

```
In [1]: import pandas as pd  
import numpy as np  
import matplotlib.pyplot as plt
```

Reading csv file

```
In [2]: def read_data_from_csv():  
        hotels=pd.read_csv(r"C:\Users\Ramakrishna\Desktop\zomato.csv")  
        return hotels  
read_data_from_csv()
```

Out[2]:

	address	name	online_order	book_table	rate	votes	phone	
0	942, 21st Main Road, 2nd Stage, Banashankari, ...	Jalsa	Yes	Yes	4.1/5	775	080 42297555\r\n+91 9743772233	Bar
1	2nd Floor, 80 Feet Road, Near Big Bazaar, 6th ...	Spice Elephant	Yes	No	4.1/5	787	080 41714161	Bar
2	1112, Next to KIMS Medical College, 17th Cross...	San Churro Cafe	Yes	No	3.8/5	918	+91 9663487993	Bar
3	1st Floor, Annakuteera, 3rd Stage, Banashankar...	Addhuri Udupi Bhojana	No	No	3.7/5	88	+91 9620009302	Bar
4	10, 3rd Floor, Lakshmi Associates, Gandhi Baza...	Grand Village	No	No	3.8/5	166	+91 8026612447\r\n+91 9901210005	Bas
...
56247	Four Points by Sheraton Bengaluru, 43/3, White...	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6 /5	27	080 40301477	
56248	Number 10, Garudachar Palya, Mahadevapura, Whi...	Vinod Bar And Restaurant	No	No	NaN	0	+91 8197675843	
56249	Sheraton Grand Bengaluru Whitefield Hotel & Co...	Plunge - Sheraton Grand Bengaluru Whitefield H...	No	No	NaN	0	NaN	
56250	Sheraton Grand Bengaluru Whitefield Hotel & Co...	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3 /5	236	080 49652769	
56251	ITPL Main Road, KIADB Export Promotion Industr...	The Nest - The Den Bengaluru	No	No	3.4 /5	13	+91 8071117272	

56252 rows × 13 columns

```
def read_data_from_csv():
    hotels=pd.read_csv('zomato.csv')
    return hotels

def remove_unwanted_columns():
    #DO NOT REMOVE FOLLOWING LINE
    #call read_data_from_csv() function to get dataframe
    hotels=read_data_from_csv()

    return hotels

def rename_columns():
    #DO NOT REMOVE FOLLOWING LINE
    #call remove_unwanted_columns() function to get dataframe
    hotels = remove_unwanted_columns()

    #task2: rename columns, only these columns are allowed in the dataset
    # 1.    Id
    # 2.    Name
    # 3.    online_order
    # 4.    book_table
    # 5.    rating
    # 6.    votes
    # 7.    location
    # 8.    rest_type
    # 9.    dish_liked
    # 10.   cuisines
    # 11.   approx_cost
    # 12.   type
    return hotels

#task3: handle null values of each column
def null_value_check():
    #DO NOT REMOVE FOLLOWING LINE
    #call rename_columns() function to get dataframe
    hotels=rename_columns()

    #deleting null values of name column

    #handling null values of online_order

    #handling null values of book_table

    #handling null values of rating

    #handling null values of votes

    #handling null values of location

    #handling null values of rest_type
```

```
#handling null values of disliked

#handling null values of cuisines

#handling null values of approxcost

#handling null values of type

return hotels


#task4 #find duplicates in the dataset
def find_duplicates():
    #DO NOT REMOVE FOLLOWING LINE
    #call null_value_check() function to get dataframe
    hotels=null_value_check()

    #dropping the duplicates value keeping the first
    return hotels


#task5 removing irrelevant text from all the columns
def removing_irrelevant_text():
    #DO NOT REMOVE FOLLOWING LINE
    #call find_duplicates() function to get dataframe
    hotels= find_duplicates()

    return hotels


#task6: check for unique values in each column and handle the irrelevant
values
def check_for_unique_values():
    #DO NOT REMOVE FOLLOWING LINE
    #call removing_irrelevant_text() function to get dataframe
    hotels=removing_irrelevant_text()

    return hotels


#task7: remove the unknown character from the dataset and export it to
"zomatocleaned.csv"
def remove_the_unknown_character():
    #DO NOT REMOVE FOLLOWING LINE
    #call check_for_unique_values() function to get dataframe
    dataframe=check_for_unique_values()

    #remove unknown character from dataset

    #export cleaned Dataset to newcsv file named "zomatocleaned.csv"
    dataframe.to_csv('zomatocleaned.csv')
    return dataframe


#check if mysql table is created using "zomatocleaned.csv"
```

```
#Use this final dataset and upload it on the provided database for performing
analysis in MySQL
#To Run this task first Run the appliation for Terminal to create table named
'Zomato' and then run test.
def start():
    remove_the_unknown_character()

def task_runner():
    start()
```

Delete Unwanted data

```
In [3]: def remove_unwanted_columns():
        #DO NOT REMOVE FOLLOWING LINE
        #call read_data_from_csv() function to get dataframe
        hotels=read_data_from_csv()
        unwanted_columns= hotels.drop(columns=["address","phone"],inplace=True)

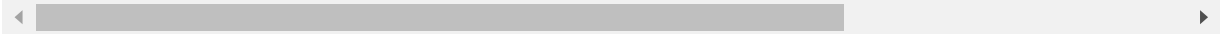
        return hotels
```

```
In [4]: remove_unwanted_columns()
```

Out[4]:

	name	online_order	book_table	rate	votes	location	rest_type	dish_liked	
0	Jalsa	Yes	Yes	4.1/5	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...	
1	Spice Elephant	Yes	No	4.1/5	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...	
2	San Churro Cafe	Yes	No	3.8/5	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...	
3	Addhuri Udupi Bhojana	No	No	3.7/5	88	Banashankari	Quick Bites	Masala Dosa	
4	Grand Village	No	No	3.8/5	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe	f
...	
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6/5	27	Whitefield	Bar	NaN	C
56248	Vinod Bar And Restaurant	No	No	NaN	0	Whitefield	Bar	NaN	
56249	Plunge - Sheraton Grand Bengaluru Whitefield H...	No	No	NaN	0	Whitefield	Bar	NaN	
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3/5	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk	
56251	The Nest - The Den Bengaluru	No	No	3.4/5	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NaN	C

56252 rows × 11 columns




```
In [5]: remove_unwanted_columns().columns
```

```
Out[5]: Index(['name', 'online_order', 'book_table', 'rate', 'votes', 'location',  
              'rest_type', 'dish_liked', 'cuisines', 'approx_cost(for two people)',  
              'listed_in(type)'],  
             dtype='object')
```

```
In [6]: def rename_columns():  
        #DO NOT REMOVE FOLLOWING LINE  
        #call remove_unwanted_columns() function to get dataframe  
        hotels = remove_unwanted_columns()  
        column_names={  
            "name":"name",  
            "online_order":"online_order",  
            'book_table':'book_table',  
            "rate":'rating',  
            'votes':'votes',  
            'location':'location',  
            'rest_type':'rest_type',  
            'dish_liked':'dish_liked',  
            'cuisines':'cuisines',  
            'approx_cost(for two people)':'approx_cost',  
            'listed_in(type)':'type'  
        }  
        hotels=hotels.rename(columns=column_names)  
        return hotels
```

In [7]: rename_columns()

Out[7]:

	name	online_order	book_table	rating	votes	location	rest_type	dish_liked
0	Jalsa	Yes	Yes	4.1/5	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...
1	Spice Elephant	Yes	No	4.1/5	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...
2	San Churro Cafe	Yes	No	3.8/5	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...
3	Addhuri Udupi Bhojana	No	No	3.7/5	88	Banashankari	Quick Bites	Masala Dosa
4	Grand Village	No	No	3.8/5	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe
...
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6 /5	27	Whitefield	Bar	NaN
56248	Vinod Bar And Restaurant	No	No	NaN	0	Whitefield	Bar	NaN
56249	Plunge - Sheraton Grand Bengaluru Whitefield H...	No	No	NaN	0	Whitefield	Bar	NaN
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3 /5	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
56251	The Nest - The Den Bengaluru	No	No	3.4 /5	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NaN

56252 rows × 11 columns



```
In [8]: def null_value_check():  
    #DO NOT REMOVE FOLLOWING LINE  
    #call rename_columns() function to get dataframe  
    hotels=rename_columns()  
    #deleting null values of name column  
    hotels=hotels.dropna(subset=["name"])  
    #handling null values of online_order  
    hotels["online_order"]=hotels["online_order"].fillna('NA')  
    #handling null values of book_table  
    hotels['book_table']=hotels['book_table'].fillna('NA')  
    #handling null values of rating  
    hotels["rating"]=hotels["rating"].fillna(0)  
    #handling null values of votes  
    hotels["votes"]=hotels["votes"].fillna(0)  
    #handling null values of location  
    hotels["location"]=hotels["location"].fillna('NA')  
    #handling null values of rest_type  
    hotels["rest_type"]=hotels["rest_type"].fillna('NA')  
    #handling null values of dishliked  
    hotels["dish_liked"]=hotels["dish_liked"].fillna('NA')  
    #handling null values of cuisines  
    hotels["cuisines"]=hotels["cuisines"].fillna('NA')  
    #handling null values of approxcost  
    hotels["approx_cost"]=hotels["approx_cost"].fillna(0)  
    #handling null values of type  
    hotels["type"]=hotels["type"].fillna('NA')  
    return hotels
```

In [9]: null_value_check()

Out[9]:

	name	online_order	book_table	rating	votes	location	rest_type	dish_liked
0	Jalsa	Yes	Yes	4.1/5	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...
1	Spice Elephant	Yes	No	4.1/5	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...
2	San Churro Cafe	Yes	No	3.8/5	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...
3	Addhuri Udupi Bhojana	No	No	3.7/5	88	Banashankari	Quick Bites	Masala Dosa
4	Grand Village	No	No	3.8/5	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe
...
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6 /5	27	Whitefield	Bar	NA
56248	Vinod Bar And Restaurant	No	No	0	0	Whitefield	Bar	NA
56249	Plunge - Sheraton Grand Bengaluru Whitefield H...	No	No	0	0	Whitefield	Bar	NA
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3 /5	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
56251	The Nest - The Den Bengaluru	No	No	3.4 /5	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NA

56236 rows × 11 columns



```
In [10]: def find_duplicates():  
          #DO NOT REMOVE FOLLOWING LINE  
          #call null_value_check() function to get dataframe  
          hotels=null_value_check()  
          hotels=hotels.drop_duplicates(keep='first')  
          #dropping the duplicates value keeping the first  
          return hotels
```

In [11]: find_duplicates()

Out[11]:

	name	online_order	book_table	rating	votes	location	rest_type	dish_liked
0	Jalsa	Yes	Yes	4.1/5	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...
1	Spice Elephant	Yes	No	4.1/5	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...
2	San Churro Cafe	Yes	No	3.8/5	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...
3	Addhuri Udupi Bhojana	No	No	3.7/5	88	Banashankari	Quick Bites	Masala Dosa
4	Grand Village	No	No	3.8/5	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe
...
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6 /5	27	Whitefield	Bar	NA
56248	Vinod Bar And Restaurant	No	No	0	0	Whitefield	Bar	NA
56249	Plunge - Sheraton Grand Bengaluru Whitefield H...	No	No	0	0	Whitefield	Bar	NA
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3 /5	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
56251	The Nest - The Den Bengaluru	No	No	3.4 /5	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NA

38413 rows × 11 columns



```
In [12]: find_duplicates().columns
```

```
Out[12]: Index(['name', 'online_order', 'book_table', 'rating', 'votes', 'location',  
              'rest_type', 'dish_liked', 'cuisines', 'approx_cost', 'type'],  
              dtype='object')
```

```
In [13]: def removing_irrelevant_text():  
          #DO NOT REMOVE FOLLOWING LINE  
          #call find_duplicates() function to get dataframe  
          hotels= find_duplicates()  
          hotels=hotels[hotels["name"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["online_order"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["book_table"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["rating"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["votes"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["location"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["rest_type"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["dish_liked"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["cuisines"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["approx_cost"].str.contains("RATED|Rated")==False]  
          hotels=hotels[hotels["type"].str.contains("RATED|Rated")==False]  
  
          return hotels
```

In [14]: removing_irrelevant_text()

Out[14]:

	name	online_order	book_table	rating	votes	location	rest_type	dish_liked
0	Jalsa	Yes	Yes	4.1/5	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...
1	Spice Elephant	Yes	No	4.1/5	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...
2	San Churro Cafe	Yes	No	3.8/5	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...
3	Addhuri Udupi Bhojana	No	No	3.7/5	88	Banashankari	Quick Bites	Masala Dosa
4	Grand Village	No	No	3.8/5	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe
...
56244	The Farm House Bar n Grill	No	No	3.7 /5	34	Whitefield	Casual Dining, Bar	NA
56246	Bhagini	No	No	2.5 /5	81	Whitefield	Casual Dining, Bar	Biryani, Andhra Meal
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6 /5	27	Whitefield	Bar	NA
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3 /5	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
56251	The Nest - The Den Bengaluru	No	No	3.4 /5	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NA

30340 rows × 11 columns




```
In [17]: def check_for_unique_values():  
    #DO NOT REMOVE FOLLOWING LINE  
    #call removing_irrelevant_text() function to get dataframe  
    hotels=removing_irrelevant_text()  
    index=hotels[~hotels["online_order"].isin(['Yes','No'])].index  
    hotels.drop(index,inplace=True)  
    hotels["rating"]= hotels["rating"].replace({'/5':''},regex=True).replace(''  
  
    return hotels
```

In [18]: `check_for_unique_values()`

Out[18]:

	name	online_order	book_table	rating	votes	location	rest_type	dish_liked
0	Jalsa	Yes	Yes	4.1	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...
1	Spice Elephant	Yes	No	4.1	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...
2	San Churro Cafe	Yes	No	3.8	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...
3	Addhuri Udupi Bhojana	No	No	3.7	88	Banashankari	Quick Bites	Masala Dosa
4	Grand Village	No	No	3.8	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe
...
56244	The Farm House Bar n Grill	No	No	3.7	34	Whitefield	Casual Dining, Bar	NA
56246	Bhagini	No	No	2.5	81	Whitefield	Casual Dining, Bar	Biryani, Andhra Meal
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6	27	Whitefield	Bar	NA
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
56251	The Nest - The Den Bengaluru	No	No	3.4	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NA

30336 rows × 11 columns

```
def read_data_from_csv():
    hotels=pd.read_csv('zomato.csv')
    return hotels

def remove_unwanted_columns():
    #DO NOT REMOVE FOLLOWING LINE
    #call read_data_from_csv() function to get dataframe
    hotels=read_data_from_csv()

    return hotels

def rename_columns():
    #DO NOT REMOVE FOLLOWING LINE
    #call remove_unwanted_columns() function to get dataframe
    hotels = remove_unwanted_columns()

    #task2: rename columns, only these columns are allowed in the dataset
    # 1.    Id
    # 2.    Name
    # 3.    online_order
    # 4.    book_table
    # 5.    rating
    # 6.    votes
    # 7.    location
    # 8.    rest_type
    # 9.    dish_liked
    # 10.   cuisines
    # 11.   approx_cost
    # 12.   type
    return hotels

#task3: handle null values of each column
def null_value_check():
    #DO NOT REMOVE FOLLOWING LINE
    #call rename_columns() function to get dataframe
    hotels=rename_columns()

    #deleting null values of name column

    #handling null values of online_order

    #handling null values of book_table

    #handling null values of rating

    #handling null values of votes

    #handling null values of location

    #handling null values of rest_type

    #handling null values of dishliked
```

```
#handling null values of cuisines

#handling null values of approxcost

#handling null values of type

return hotels


#task4 #find duplicates in the dataset
def find_duplicates():
    #DO NOT REMOVE FOLLOWING LINE
    #call null_value_check() function to get dataframe
    hotels=null_value_check()

    #dropping the duplicates value keeping the first
    return hotels


#task5 removing irrelevant text from all the columns
def removing_irrelevant_text():
    #DO NOT REMOVE FOLLOWING LINE
    #call find_duplicates() function to get dataframe
    hotels= find_duplicates()

    return hotels


#task6: check for unique values in each column and handle the irrelevant
values
def check_for_unique_values():
    #DO NOT REMOVE FOLLOWING LINE
    #call removing_irrelevant_text() function to get dataframe
    hotels=removing_irrelevant_text()

    return hotels


#task7: remove the unknown character from the dataset and export it to
"zomatocleaned.csv"
def remove_the_unknown_character():
    #DO NOT REMOVE FOLLOWING LINE
    #call check_for_unique_values() function to get dataframe
    dataframe=check_for_unique_values()

    #remove unknown character from dataset

    #export cleaned Dataset to newcsv file named "zomatocleaned.csv"
    dataframe.to_csv('zomatocleaned.csv')
    return dataframe


#check if mysql table is created using "zomatocleaned.csv"
#Use this final dataset and upload it on the provided database for performing
analysis in MySQL
```

```
#To Run this task first Run the appliation for Terminal to create table named
'Zomato' and then run test.
def start():
    remove_the_unknown_character()

def task_runner():
    start()
```

In [93]: `check_for_unique_values().columns`

Out[93]: Index(['name', 'online_order', 'book_table', 'rating', 'votes', 'location',
 'rest_type', 'dish_liked', 'cuisines', 'approx_cost', 'type'],
 dtype='object')

In [94]: `check_for_unique_values().columns`

Out[94]: Index(['name', 'online_order', 'book_table', 'rating', 'votes', 'location',
 'rest_type', 'dish_liked', 'cuisines', 'approx_cost', 'type'],
 dtype='object')

In [21]: `def remove_the_unknown_character():`
 #DO NOT REMOVE FOLLOWING LINE
 #call check_for_unique_values() function to get dataframe
 dataframe=check_for_unique_values()
 #remove unknown character from dataset
 dataframe['name']=dataframe['name'].str.replace('[\Ãx][^A-Za-z]+','')
 # dataframe['approx_cost']=dataframe['approx_cost'].str.replace(",","")
 # dataframe['approx_cost']=dataframe['approx_cost'].str.strip(' "')
 #export cleaned Dataset to newcsv file named "zomatocleaned.csv"
 dataframe.to_csv('zomatocleaned.csv')
 return dataframe

In [22]: `remove_the_unknown_character()`

C:\Users\Ramakrishna\AppData\Local\Temp\ipykernel_15644\929471048.py:6: FutureWarning: The default value of regex will change from True to False in a future version.

```
dataframe['name']=dataframe['name'].str.replace('[\Ãx][^A-Za-z]+','')
```

Out[22]:

	name	online_order	book_table	rating	votes	location	rest_type	dish_liked
0	Jalsa	Yes	Yes	4.1	775	Banashankari	Casual Dining	Pasta, Lunch Buffet, Masala Papad, Paneer Laja...
1	Spice Elephant	Yes	No	4.1	787	Banashankari	Casual Dining	Momos, Lunch Buffet, Chocolate Nirvana, Thai G...
2	San Churro Cafe	Yes	No	3.8	918	Banashankari	Cafe, Casual Dining	Churros, Cannelloni, Minestrone Soup, Hot Choc...
3	Addhuri Udupi Bhojana	No	No	3.7	88	Banashankari	Quick Bites	Masala Dosa
4	Grand Village	No	No	3.8	166	Basavanagudi	Casual Dining	Panipuri, Gol Gappe
...
56244	The Farm House Bar n Grill	No	No	3.7	34	Whitefield	Casual Dining, Bar	NA
56246	Bhagini	No	No	2.5	81	Whitefield	Casual Dining, Bar	Biryani, Andhra Meal
56247	Best Brews - Four Points by Sheraton Bengaluru...	No	No	3.6	27	Whitefield	Bar	NA
56250	Chime - Sheraton Grand Bengaluru Whitefield Ho...	No	Yes	4.3	236	ITPL Main Road, Whitefield	Bar	Cocktails, Pizza, Buttermilk
56251	The Nest - The Den Bengaluru	No	No	3.4	13	ITPL Main Road, Whitefield	Bar, Casual Dining	NA

30336 rows × 11 columns



In []: