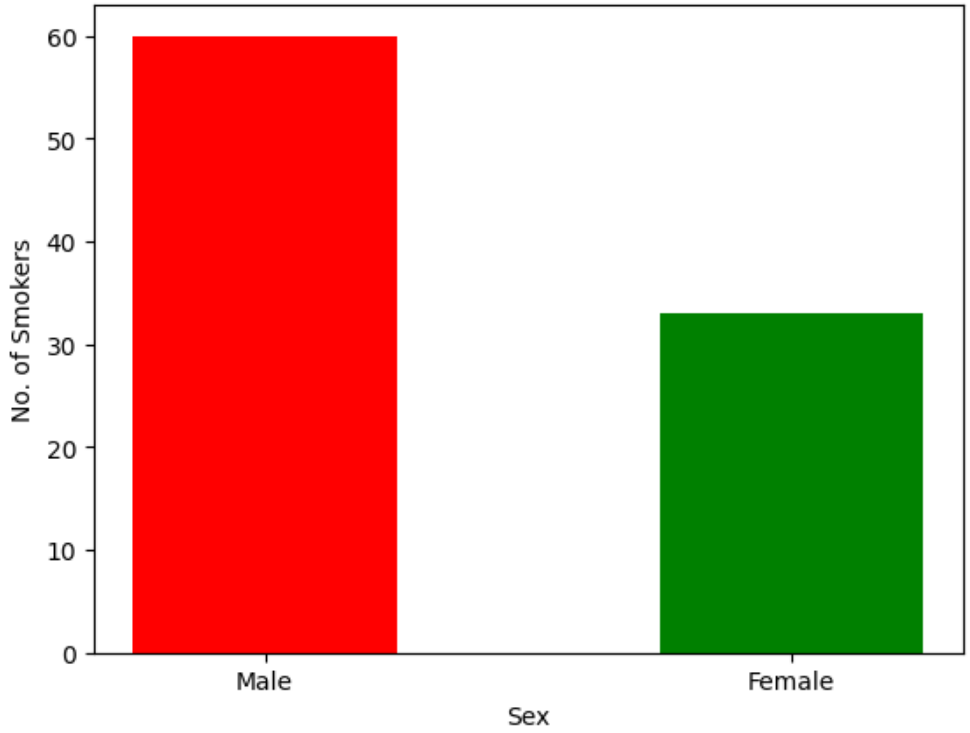
```
import matplotlib.pyplot as plt
import pandas as pd
df = pd.read_csv("/content/tips.csv")
print(df)
```

```
     total_bill   tip     sex 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 x 7 columns]
```

```
# 1. Find Total No. of Male And Female Smokers.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

x1 = df.loc[(df['sex'] == 'Male') & (df['smoker'] == 'Yes')].shape[0]
x2 = df.loc[(df['sex'] == 'Female') & (df['smoker'] == 'Yes')].shape[0]

print("No. of Male Smoker:",x1)
print("No. of Female Smoker:",x2)

no_of_Smokers  = [x1,x2]
Sex = ["Male","Female"]

c1 =['red','green']

plt.bar(Sex, no_of_Smokers, width = 0.5 ,color = c1)

plt.xlabel("Sex")
plt.ylabel("No. of Smokers")
```

```
plt.show()
```

```
No. of Male Smoker: 60
No. of Female Smoker: 33
```



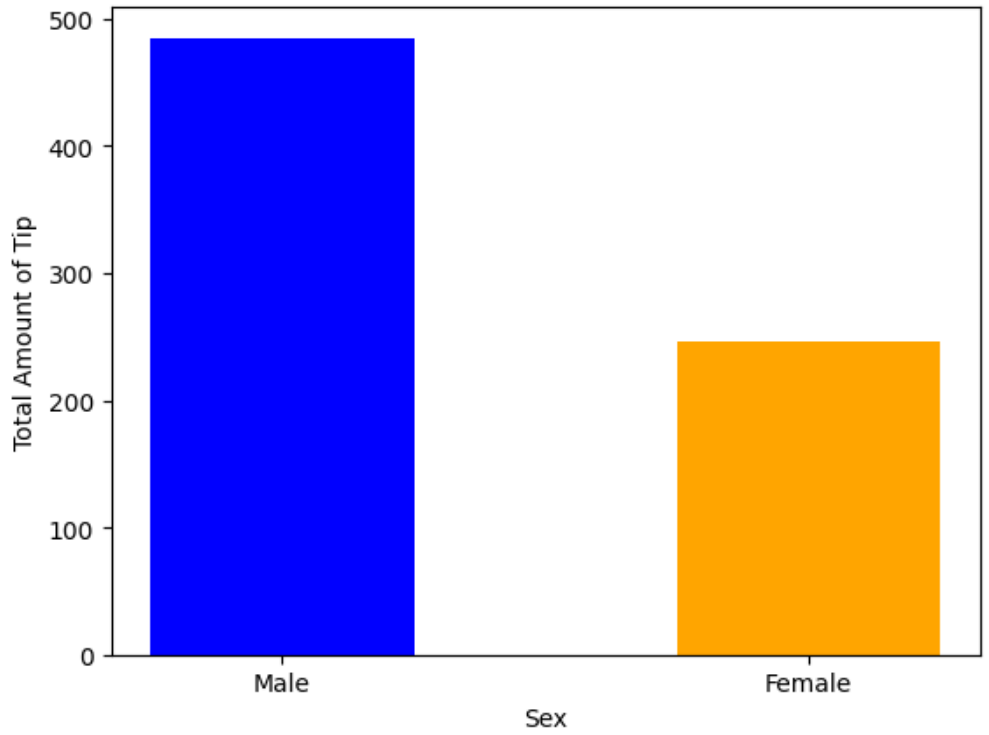

```
# 2. Find The Total Amount of Tip Given By Male And Female.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

x1 = df.loc[df['sex'] == 'Male', 'tip'].sum()
x2 = df.loc[df['sex'] == 'Female', 'tip'].sum()

print("Total Amount of Tip given by Male:",x1)
print("Total Amount of Tip given by Female:",x2)

Amount_of_tip  = [x1,x2]
Sex = ["Male","Female"]
```

```
c1 =['Blue','orange']

plt.bar(Sex, Amount_of_tip, width = 0.5 ,color = c1)

plt.xlabel("Sex")
plt.ylabel("Total Amount of Tip")

plt.show()
```

[ ]

```
# 3.Find The Percentage of People Come in Particular Day.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

df1 = df.groupby("day").count()
print(df1)

df1["sex"].plot(kind="pie",autopct = "%1.f%%")
```

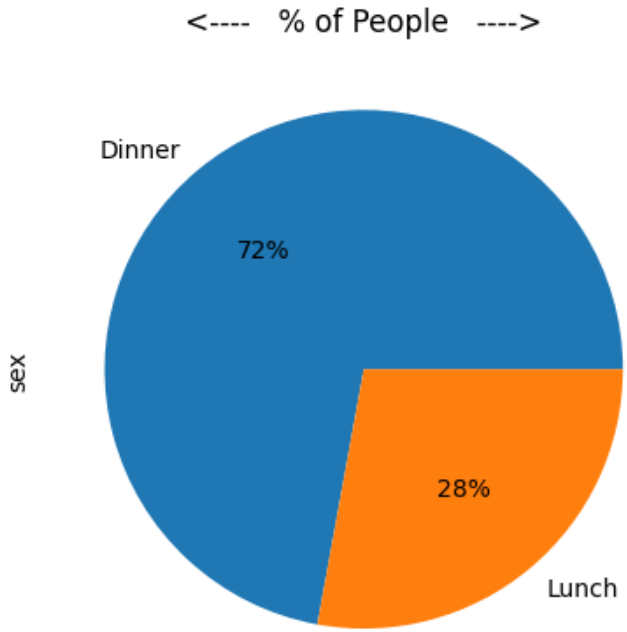
```
Total Amount of Tip given by Male: 485.07
Total Amount of Tip given by Female: 246.50999999999996
```




```
     total_bill  tip  sex  smoker  time  size
day
Fri          19   19   19      19    19    19
Sat          87   87   87      87    87    87
Sun          76   76   76      76    76    76
Thur         62   62   62      62    62    62
<Axes: vlabel='sex'>
```

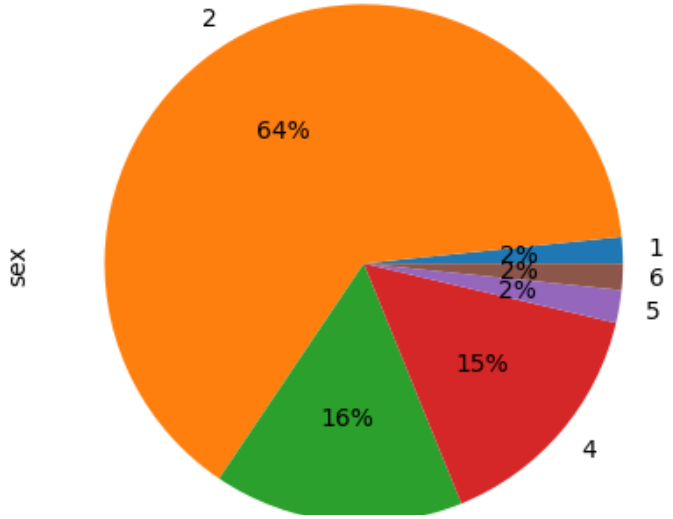
```
# 4.Find The Percentage Of People Who Take Dinner And Lunch.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

df1 = df.groupby("time").count()
print(df1)

df1["sex"].plot(kind="pie",autopct = "%1.f%%",title=" <----   % of People   ----> ")
```

```
        total_bill  tip  sex  smoker  day  size
time
Dinner         176  176  176     176  176   176
Lunch           68   68   68      68   68    68
<Axes: title={'center': ' <----   % of People   ----> '}, ylabel='sex'>
```




```
# 5.Find The Percentage Of People According to Different Size.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

df1 = df.groupby("size").count()
print(df1)

df1["sex"].plot(kind="pie",autopct = "%1.f%%")
```

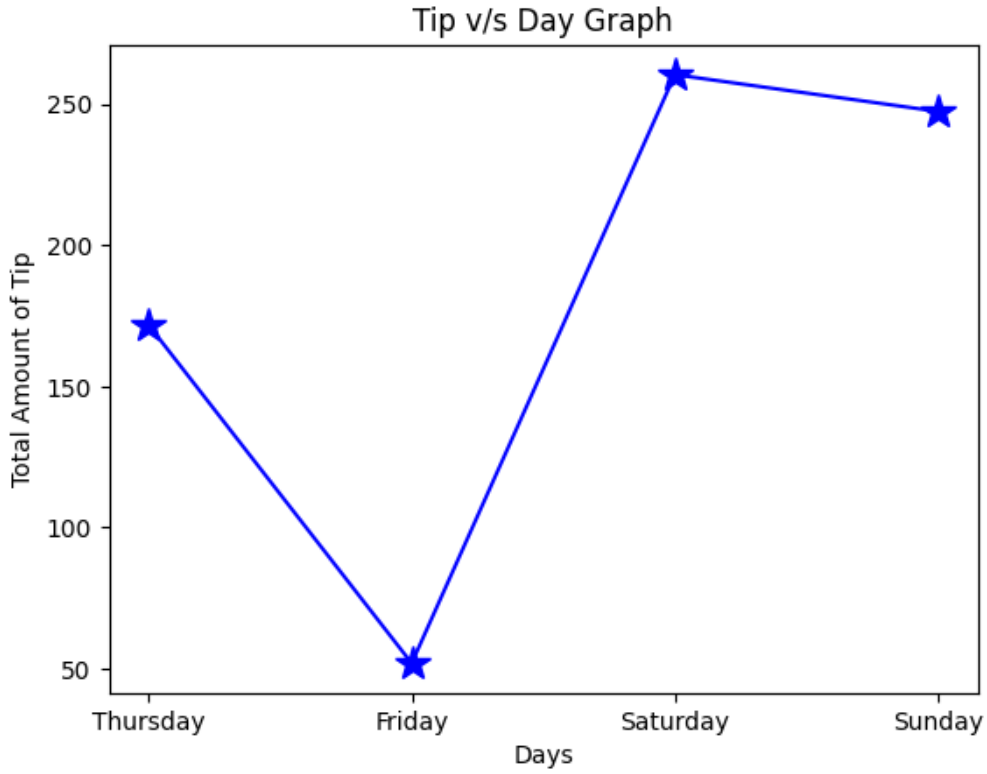
```
      total_bill  tip  sex  smoker  day  time
size
1              4    4    4       4    4     4
2            156  156  156     156  156   156
3             38   38   38      38   38    38
4             37   37   37      37   37    37
5              5    5    5       5    5     5
6              4    4    4       4    4     4
<Axes: ylabel='sex'>
```




```
# 6.Find Total Amount of Tip in Each Day.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

x1 = df.loc[df['day'] == 'Thur', 'tip'].sum()
x2 = df.loc[df['day'] == 'Fri', 'tip'].sum()
x3 = df.loc[df['day'] == 'Sat', 'tip'].sum()
x4 = df.loc[df['day'] == 'Sun', 'tip'].sum()

print("Total Amount of Tip in Thursday:",x1)
print("Total Amount of Tip in Friday:",x2)
print("Total Amount of Tip in Saturday:",x3)
print("Total Amount of Tip in Sunday:",x4)
```

```
Amount_of_Tip  = [x1,x2,x3,x4]
Days = ["Thursday","Friday","Saturday","Sunday"]
range = (0,300)

plt.plot(Days,Amount_of_Tip, color="blue", marker="*", markersize = 15 )

plt.title("Tip v/s Day Graph")
plt.xlabel("Days")
plt.ylabel("Total Amount of Tip")

plt.show()
```

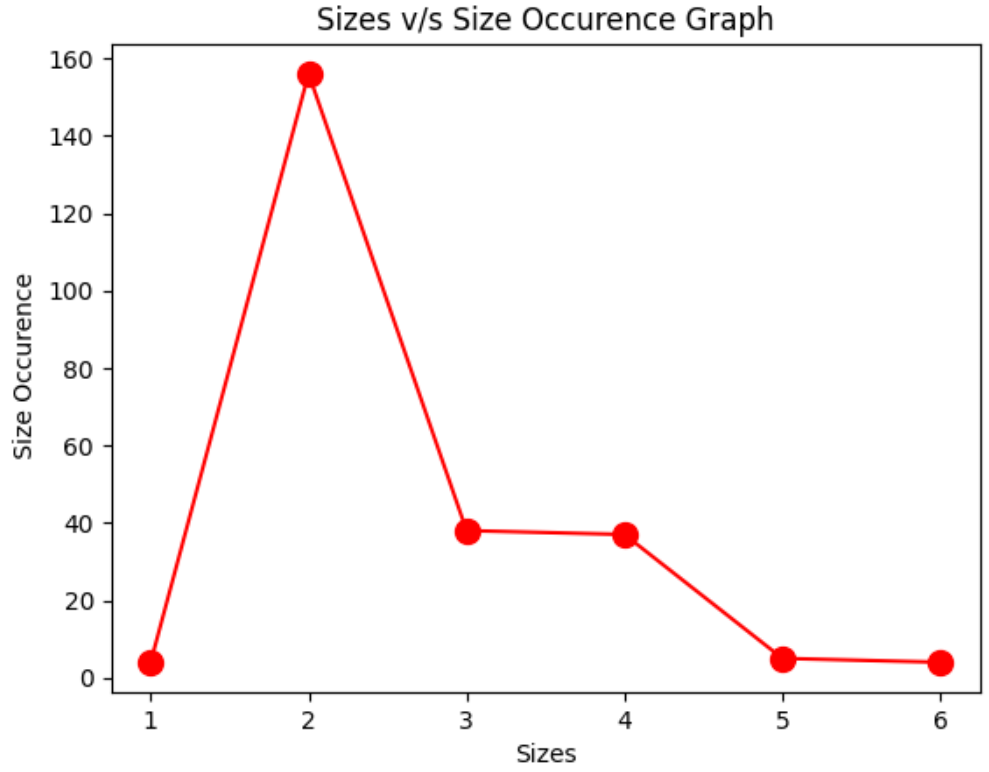
```
Total Amount of Tip in Thursday: 171.82999999999996
Total Amount of Tip in Friday: 51.959999999999994
Total Amount of Tip in Saturday: 260.4
Total Amount of Tip in Sunday: 247.39000000000001
```




```
# 7.Plot the Line Graph of Size and Size Occurence.
```

```
import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

df1 = df.groupby("size").count()
print(df1)

df1["sex"].plot(kind="line",color="red",marker="o",markersize=10,title="Sizes v/s Size Occurence Graph", ylabel=" Size Occurence", xlabel="Siz
```

```
      total_bill  tip  sex  smoker  day  time
size
1              4    4    4       4    4     4
2            156  156  156     156  156   156
3             38   38   38      38   38    38
4             37   37   37      37   37    37
5              5    5    5       5    5     5
6              4    4    4       4    4     4
<Axes: title={'center': 'Sizes v/s Size Occurence Graph'}, xlabel='Sizes', ylabel=' Size Occurence'>
```

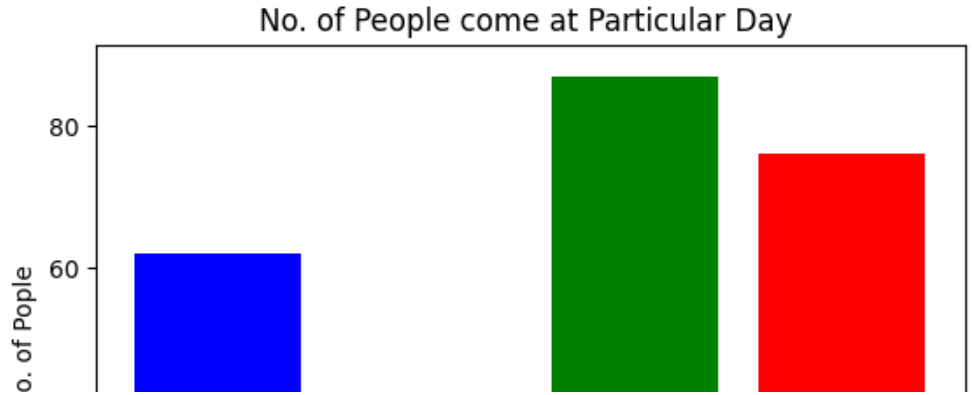


```
# 8.Find The Percentage of Total Amount Bill At Dinner And Lunch.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

x1 = int(df.loc[df['time'] == 'Dinner', 'total_bill'].sum())
x2 = int(df.loc[df['time'] == 'Lunch', 'total_bill'].sum())

print("Total Amount of bill for Dinner:",x1)
print("Total Amount of bill for Lunch:",x2)

Amount_of_bill  = [x1,x2]

plt.pie(Amount_of_bill,autopct = "%1.f%%")

plt.title("## Percentage of Total Amount of Bill ##")

plt.show()
```

```
     Total Amount of bill for Dinner: 3660
     Total Amount of bill for Lunch: 1167
```

```
# 9.Find The No. of People Come at Particular Day.

import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

x1 = df.loc[df['day'] == 'Thur'].count()
x2 = df.loc[df['day'] == 'Fri'].count()
x3 = df.loc[df['day'] == 'Sat'].count()
x4 = df.loc[df['day'] == 'Sun'].count()

print("Total No. of Pople in Thursday:",x1)
print("Total No. of Pople in Friday:",x2)
print("Total No. of Pople in Saturday:",x3)
print("Total No. of Pople in Sunday:",x4)

no_of_Pople = [62,19,87,76]
Days = ["Thursday","Friday","Saturday","Sunday"]
c1 =['Blue','orange','green','red']

plt.bar( Days, no_of_Pople, color=c1)

plt.xlabel("Day")
plt.ylabel("Total No. of Pople")
plt.title("No. of People come at Particular Day ")

plt.show()
```

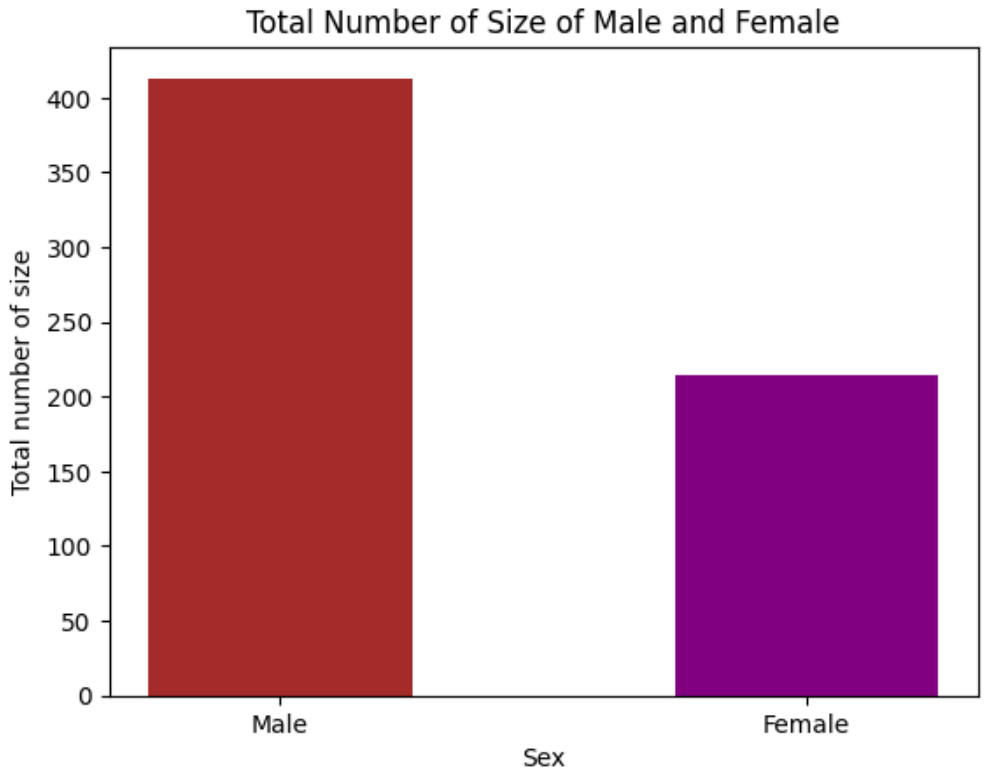
```
Total No. of Pople in Thursday: total_bill    62
tip           62
sex           62
smoker        62
day           62
time          62
size          62
dtype: int64
Total No. of Pople in Friday: total_bill    19
tip           19
sex           19
smoker        19
day           19
time          19
size          19
dtype: int64
Total No. of Pople in Saturday: total_bill    87
tip           87
sex           87
smoker        87
day           87
time          87
size          87
dtype: int64
Total No. of Pople in Sunday: total_bill    76
tip           76
sex           76
smoker        76
day           76
time          76
size          76
dtype: int64
```




```
# 10.Find The Sum Of Size of Male and Female.
```

```
import matplotlib.pyplot as plt
import pandas as pd

df = pd.read_csv("/content/tips.csv")

x1 = df.loc[df['sex'] == 'Male', 'size'].sum()
x2 = df.loc[df['sex'] == 'Female', 'size'].sum()

print("Total number of size of Male:",x1)
print("Total number of size of Female:",x2)

Total_number_of_size  = [x1,x2]
Sex = ["Male","Female"]
c1 =['brown','purple']

plt.bar(Sex, Total_number_of_size, width = 0.5 ,color = c1)

plt.xlabel("Sex")
plt.ylabel("Total number of size")
plt.title("Total Number of Size of Male and Female")
plt.show()
```

```
Total number of size of Male: 413
Total number of size of Female: 214
```



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