```
In [7]:  import pandas as pd
         import matplotlib.pyplot as plt
```

```
In [48]: df=pd.read_csv('g:/dataset/analysis/restaurant.csv')
         df
```

Out[48]:

	total_bill	tip	gender	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

244 rows × 7 columns

```
In [49]: df.day.value_counts()
```

Out[49]:
```
Sat     87
Sun     76
Thur    62
Fri     19
Name: day, dtype: int64
```

```
In [9]:  res_df=df.groupby(by='day')[['total_bill']].agg(['count','sum','mean'])
```

```
In [10]: res_df
```

Out[10]:

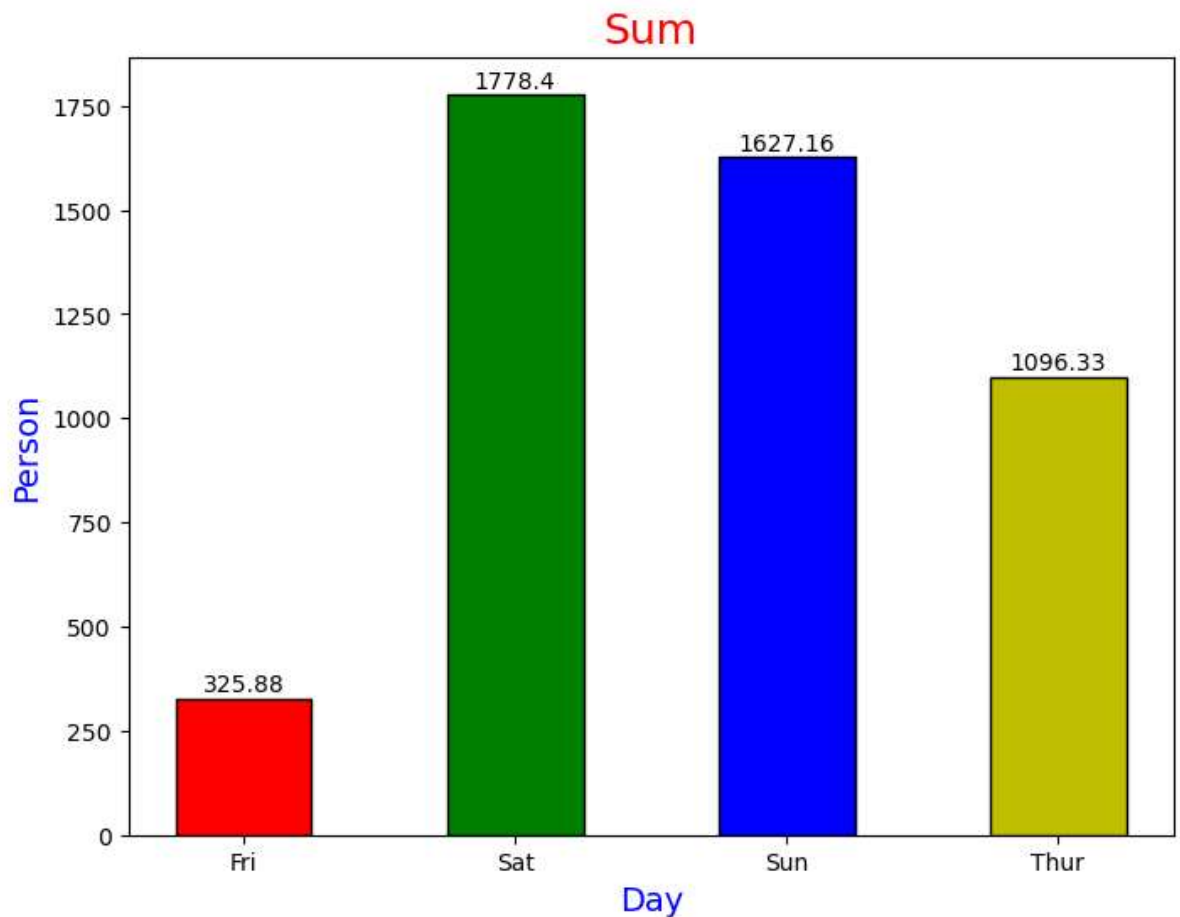|	total_bill		
	count	sum	mean
day			
Fri	19	325.88	17.151579
Sat	87	1778.40	20.441379
Sun	76	1627.16	21.410000
Thur	62	1096.33	17.682742

```
In [11]: res_df['total_bill']['count'].values
```

Out[11]:
```
array([19, 87, 76, 62], dtype=int64)
```

```
In [89]: plt.figure(figsize=(8,6))
         plt.bar(res_df.index,res_df['total_bill']['count'].values,edgecolor='k',color=['r'
         plt.title('Count',c='r',size=18)
         plt.xlabel('Day',size=14,c='b')
         plt.ylabel('Person',size=14,c='b')
         plt.text('Fri',21,19,horizontalalignment='center',verticalalignment='center')
         plt.text('Sat',89,87,horizontalalignment='center',verticalalignment='center')
         plt.text('Sun',78,76,horizontalalignment='center',verticalalignment='center')
         plt.text('Thur',65,62,horizontalalignment='center',verticalalignment='center')
         plt.show()
```
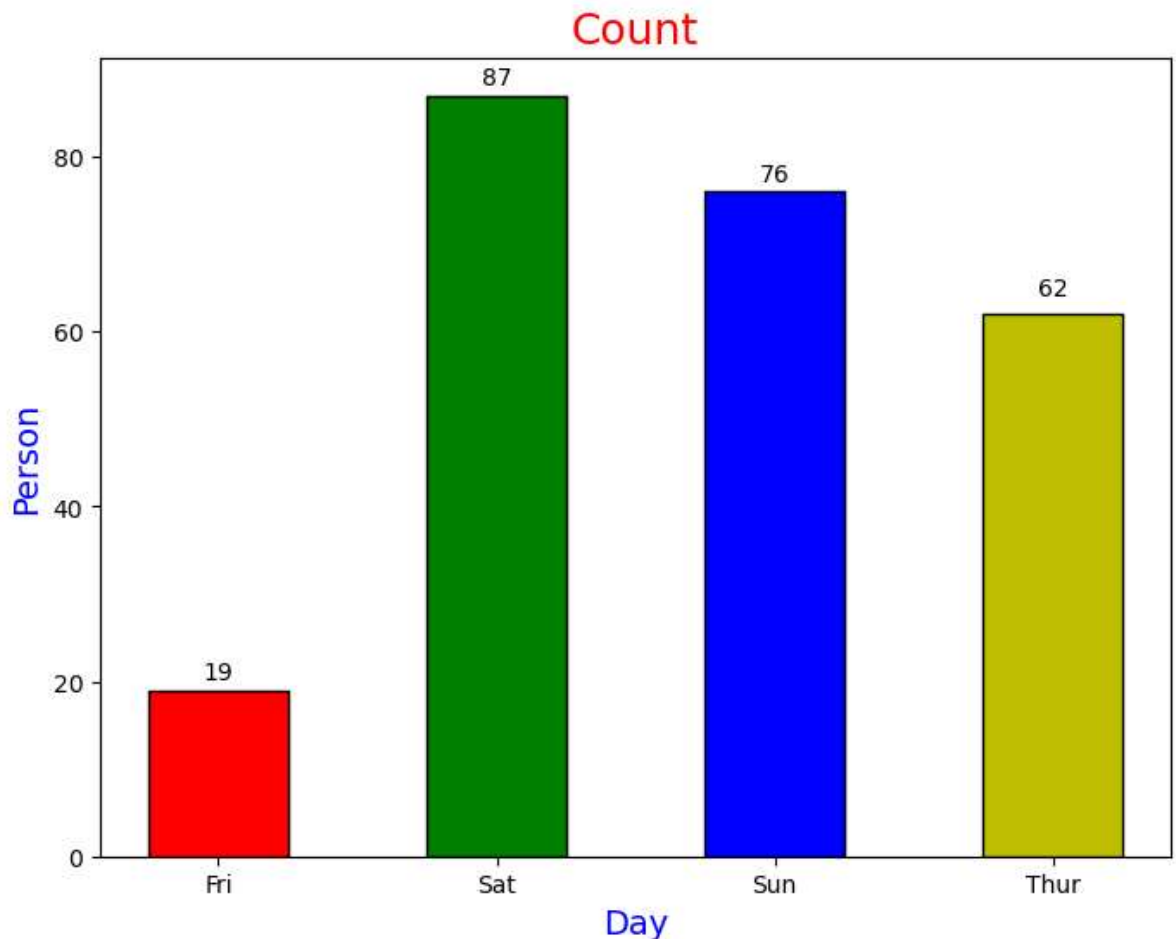


```
In [87]: plt.figure(figsize=(8,6))
         plt.bar(res_df.index,res_df['total_bill']['sum'].values,edgecolor='k',color=['r','g
         plt.title('Sum',c='r',size=18)
         plt.xlabel('Day',size=14,c='b')
         plt.ylabel('Person',size=14,c='b')
         plt.text('Fri',360,325.88,horizontalalignment='center',verticalalignment='center')
         plt.text('Sat',1810,1778.40,horizontalalignment='center',verticalalignment='center
         plt.text('Sun',1660,1627.16,horizontalalignment='center',verticalalignment='center
         plt.text('Thur',1135,1096.33,horizontalalignment='center',verticalalignment='center
         plt.show()
```
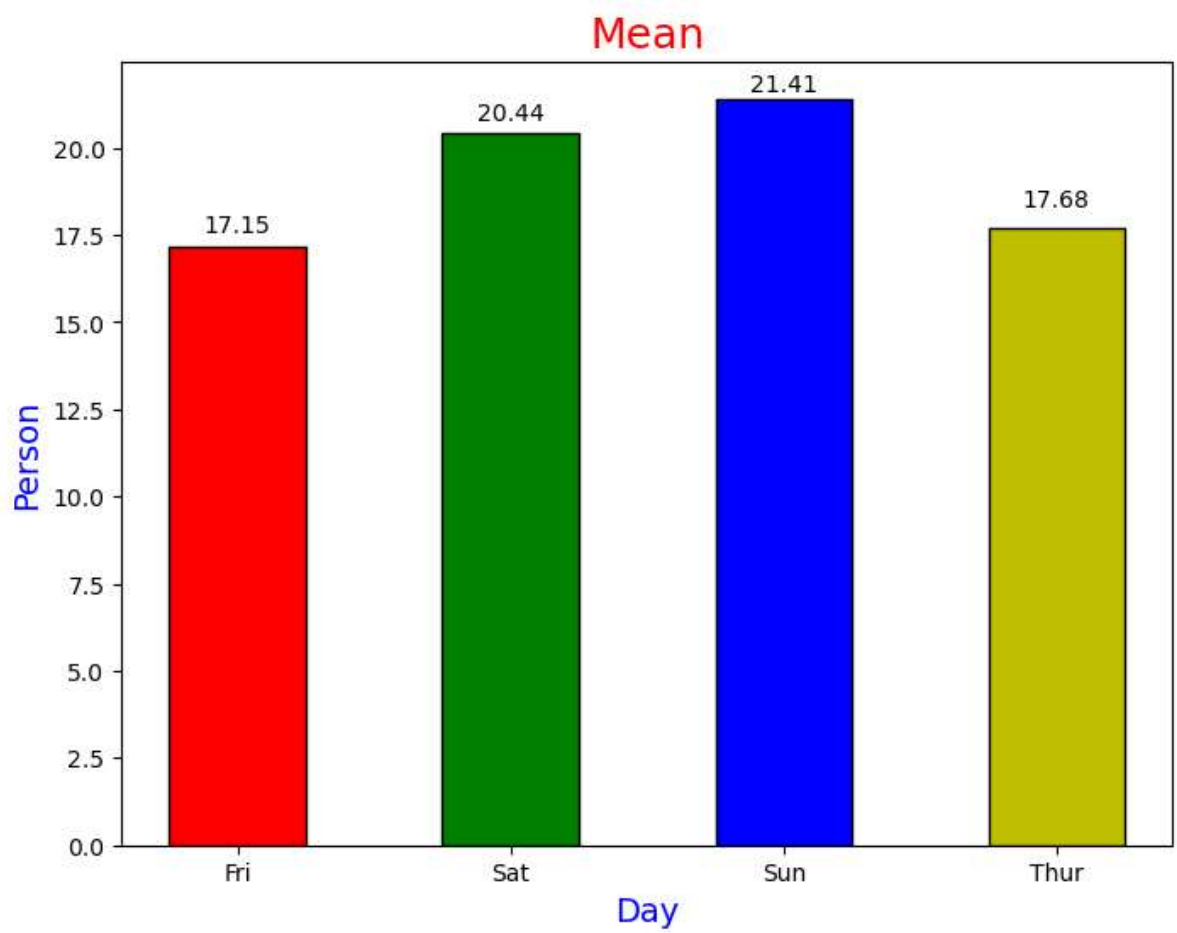
Sum

```
In [68]:  res_df
```

```
Out[68]:
```

		total_bill	
	count	sum	mean
day			
Fri	19	325.88	17.151579
Sat	87	1778.40	20.441379
Sun	76	1627.16	21.410000
Thur	62	1096.33	17.682742

```
In [83]:  plt.figure(figsize=(8,6))
          plt.bar(res_df.index,res_df['total_bill']['mean'].values,edgecolor='k',color=['r',
          plt.title('Mean',c='r',size=18)
          plt.xlabel('Day',size=14,c='b')
          plt.ylabel('Person',size=14,c='b')
          plt.text('Fri',17.8,17.15,horizontalalignment='center',verticalalignment='center')
          plt.text('Sat',21,20.44,horizontalalignment='center',verticalalignment='center')
          plt.text('Sun',21.8,21.41,horizontalalignment='center',verticalalignment='center')
          plt.text('Thur',18.5,17.68,horizontalalignment='center',verticalalignment='center'
          plt.show()
```

In [ ]: