Name :- Pragati Somnath Jadhav.

Roll no :- 422

Div :- D2

PRN NO:- 202201090131

EDS Assignment 2

```
1.#read the data set
import pandas as pd
df =
pd.read_csv(r'/content/drive/MyDrive/weather
pooja.csv')
df
```

OUTPUT:-

	sr no	city	Date	Day	Temp	Weather
0	1	Pune	1/1/1900	Monday	30.0	sunny
1	2	Mumbai	1/2/1900	Friday	29.0	sunny
2	3	Nagpur	1/3/1900	Saturday	40.0	cold
3	4	Dhule	1/4/1900	Sunday	33.0	windy

	sr no	city	Date	Day	Temp	Weather
4	5	Kolkata	1/5/1900	Friday	34.0	Rainy
5	6	Dehilli	1/6/1900	Thrusday	12.0	cold
6	7	Nagar	1/4/1900	Monday	36.0	sunny
7	8	Nashik	1/3/1902	sunday	40.0	Hot
8	9	Ahamdabad	1/2/1900	Friday	38.0	sunny
9	10	Dhane	3/6/1900	sunday	42.0	Hot
10	11	Navi mumbai	12/12/100	Mnday	33.0	sunny
11	12	Manali	12/2/1900	Friday	10.0	cold
12	13	Nanded	30/6/1900	staurday	22.0	sunny
13	14	Panjab	4/2/1900	Tuesday	28.0	rainy
14	15	Agra	4-Feb	Friday	26.0	rainy
15	16	Bengalor	4/7/1900	Monday	45.0	hot
16	17	karnataka	4/6/1900	saturday	37.0	sunny
17	18	Chennai	5/9/1900	wenesday	35.0	hot
18	19	Hydrabad	5/6/1900	Monday	32.0	sunny
19	20	NaN	NaN	NaN	NaN	NaN

```
2.# Count the number of unique cities
num_cities = df['city'].nunique()
```

```
print("Number of unique cities:",
num_cities)
```

OUTPUT:-

```
Number of unique cities: 19
```

```
3. Find the maximum temperature
max_temp = df['Temp'].max()

print("Maximum temperature recorded:",
max_temp)
```

OUTPUT:-

```
Maximum temperature recorded: 45.0
```

```
4. Find the day with the most occurrences
most_occurrences =
df['Day'].value_counts().idxmax()

print("Day of the week with the most
occurrences:", most_occurrences)
```

OUTPUT:-

```
Day of the week with the most occurrences:
Monday
```

```
5. Count the number of days with a "sunny"
weather condition
num_sunny_days = len(df[df['Weather'] ==
'sunny'])

print("Number of sunny days:",
num_sunny_days)
```

OUTPUT:-

```
Number of sunny days: 8
```

```
6. Find the city with the lowest
temperature
city_with_lowest_temp =
df.loc[df['Temp'].idxmin(), 'city']

print("City with the lowest temperature
recorded:", city_with_lowest_temp)
```

OUTPUT:-

```
City with the lowest temperature recorded:
Manali
```

```
7. Count the number of days with a
temperature above 40 degrees
num_hot_days = len(df[df['Temp'] > 40])

print("Number of days with temperature
above 40 degrees:", num_hot_days
```

```
Number of days with temperature above 40
degrees: 2
```

```
8. Calculate the average temperature
average_temp = df['Temp'].mean()

print("Average temperature recorded:",
average_temp)
```

```
Average temperature recorded:
31.68421052631579
```

```
9. Count the number of days with a "rainy"
weather condition
num_rainy_days = len(df[df['Weather'] ==
'rainy'])

print("Number of rainy days:",
num_rainy_days)
```

OUTPUT:-

```
Number of rainy days: 2
```

```
10. Calculate the average temperature per
day of the week
avg_temp_by_day =
df.groupby('Day')['Temp'].mean()

# Find the day with the highest average
temperature
day_with_highest_avg_temp =
avg_temp_by_day.idxmax()

print("Day of the week with the highest
average temperature:",
day_with_highest_avg_temp)
```

OUTPUT:-

```
Day of the week with the highest average
temperature: Sunday
```

```
11. Find the most frequent weather
condition
most_frequent_weather =
df['Weather'].value_counts().idxmax()

print("Most frequent weather condition:",
most_frequent_weather)
```

OUTPUT:-

```
Most frequent weather condition: sunny
```