```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

df = pd.read_csv(r"C:\Users\nikhi\Downloads\New folder\
blinkit_data.csv")

df.head(10)
```

```
  Item Fat Content Item Identifier              Item Type  \
0          Regular           FDX32  Fruits and Vegetables
1          Low Fat           NCB42     Health and Hygiene
2          Regular           FDR28           Frozen Foods
3          Regular           FDL50                Canned
4          Low Fat           DRI25            Soft Drinks
5          low fat           FDS52           Frozen Foods
6          Low Fat           NCU05     Health and Hygiene
7          Low Fat           NCD30              Household
8          Low Fat           FDW20  Fruits and Vegetables
9          Low Fat           FDX25                Canned

   Outlet Establishment Year Outlet Identifier Outlet Location Type  \
0                       2012            OUT049                Tier 1
1                       2022            OUT018                Tier 3
2                       2010            OUT046                Tier 1
3                       2000            OUT013                Tier 3
4                       2015            OUT045                Tier 2
5                       2020            OUT017                Tier 2
6                       2011            OUT010                Tier 3
7                       2015            OUT045                Tier 2
8                       2000            OUT013                Tier 3
9                       1998            OUT027                Tier 3

  Outlet Size        Outlet Type  Item Visibility  Item Weight
Sales  \
0      Medium  Supermarket Type1         0.100014        15.10
145.4786
1      Medium  Supermarket Type2         0.008596        11.80
115.3492
2       Small  Supermarket Type1         0.025896        13.85
165.0210
3        High  Supermarket Type1         0.042278        12.15
126.5046
4       Small  Supermarket Type1         0.033970        19.60
55.1614
5       Small  Supermarket Type1         0.005505         8.89
102.4016
6       Small      Grocery Store         0.098312        11.80
81.4618
```

```
7       Small  Supermarket Type1          0.026904         19.70
96.0726
8        High  Supermarket Type1          0.024129         20.75
124.1730
9      Medium  Supermarket Type3          0.101562           NaN
181.9292

   Rating
0     5.0
1     5.0
2     5.0
3     5.0
4     5.0
5     5.0
6     5.0
7     5.0
8     5.0
9     5.0
```

```
print(df['Item Fat Content'].unique())
```

```
['Regular' 'Low Fat' 'low fat' 'LF' 'reg']
```

```
df['Item Fat Content'] = df['Item Fat Content'].replace({
    'reg': 'Regular',
    'REG': 'Regular'
})
```

```
df['Item Fat Content'] = df['Item Fat Content'].replace({
    'low fat': 'Low Fat',
    'LF': 'Low Fat'
})
```

```
print(df['Item Fat Content'].unique())
```

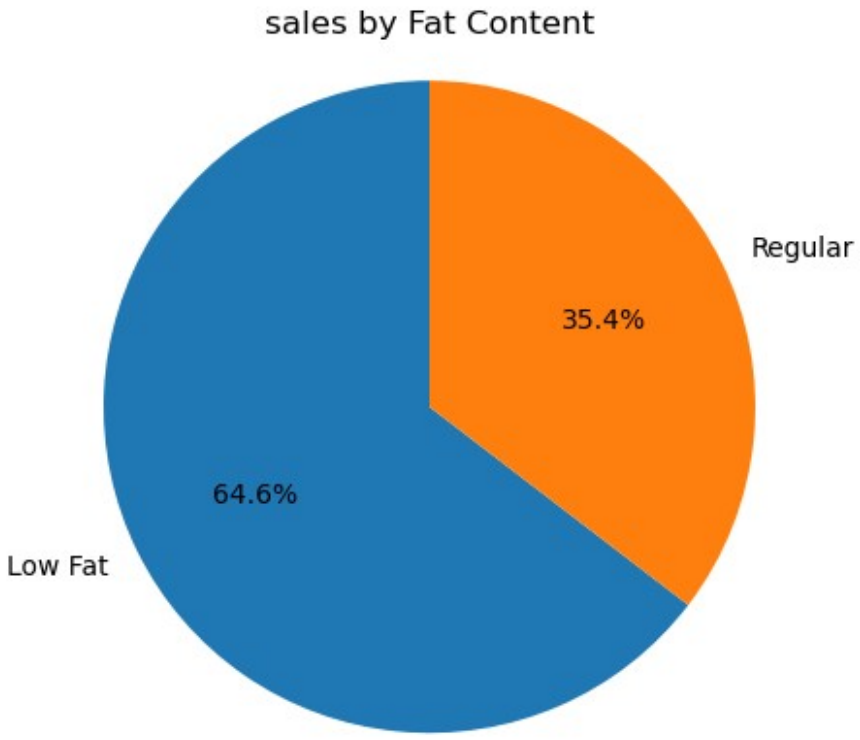
```
['Regular' 'Low Fat']
```

```
# Total Sales
total_Sales = df['Sales'].sum()

#Average sales
avg_Sales = df['Sales'].mean()

#no of item sold
no_of_item_sold = df ['Sales'].count()

#average rating
avg_rating =df['Rating'].mean()
#display
print(f"total Sales: ${total_Sales:,.0f}")
print(f"Average Sales: ${avg_Sales:,.1f}")
```

```
print(f"Number of Items Sold: {no_of_item_sold:,.0f}")
print(f"Average Rating: {avg_rating:.1f}")
```

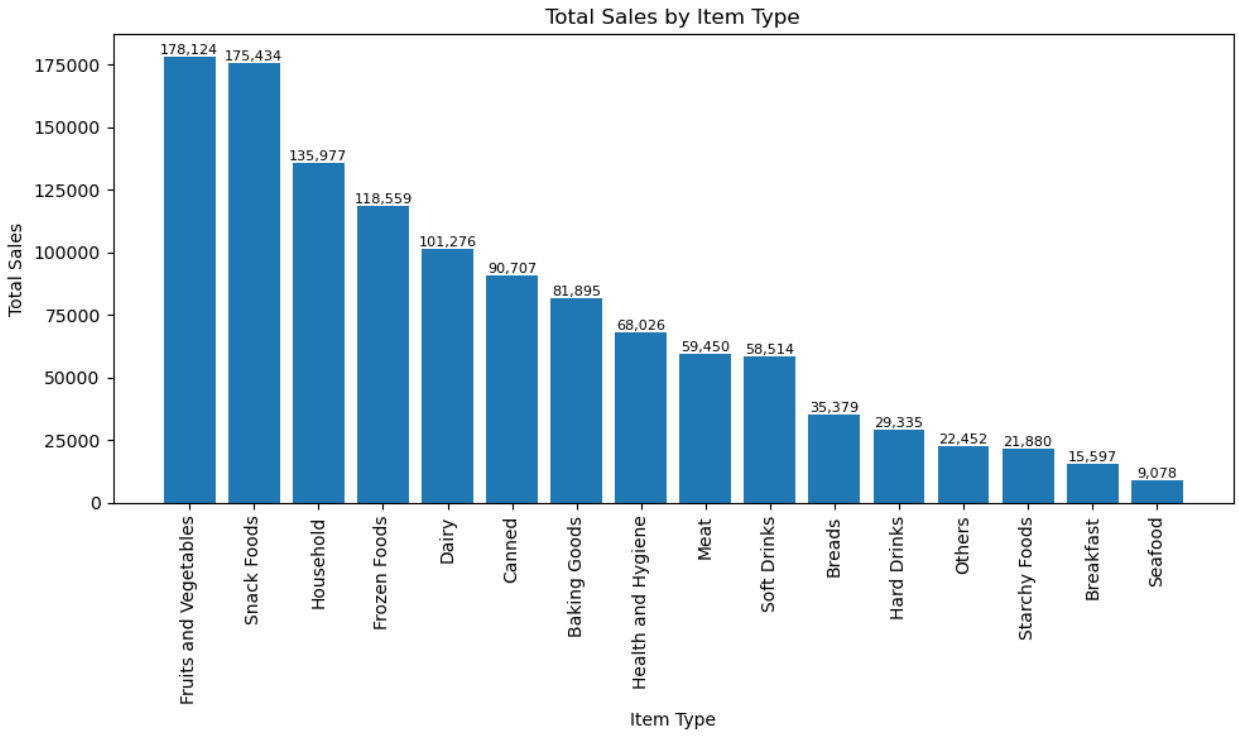
```
total Sales: $1,201,681
Average Sales: $141.0
Number of Items Sold: 8,523
Average Rating: 4.0
```

```
sales_by_fat = df.groupby('Item Fat Content')['Sales'].sum()

plt.pie(sales_by_fat, labels= sales_by_fat. index,
           autopct = '%.1f%%' ,
        startangle = 90)
plt.title('sales by Fat Content')
plt.axis('equal')
plt.show()
```



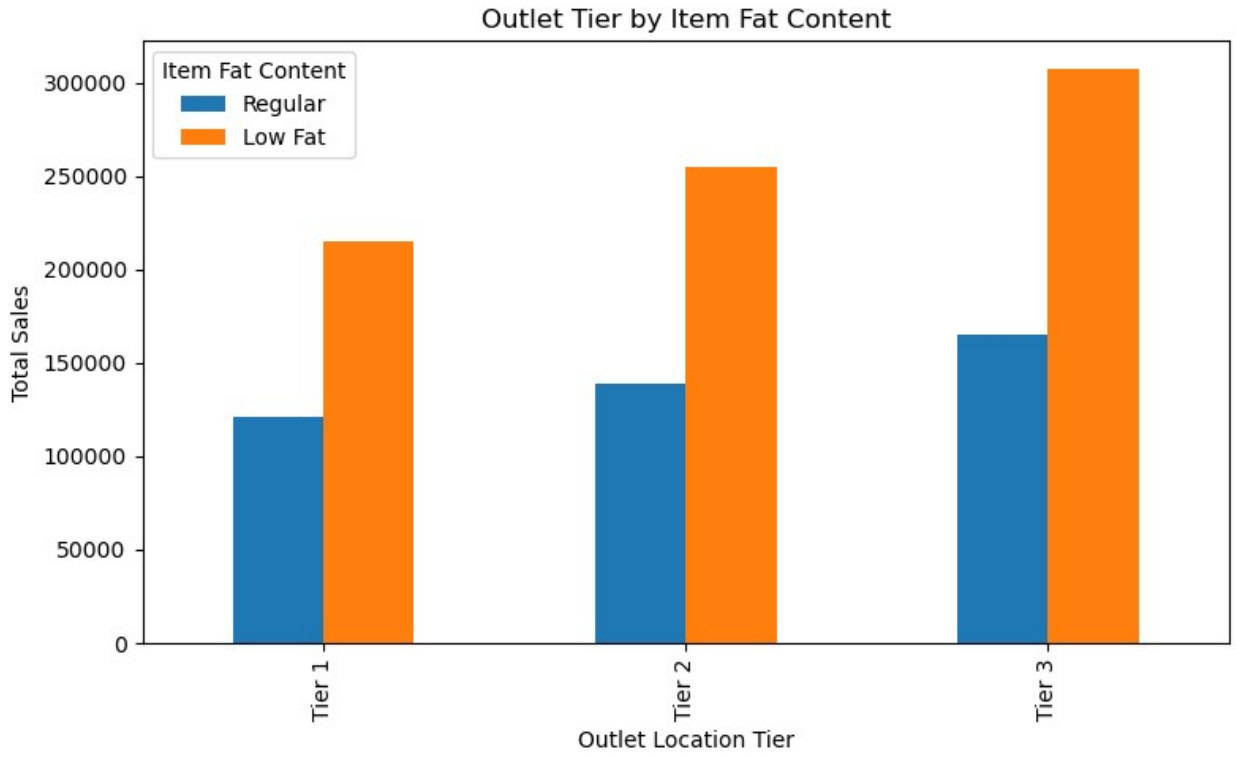

```
# □ Total Sales by Item Type

# Group data by 'Item Type' and sum up the Sales
sales_by_type = df.groupby('Item Type')
['Sales'].sum().sort_values(ascending=False)

# Plot the bar chart
plt.figure(figsize=(10, 6))
```

```
bars = plt.bar(sales_by_type.index, sales_by_type.values)

# Rotate x-axis labels for better readability
plt.xticks(rotation=90)

# Add labels and title
plt.xlabel('Item Type')
plt.ylabel('Total Sales')
plt.title('Total Sales by Item Type')

# Add values on top of each bar
for bar in bars:
    plt.text(bar.get_x() + bar.get_width() / 2,
             bar.get_height(),
             f'{bar.get_height():,.0f}',
             ha='center', va='bottom', fontsize=8)

# Adjust layout and show plot
plt.tight_layout()
plt.show()
```



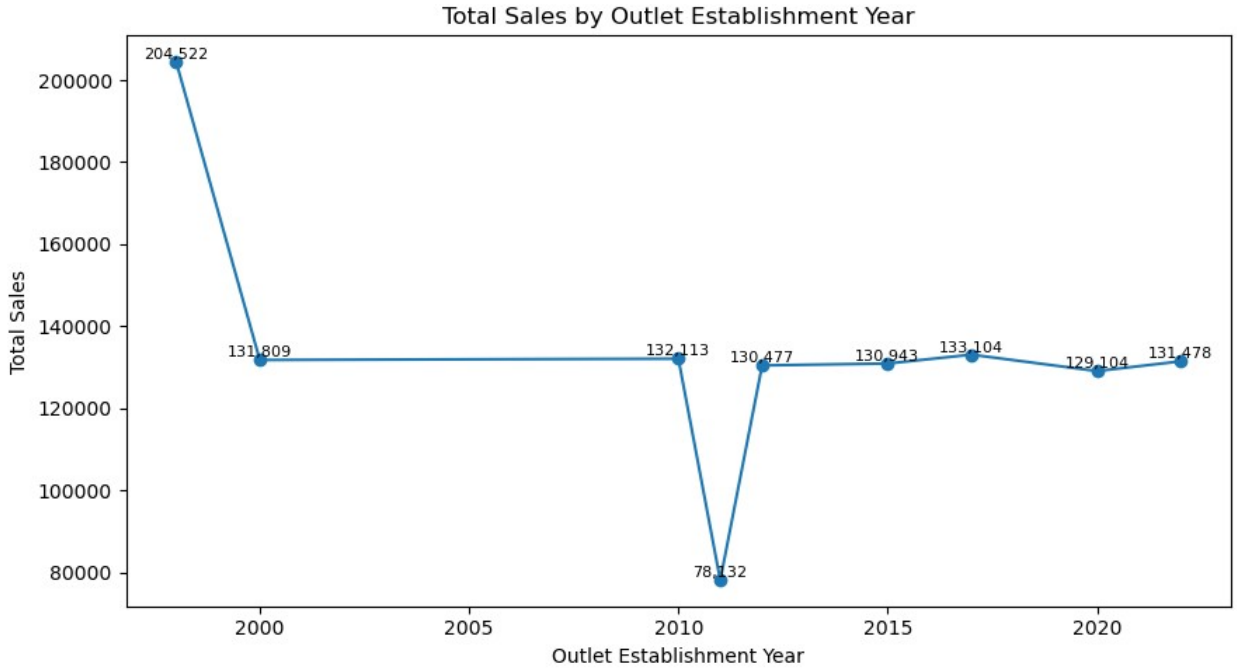

```
# □ Fat Content by Outlet for Total Sales

# Group data by 'Outlet Location Type' and 'Item Fat Content' and sum
the Sales
grouped = df.groupby(['Outlet Location Type', 'Item Fat Content'])
['Sales'].sum().unstack()
```

```
# Keep only Regular and Low Fat categories (optional)
grouped = grouped[['Regular', 'Low Fat']]

# Plot the grouped bar chart
ax = grouped.plot(kind='bar', figsize=(8, 5), title='Outlet Tier by
Item Fat Content')

# Add labels and legend
plt.xlabel('Outlet Location Tier')
plt.ylabel('Total Sales')
plt.legend(title='Item Fat Content')

# Adjust layout and show plot
plt.tight_layout()
plt.show()
```



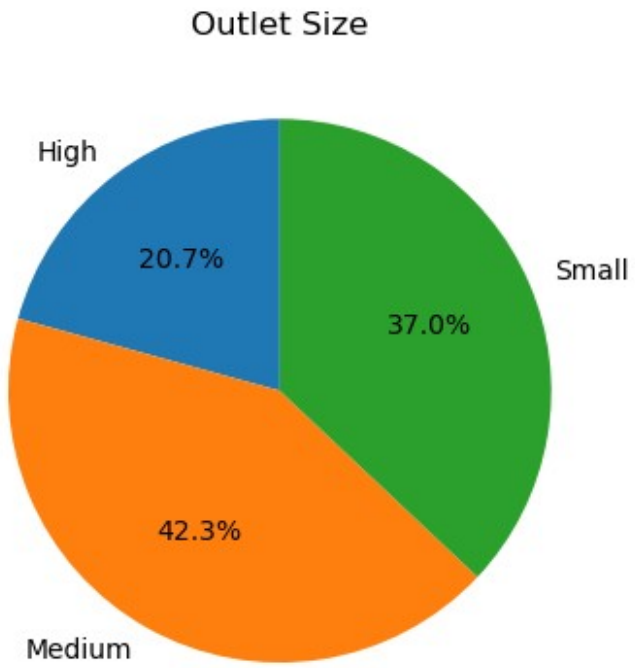

```
# □ Total Sales by Outlet Establishment Year

# Group data by 'Outlet Establishment Year' and sum up the Sales
sales_by_year = df.groupby('Outlet Establishment Year')
['Sales'].sum().sort_index()

# Create the line plot
plt.figure(figsize=(9, 5))
plt.plot(sales_by_year.index, sales_by_year.values, marker='o',
```

```
linestyle='-')

# Add labels and title
plt.xlabel('Outlet Establishment Year')
plt.ylabel('Total Sales')
plt.title('Total Sales by Outlet Establishment Year')

# Add value labels on each point
for x, y in zip(sales_by_year.index, sales_by_year.values):
    plt.text(x, y, f'{y:,.0f}', ha='center', va='bottom', fontsize=8)

# Adjust layout and show the plot
plt.tight_layout()
plt.show()
```




```
# □ Sales by Outlet Size

# Group data by 'Outlet Size' and sum up the Sales
sales_by_size = df.groupby('Outlet Size')['Sales'].sum()

# Create a pie chart
plt.figure(figsize=(4, 4))
plt.pie(sales_by_size,
        labels=sales_by_size.index,
        autopct='%1.1f%%',
        startangle=90)

# Add title and layout
```

```
plt.title('Outlet Size')
plt.tight_layout()
plt.show()
```




```
#  Sales by Outlet Location

# Group data by 'Outlet Location Type' and sum up the Sales
sales_by_location = df.groupby('Outlet Location Type')
['Sales'].sum().reset_index()

# Sort the data by Sales (highest to lowest)
sales_by_location = sales_by_location.sort_values('Sales',
ascending=False)

# Create the bar plot
plt.figure(figsize=(8, 3))  # Smaller height, enough width
ax = sns.barplot(x='Sales', y='Outlet Location Type',
data=sales_by_location)

# Add labels and title
plt.title('Total Sales by Outlet Location Type')
plt.xlabel('Total Sales')
plt.ylabel('Outlet Location Type')

# Adjust layout
```

```
plt.tight_layout()  # Ensures layout fits without scroll
plt.show()
```