

# Level 1

## Task 1

### Task: Top Cuisines

Determine the top three most common cuisines in the dataset.

```
In [1]: # import library
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sb
```

```
In [74]: df=pd.read_csv("C:\\Users\\abhis\\Downloads\\Dataset .csv")
df
```

Out[74]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenue...	Century City Mall, Poblacion, Makati City	Century City Mall, Poblacion Makati City Mak..
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City	Little Tokyo Legaspi Village Makati City Ma..
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City	Edsa Shangri-La Ortigas Mandaluyong City, Ma..
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
...	...	...	...	...	...	...	...
9546	5915730	Naml Gurme	208	istanbul	Kemankeş Karamustafa Paşa Mahallesi, Rıhtım ...	Karaköy	Karaköy stanbu
9547	5908749	Ceviz Açıacl	208	istanbul	Koşuyolu Mahallesi, Muhittin Çiftçioğlu Cadd...	Koşuyolu	Koşuyolu stanbu
9548	5915807	Huqqa	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9549	5916112	Açıklär Kahve	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9550	5927402	Walter's Coffee Roastery	208	istanbul	Cafeaşa Mahallesi, Bademaltı Sokak, No 21/B, ...	Moda	Moda stanbu

9551 rows × 21 columns

In this task we have to work on cuisines in the dataset.

so we focus only on cuisines column.

```
In [75]: df.isnull().sum()
```

```
Out[75]: Restaurant ID      0
Restaurant Name      0
Country Code        0
City                0
Address              0
Locality            0
Locality Verbose    0
Longitude           0
Latitude            0
Cuisines             9
Average Cost for two 0
Currency             0
Has Table booking    0
Has Online delivery   0
Is delivering now     0
Switch to order menu 0
Price range          0
Aggregate rating     0
Rating color         0
Rating text          0
Votes                0
dtype: int64
```

```
In [76]: df.Cuisines.isnull().sum()
```

```
Out[76]: 9
```

```
In [77]: # there are 9 empty values in Cuisines data
# we will remove that row .
df1=df.dropna()
```

```
In [81]: df1.Cuisines.dropna()
```

```
Out[81]: 0      French, Japanese, Desserts
1      Japanese
2      Seafood, Asian, Filipino, Indian
3      Japanese, Sushi
4      Japanese, Korean
...
9546      Turkish
9547      World Cuisine, Patisserie, Cafe
9548      Italian, World Cuisine
9549      Restaurant Cafe
9550      Cafe
Name: Cuisines, Length: 9542, dtype: object
```

```
In [80]: df1.Cuisines.isnull().sum()
```

Out[80]: 0

In [82]: df1

Out[82]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenue...	Century City Mall, Poblacion, Makati City	Century City Mall, Poblacion Makati City Mak..
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City	Little Tokyo Legaspi Village Makati City Ma..
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City	Edsa Shangri-La Ortigas Mandaluyong City, Ma..
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
...	...	...	...	...	...	...	...
9546	5915730	Naml Gurme	208	istanbul	Kemankeş Karamustafa Paşa Mahallesi, Rıhtım ...	Karaköy	Karaköy stanbu
9547	5908749	Ceviz Aşçıacl	208	istanbul	Koşuyolu Mahallesi, Muhittin Çiftçioğlu Cadd...	Koşuyolu	Koşuyolu stanbu
9548	5915807	Huqqa	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9549	5916112	Aşçıklär Kahve	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9550	5927402	Walter's Coffee Roastery	208	istanbul	Cafeaşa Mahallesi, Bademaltı Sokak, No 21/B, ...	Moda	Moda stanbu

9542 rows × 21 columns

```
In [83]: df1.Cuisines.value_counts()
```

```
Out[83]: North Indian          936
          North Indian, Chinese   511
          Chinese                 354
          Fast Food                354
          North Indian, Mughlai    334
          ...
          Bengali, Fast Food        1
          North Indian, Rajasthani, Asian 1
          Chinese, Thai, Malaysian, Indonesian 1
          Bakery, Desserts, North Indian, Bengali, South Indian 1
          Italian, World Cuisine    1
          Name: Cuisines, Length: 1825, dtype: int64
```

```
In [84]: print(df1.Cuisines.describe())
```

```
<bound method NDFrame.describe of 0           French, Japanese, Desserts
1                           Japanese
2           Seafood, Asian, Filipino, Indian
3                   Japanese, Sushi
4                   Japanese, Korean
...
9546                      Turkish
9547  World Cuisine, Patisserie, Cafe
9548          Italian, World Cuisine
9549             Restaurant Cafe
9550                  Cafe
Name: Cuisines, Length: 9542, dtype: object>
```

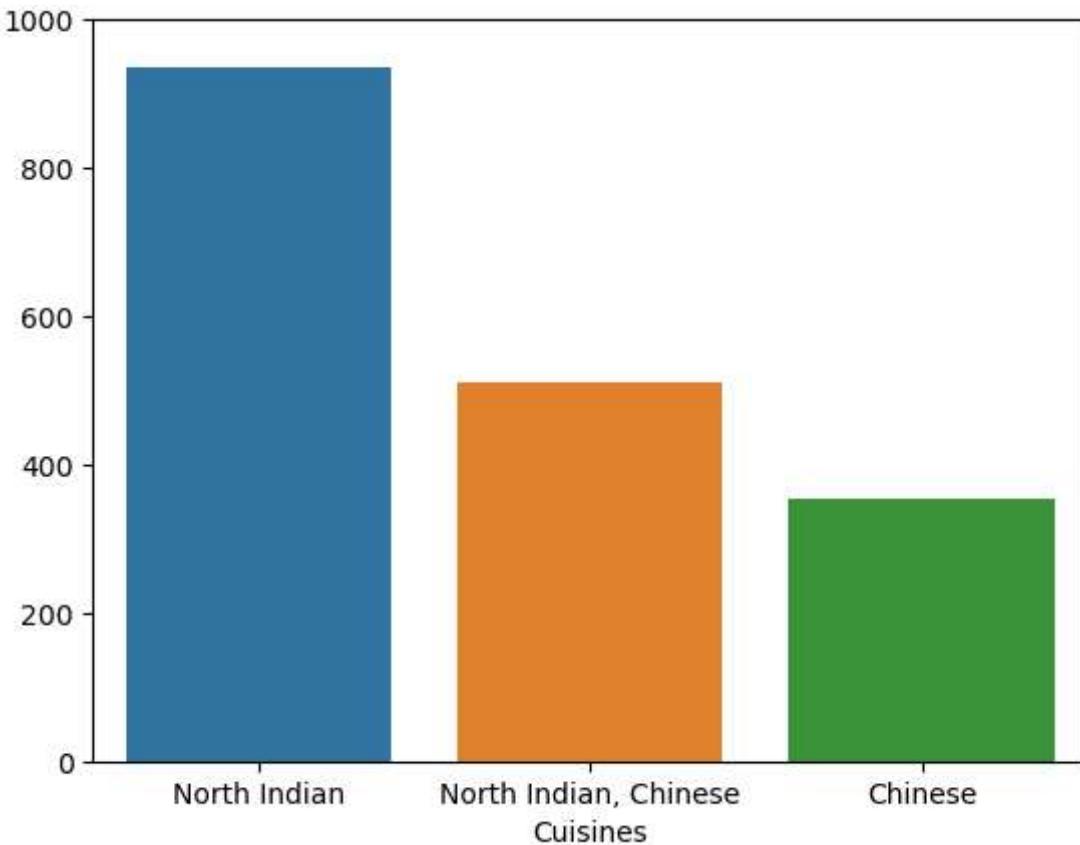
```
In [85]: x=df1.Cuisines.value_counts().sort_values(ascending=False)
x
```

```
Out[85]: North Indian          936
          North Indian, Chinese   511
          Chinese                 354
          Fast Food                354
          North Indian, Mughlai    334
          ...
          Cafe, Mexican, Italian, North Indian, Chinese   1
          Continental, Mexican      1
          Continental, Chinese, Italian, Cafe            1
          Hyderabadi, Biryani       1
          Italian, World Cuisine    1
          Name: Cuisines, Length: 1825, dtype: int64
```

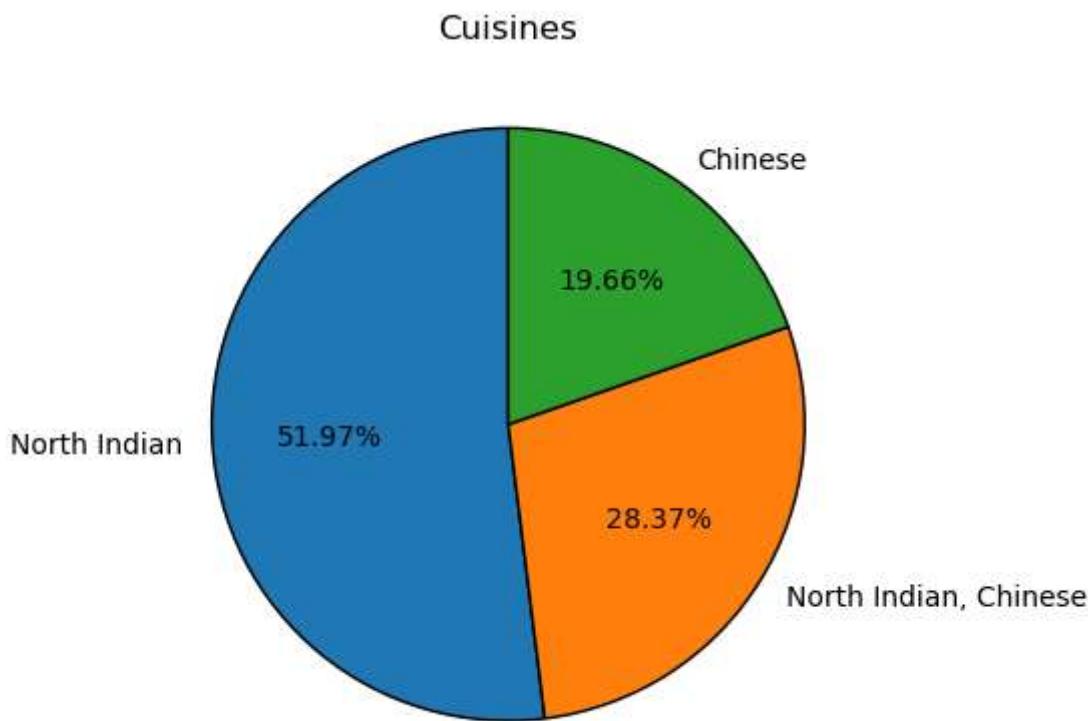
```
In [86]: # top 3 cuisines
z=x.head(3)
z
```

```
Out[86]: North Indian          936
          North Indian, Chinese   511
          Chinese                 354
          Name: Cuisines, dtype: int64
```

```
In [88]: sb.barplot(x=z.index,y=z.values)
plt.yticks(range(0,1200,200))
plt.xlabel("Cuisines")
plt.show()
```



```
In [89]: y=z.index  
plt.pie(z,labels=y , autopct='%.2f%%', wedgeprops={'edgecolor':'black'},startangle=90)  
plt.title("Cuisines")  
plt.show()
```



```
In [90]: print("The most common three cuisines:",z.index)
```

```
The most common three cuisines: Index(['North Indian', 'North Indian, Chinese', 'Chinese'], dtype='object')
```

## The most common three cuisines

'North Indian'

'North Indian, Chinese'

'Chinese'

**Calculate the percentage of restaurants that serve each of the top cuisines.**

```
In [91]: df
```

Out[91]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenue...	Century City Mall, Poblacion, Makati City	Century City Mall, Poblacion Makati City Mak..
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City	Little Tokyo Legaspi Village Makati City Ma..
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City	Edsa Shangri-La Ortigas Mandaluyong City, Ma..
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
...	...	...	...	...	...	...	...
9546	5915730	Naml Gurme	208	istanbul	Kemankeş Karamustafa Paşa Mahallesi, Rıhtım ...	Karaköy	Karaköy stanbu
9547	5908749	Ceviz Açıacl	208	istanbul	Koşuyolu Mahallesi, Muhittin Çiftçioğlu Cadd...	Koşuyolu	Koşuyolu stanbu
9548	5915807	Huqqa	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9549	5916112	Açıklär Kahve	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9550	5927402	Walter's Coffee Roastery	208	istanbul	Cafeaşa Mahallesi, Bademaltı Sokak, No 21/B, ...	Moda	Moda stanbu

9551 rows × 21 columns

```
In [95]: # total no. of restaurants
tr=len(df)
tr
```

```
Out[95]: 9551
```

```
In [103... a=df.groupby(by="Cuisines")['Restaurant Name'].value_counts()
a
```

Cuisines	Restaurant Name	
Afghani	Afghan Indian	1
	Burj Al Arab	1
	Kabul Delhi	1
	Pak Afghan Restaurant	1
Afghani, Mughlai, Chinese	Al- Sheikh	1
	..	
Western, Asian, Cafe	MONKS	1
Western, Fusion, Fast Food	I Am	1
World Cuisine	Gaga Manjero	1
World Cuisine, Mexican, Italian	Cafemiz	1
World Cuisine, Patisserie, Cafe	Ceviz Aðcacı	1
Name: Restaurant Name, Length: 7940, dtype: int64		

```
In [104... a.sort_values(ascending=False)
```

Cuisines	Restaurant Name	
Cafe	Cafe Coffee Day	83
Pizza, Fast Food	Domino's Pizza	78
American, Fast Food, Salad, Healthy Food	Subway	62
Raw Meats, North Indian, Fast Food	Green Chick Chop	47
Fast Food, Burger	McDonald's	44
	..	
European, Italian, Desserts	That Madras Place	1
European, Italian, Cafe	Smoke House Deli	1
European, Italian	The Hungry Monkey	1
	The Food Store - DoubleTree by Hilton	1
World Cuisine, Patisserie, Cafe	Ceviz Aðcacı	1
1		
Name: Restaurant Name, Length: 7940, dtype: int64		

```
In [111... tcr=df[df['Cuisines'].isin(z.index)]
tcr
```

Out[111]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Loc Ver
5	18189371	Din Tai Fung	162	Mandaluyong City	Ground Floor, Mega Fashion Hall, SM Megamall, ...	SM Megamall, Ortigas, Mandaluyong City	SM Mega Or Mandalu City, Mar
93	17284150	House of China Restaurant II	216	Albany	2526 Dawson Rd Ste A, Albany, GA 31707	Albany	All AI
172	17316208	Ting's Red Lantern	216	Cedar Rapids/Iowa City	540 Boyson Rd NE, Cedar Rapids, IA 52402	Cedar Rapids	Cedar Ra C Rapids/
199	17330087	Chef Lee's Peking Restaurant	216	Columbus	6100 Bradley Park Dr, Columbus, GA 31904	Columbus	Colun Colur
241	17334718	China Cafe	216	Davenport	3018 E 53rd St, Davenport, IA 52807	Davenport	Daven Daver
...	...	...	...	...	...	...	...
9245	3900058	Chrystal Bowl Restaurant	1	Varanasi	34-B, Ravindra Puri, Near Lanka, Varanasi	Lanka	L Var
9247	3900057	Ming Garden	1	Varanasi	34-B, Ravindra Puri, Near Lanka,Varanasi	Lanka	L Var
9308	7000992	Eden Noodles Cafe _____	148	Auckland	105 Dominion Road, Mt Eden, Auckland 1024	Mt Eden	Mt I Aucl
9424	6202039	Mainland China Restaurant	166	Doha	1st Floor, Barwa Towers, Suhaim Bin Hamad Stre...	Barwa Towers, Al Sadd	Barwa To Al Sadd, I
9497	5800557	Chinese Dragon Cafe	191	Colombo	11, Milagiriya Avenue, Bambalapitiya, Colombo 04	Bambalapitiya, Colombo 04	Bambalap Colomb Colc

1801 rows × 21 columns

In [131...]

df

Out[131]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality	Locality Verbose
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenue...	Century City Mall, Poblacion, Makati City	Century City Mall, Poblacion Makati City Mak..
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City	Little Tokyo Legaspi Village Makati City Ma..
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City	Edsa Shangri-La Ortigas Mandaluyong City, Ma..
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City	SM Megamall Ortigas Mandaluyong City, Mandal..
...	...	...	...	...	...	...	...
9546	5915730	Namlı Gurme	208	istanbul	Kemankeş Karamustafa Paşa Mahallesi, Rıhtım ...	Karaköy	Karaköy stanbu
9547	5908749	Ceviz Acl	208	istanbul	Koşuyolu Mahallesi, Muhittin Çelik Caddesi, ...	Koşuyolu	Koşuyolu stanbu
9548	5915807	Huqqa	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9549	5916112	Aşk Kahve	208	istanbul	Kuruçeşme Mahallesi, Muallim Naci Caddesi, N...	Kuruçeşme	Kuruçeşme stanbu
9550	5927402	Walter's Coffee Roastery	208	istanbul	Cafeaşa Mahallesi, Bademaltı Sokak, No 21/B, ...	Moda	Moda stanbu

9551 rows × 21 columns

```
In [133...]: tcr.nunique()
```

```
Out[133]:
```

Restaurant ID	1801
Restaurant Name	1617
Country Code	7
City	48
Address	1761
Locality	364
LocalityVerbose	390
Longitude	1651
Latitude	1682
Cuisines	3
Average Cost for two	50
Currency	7
Has Table booking	2
Has Online delivery	2
Is delivering now	2
Switch to order menu	1
Price range	4
Aggregate rating	31
Rating color	6
Rating text	6
Votes	260

dtype: int64

There are 1617 restaurant serve in top 3 most common cuisines

```
In [137...]: top_res=tcr['Restaurant Name'].nunique()  
top_res
```

```
Out[137]: 1617
```

```
In [138...]: per=top_res/tr*100  
per
```

```
Out[138]: 16.93016438069312
```

```
In [ ]:
```