.200953	72.835225	0.129524

```
In [26]: 1 newdata=data.drop(columns=['Review','city','Place'])
```

```
In [27]: 1 newdata.head()
```

Out[27]:

	hotel_name	Cuisine	Rating	Latitudes	longitudes	Sentiment
0	Kochi Kitchen	North Indian, Continental, Chinese	5	9.965683	76.240053	0.425758
2	Hotel Chandra	North Indian	2	17.469109	78.427283	-0.029658
4	Cafe Coffee Day Surat	Biryani, North Indian, Chinese	4	21.171268	72.789414	0.288235
5	Hotel KRC Palace	Cafe, Fast Food	4	26.626499	92.790122	0.264875
6	Galaxy Surat	North Indian	1	21.200953	72.835225	0.129524

```
In [28]: 1 newdata["North"]=newdata['Cuisine'].astype(str).apply(lambda x:"North" in x)
2 newdata["Mexican"]=newdata['Cuisine'].astype(str).apply(lambda x:"Mexican" in x)
3 newdata["South"]=newdata['Cuisine'].astype(str).apply(lambda x:"South" in x)
4 newdata["Continental"]=newdata['Cuisine'].astype(str).apply(lambda x:"Continental" in x)
```

```
In [29]: 1 newdata.head()
```

Out[29]:

	hotel_name	Cuisine	Rating	Latitudes	longitudes	Sentiment	North	Mexican	South	Continental
0	Kochi Kitchen	North Indian, Continental, Chinese	5	9.965683	76.240053	0.425758	True	False	False	True
2	Hotel Chandra	North Indian	2	17.469109	78.427283	-0.029658	True	False	False	False
4	Cafe Coffee Day Surat	Biryani, North Indian, Chinese	4	21.171268	72.789414	0.288235	True	False	False	False
5	Hotel KRC Palace	Cafe, Fast Food	4	26.626499	92.790122	0.264875	False	False	False	False
6	Galaxy Surat	North Indian	1	21.200953	72.835225	0.129524	True	False	False	False

```
In [30]: 1 newdata.shape
```

Out[30]: (223, 10)

```
In [51]: 1 newdata['North'].value_counts()
```

Out[51]: True 120
False 103
Name: North, dtype: int64

```
In [56]: 1 choice=input("which food you want ")
2 result=newdata[newdata[choice]]
3 result.shape
```

which food you want North

Out[56]: (120, 10)

```
In [57]: 1 restvalue=input("Which restaurant you have purchased :- ")
```

Which restaurant you have purchased :- Galaxy Surat

```
In [58]: 1 ans=data.index[data['hotel_name']==restvalue]
```

```
In [59]: 1 ans
```

Out[59]: Int64Index([6], dtype='int64')

```
In [60]: 1 result.head()
```

Out[60]:

	hotel_name	Cuisine	Rating	Latitudes	longitudes	Sentiment	North	Mexican	South	Continental
0	Kochi Kitchen	North Indian, Continental, Chinese	5	9.965683	76.240053	0.425758	True	False	False	True
2	Hotel Chandra	North Indian	2	17.469109	78.427283	-0.029658	True	False	False	False
4	Cafe Coffee Day Surat	Biryani, North Indian, Chinese	4	21.171268	72.789414	0.288235	True	False	False	False
6	Galaxy Surat	North Indian	1	21.200953	72.835225	0.129524	True	False	False	False
7	The Coral Tree	North Indian	3	27.166677	78.051125	0.065625	True	False	False	False

```
In [61]: 1 newresult=result.filter(['Latitudes','Latitudes'])
```

```
In [62]: 1 from sklearn.metrics.pairwise import euclidean_distances
```

```
In [63]: 1 dis=euclidean_distances(newresult)
```

```
In [64]: 1 dis
```

Out[64]: array([[0. , 10.61144582, 15.84709014, ..., 0.56116645,
10.53973671, 21.90556096],
[10.61144582, 0. , 5.23564432, ..., 11.17261227,
 0.07170911, 11.29411514],
[15.84709014, 5.23564432, 0. , ..., 16.40825659,
 5.30735343, 6.05847082],
...,
[0.56116645, 11.17261227, 16.40825659, ..., 0. ,
11.10090316, 22.46672741],
[10.53973671, 0.07170911, 5.30735343, ..., 11.10090316,
 0. , 11.36582425],
[21.90556096, 11.29411514, 6.05847082, ..., 22.46672741,
11.36582425, 0.]])

```
In [65]: 1 final=dis[ans[0]]
```

In [66]: 1 final

```
Out[66]: array([3.06228701e+01, 2.00114243e+01, 1.47757800e+01, 1.47337990e+01,
6.29699222e+00, 1.25428043e+01, 0.00000000e+00, 3.06216339e+01,
7.06266696e+00, 3.11342826e+01, 8.54325338e+00, 8.49236588e+00,
9.96155034e+00, 3.45215187e-02, 1.01663377e+01, 6.29353786e+00,
2.01018342e+01, 1.22564445e-01, 8.69899139e+00, 6.31704167e+00,
1.77598994e+01, 6.30737912e+00, 2.87970623e+01, 3.11568129e+01,
3.11926688e+01, 1.16890684e+01, 8.72582567e+00, 6.24735926e+00,
1.25940725e+01, 3.11872237e+01, 4.04156780e-02, 3.10777261e+01,
8.49112278e+00, 6.67795901e+00, 8.71850442e+00, 6.31800107e+00,
6.70759088e+00, 1.25450237e+01, 1.04533010e-02, 9.62457182e-03,
1.99701240e+01, 4.23955657e+00, 8.71947274e+00, 1.78154709e+01,
1.25388370e+01, 2.00741670e+01, 1.48226645e+01, 1.47248889e+01,
6.30857378e+00, 3.27215653e+01, 1.25881199e+01, 1.18496239e+01,
3.11566063e+01, 8.51748641e+00, 1.25254262e+01, 1.85062021e+01,
1.27030286e+01, 6.75545275e+00, 1.46735791e+01, 2.00065843e+01,
4.34729252e-03, 1.47436315e+01, 6.30060723e+00, 2.81227349e+01,
3.11508908e+01, 8.49942139e+00, 7.52083906e+00, 3.12541197e-02,
4.33871833e+00, 1.18046305e+01, 3.13468653e+01, 6.30857378e+00,
6.29311317e+00, 3.06186546e+01, 1.25412362e+01, 2.16565589e-03,
6.29372567e+00, 1.47448849e+01, 2.01055304e+01, 6.29174832e+00,
6.30469876e+00, 1.25252650e+01, 8.72108409e+00, 2.00777293e+01,
1.26236707e+01, 1.22769294e-02, 1.18231449e+01, 2.73044177e+01,
6.31563848e+00, 4.26324203e+00, 2.29190278e-02, 8.53193614e+00,
6.29444112e+00, 8.50758748e+00, 6.33700647e+00, 8.71950258e+00,
3.11583645e+01, 1.25877565e+01, 1.77767539e+01, 2.09121259e+00,
1.85091451e+01, 1.25881199e+01, 1.84879906e+01, 3.02253530e+01,
1.25428043e+01, 1.78709987e+01, 1.32158264e-03, 3.11565797e+01,
2.00756116e+01, 6.28530247e+00, 4.20544447e+00, 2.00564301e+01,
8.71597503e+00, 6.23554096e+00, 2.25567161e-04, 3.50743256e+01,
8.71277544e+00, 3.11840365e+01, 2.00831334e+01, 8.71730913e+00])
```

In [67]: 1 disdf=pandas.DataFrame(dis)

In [68]: 1 value=disdf.iloc[ans[0]].values

In [69]: 1 import numpy
2 sortedvalue=numpy.argsort(value)

In [70]: 1 sortedvalue

```
Out[70]: array([ 6, 114, 106, 75, 60, 39, 38, 85, 90, 67, 13, 30, 17,
99, 110, 41, 89, 68, 113, 27, 109, 79, 72, 15, 76, 92,
4, 62, 80, 21, 71, 48, 88, 19, 35, 94, 33, 36, 57,
8, 66, 32, 11, 65, 93, 53, 91, 10, 18, 116, 112, 119,
34, 42, 95, 82, 26, 12, 14, 25, 69, 86, 51, 81, 54,
44, 74, 104, 5, 37, 97, 50, 101, 28, 84, 56, 58, 47,
3, 61, 77, 2, 46, 20, 98, 43, 105, 102, 55, 100, 40,
59, 1, 111, 45, 108, 83, 118, 16, 78, 87, 63, 22, 103,
73, 7, 0, 31, 9, 64, 107, 52, 23, 96, 117, 29, 24,
70, 49, 115], dtype=int64)
```



```
In [71]: 1 data.info()

<class 'pandas.core.frame.DataFrame'>
Int64Index: 223 entries, 0 to 384
Data columns (total 9 columns):
#   Column      Non-Null Count  Dtype
---  -
0   hotel_name  223 non-null    object
1   city        223 non-null    object
2   Review      223 non-null    object
3   Cuisine     223 non-null    object
4   Rating      223 non-null    int64
5   Place       223 non-null    object
6   Latitudes   223 non-null    float64
7   longitudes  223 non-null    float64
8   Sentiment   223 non-null    float64
dtypes: float64(3), int64(1), object(5)
memory usage: 17.4+ KB
```

```
In [72]: 1 data
```

Out[72]:

	hotel_name	city	Review	Cuisine	Rating	Place	Latitudes	longitudes	Sentiment
0	Kochi Kitchen	Kerala	wonderful hotel, just spent nights mayflower p...	North Indian, Continental, Chinese	5	Kochi Kitchen,Kerala	9.965683	76.240053	0.425758
2	Hotel Chandra	Hyderabad	average experience rooms sixth avenue inn incl...	North Indian	2	Hotel Chandra,Hyderabad	17.469109	78.427283	-0.029658
4	Cafe Coffee Day Surat	Surat	not central stayed 2 children overall good tim...	Biryani, North Indian, Chinese	4	Cafe Coffee Day Surat,Surat	21.171268	72.789414	0.288235
5	Hotel KRC Palace	Tezpur	good location recently stayed 3 nights sherato...	Cafe, Fast Food	4	Hotel KRC Palace,Tezpur	26.626499	92.790122	0.264875
6	Galaxy Surat	Surat	watch spent single night westin seattle left f...	North Indian	1	Galaxy Surat,Surat	21.200953	72.835225	0.129524
...
375	Rajmandir	Pune	loved inn inn market awesome, not beat locatio...	Bakery, Desserts	5	Rajmandir,Pune	18.501806	73.809313	0.366818
376	Radisson Blu Hotel New Delhi	Delhi	pretty good, spent nights moore, really like 3...	Cafe	3	Radisson Blu Hotel New Delhi,Delhi	28.633966	77.217166	0.290030
377	Happiness Celebration House	Patna	super place stay, treat book andra business tr...	Andhra, Chinese, South Indian	5	Happiness Celebration House,Patna	25.587090	85.223074	0.296053
383	Hyatt Hyderabad Gachibowli	Hyderabad	o.k, place price recently stayed oct. 2004 4 n...	North Indian, Bengali, Oriya, Chinese	3	Hyatt Hyderabad Gachibowli,Hyderabad	17.418403	78.341576	0.133542
384	Hotel Jk Palace Allahabad (Prayagraj)	Allahabad	kind kimpton property tells story want cookie ...	North Indian, Chinese	4	Hotel Jk Palace Allahabad (Prayagraj),Allahabad	25.455254	81.836093	0.206618

223 rows × 9 columns

```
In [73]: 1 #Recommendation on basis of Location
2 for i in range(25):
3     try:
4
5         print(result['hotel_name'][sortedvalue[i]])
6     except:
7         pass
```

Galaxy Surat
 Paragon Restaurant
 Trident
 Kashi Art Cafe
 Radisson Hotel Amritsar
 Hotel Apex Surat
 Katriya Hotel & Towers
 DoubleTree Hilton Hotel Agra
 Rambagh Palace
 Bar b que inn

```
In [74]: 1 result
```

Out[74]:

	hotel_name	Cuisine	Rating	Latitudes	longitudes	Sentiment	North	Mexican	South	Continental
0	Kochi Kitchen	North Indian, Continental, Chinese	5	9.965683	76.240053	0.425758	True	False	False	True
2	Hotel Chandra	North Indian	2	17.469109	78.427283	-0.029658	True	False	False	False
4	Cafe Coffee Day Surat	Biryani, North Indian, Chinese	4	21.171268	72.789414	0.288235	True	False	False	False
6	Galaxy Surat	North Indian	1	21.200953	72.835225	0.129524	True	False	False	False
7	The Coral Tree	North Indian	3	27.166677	78.051125	0.065625	True	False	False	False
...
368	Green Paradise	North Indian, South Indian, Chinese	2	6.818029	79.947558	-0.105641	True	False	True	False
370	Kundan Guest House Allahabad (Prayagraj)	North Indian, South Indian, Biryani, Continental	1	25.458460	81.865851	-0.228030	True	False	True	True
372	ChicKing	North Indian	5	9.568879	76.519217	0.766667	True	False	False	False
383	Hyatt Hyderabad Gachibowli	North Indian, Bengali, Oriya, Chinese	3	17.418403	78.341576	0.133542	True	False	False	False
384	Hotel Jk Palace Allahabad (Prayagraj)	North Indian, Chinese	4	25.455254	81.836093	0.206618	True	False	False	False

120 rows × 10 columns

```
In [75]: 1 #recommendation on basis of sentiment
2 newresult=result.sort_values(by = ('Sentiment'))
3
```

```
In [76]: 1 for i in range(25):  
2     try:  
3         print('The review of',result['hotel_name'][sortedvalue[i]], 'is: ',result['Sentiment'][sortedvalue[i]])  
4     except:  
5         pass
```

The review of Galaxy Surat is: 0.12952380952380954
The review of Paragon Restaurant is: 0.4076388888888889
The review of Trident is: 0.2518518518518519
The review of Kashi Art Cafe is: 0.43321428571428583
The review of Radisson Hotel Amritsar is: 0.4041666666666667
The review of Hotel Apex Surat is: 0.1247767857142857
The review of Katriya Hotel & Towers is: 0.6069444444444445
The review of DoubleTree Hilton Hotel Agra is: -0.22999999999999998
The review of Rambagh Palace is: 0.29441964285714284
The review of Bar b que inn is: -0.13437500000000002

```
In [ ]: 1
```

```
In [ ]: 1
```