In [3]:
```
import pandas as pd
import matplotlib.pyplot as plt
```

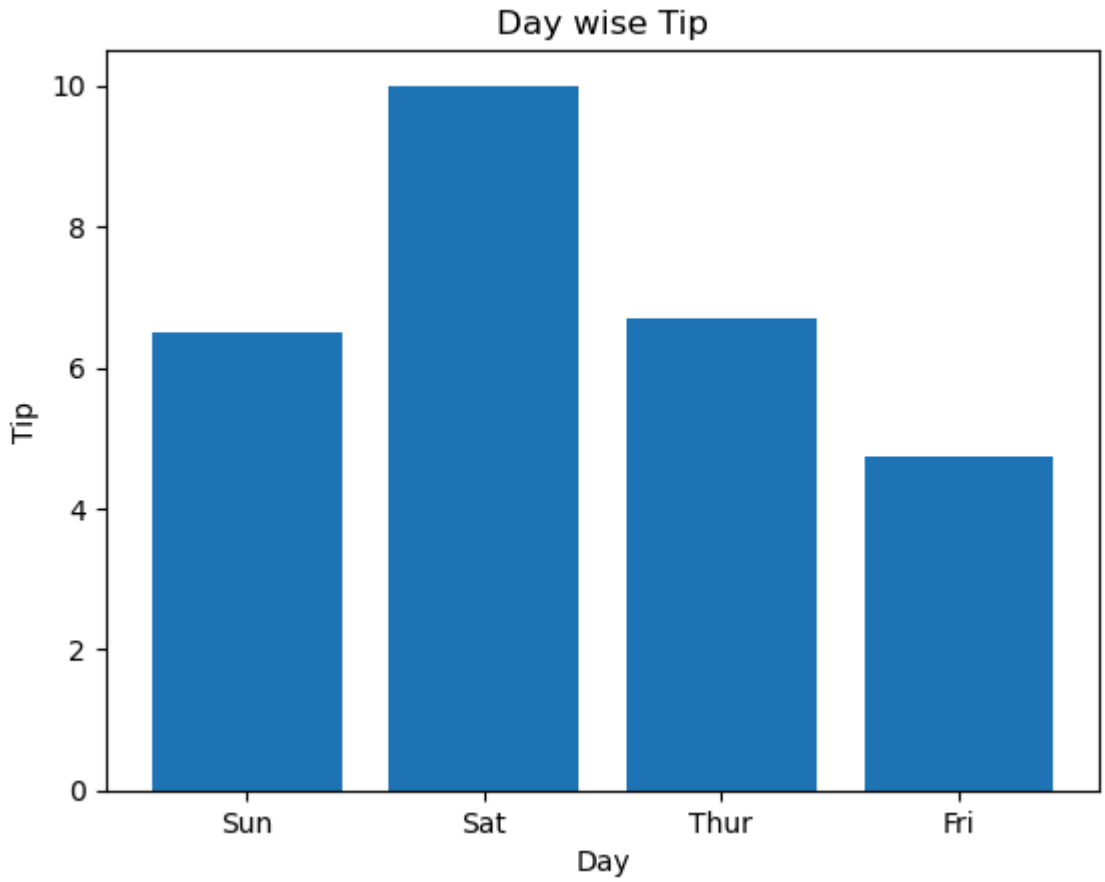
In [9]:
```
data = pd.read_excel("tips.xlsx")
```

In [11]:
```
data.head
```

Out[11]:
```
<bound method NDFrame.head of      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]>
```

In [65]:
```
plt.bar(data['day'],data['tip'])
plt.xlabel('Day')
plt.ylabel('Tip')
plt.title('Day wise Tip')
```

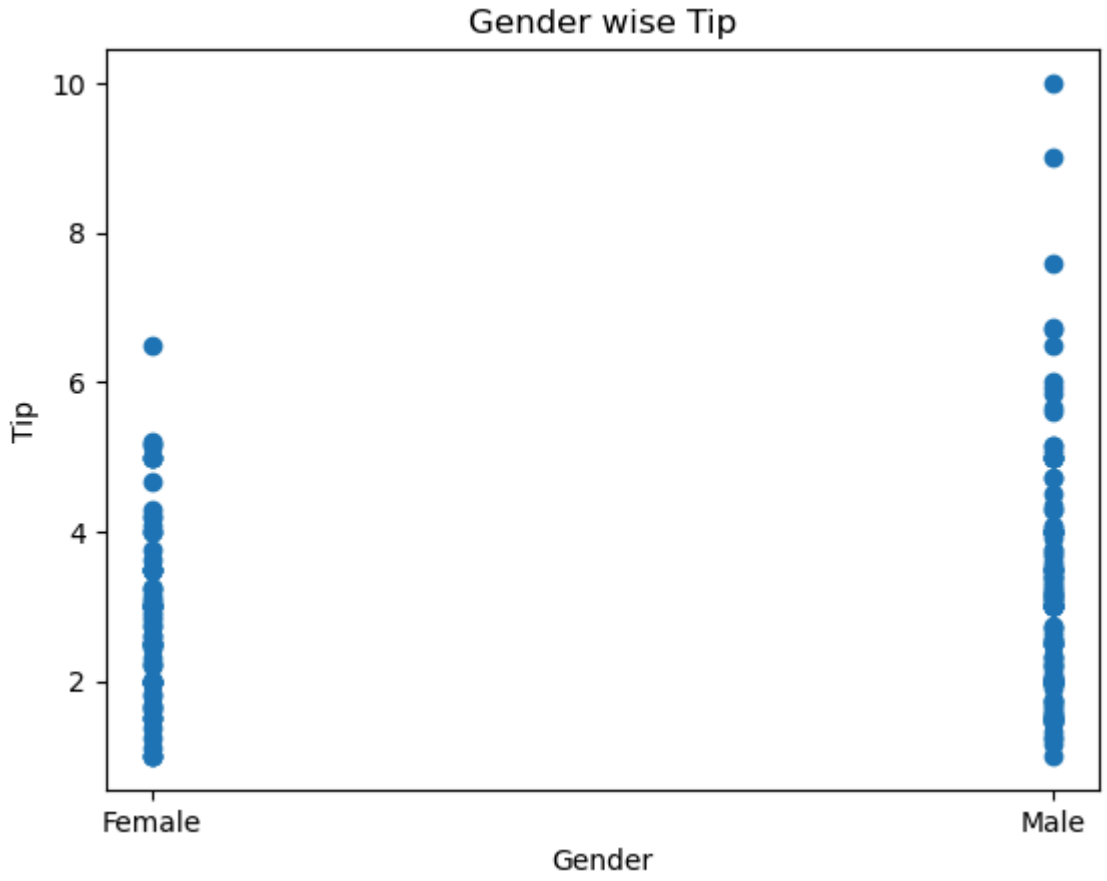
Out[65]:
```
Text(0.5, 1.0, 'Day wise Tip')
```



In [59]:
```
plt.scatter(data['sex'],data['tip'])
plt.xlabel('Gender')
```

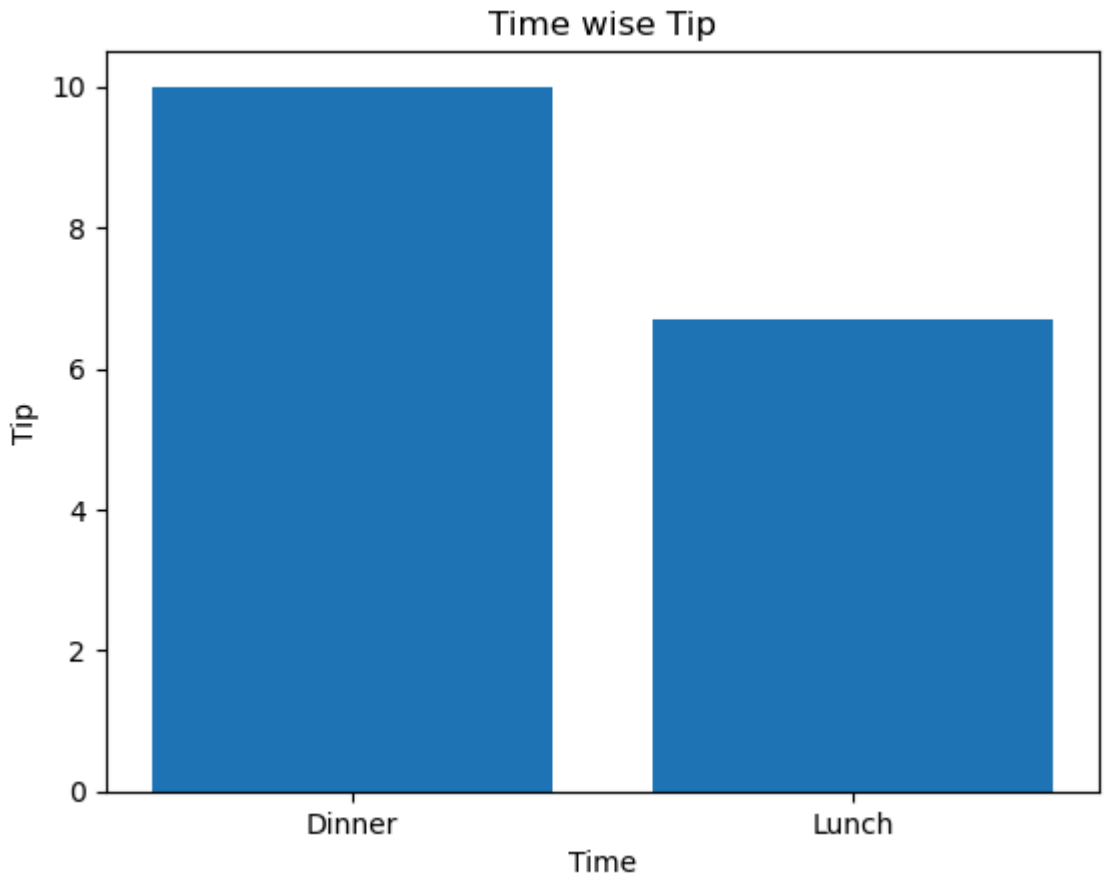
```
plt.ylabel('Tip')
plt.title('Gender wise Tip')
```

Out[59]:
```
Text(0.5, 1.0, 'Gender wise Tip')
```



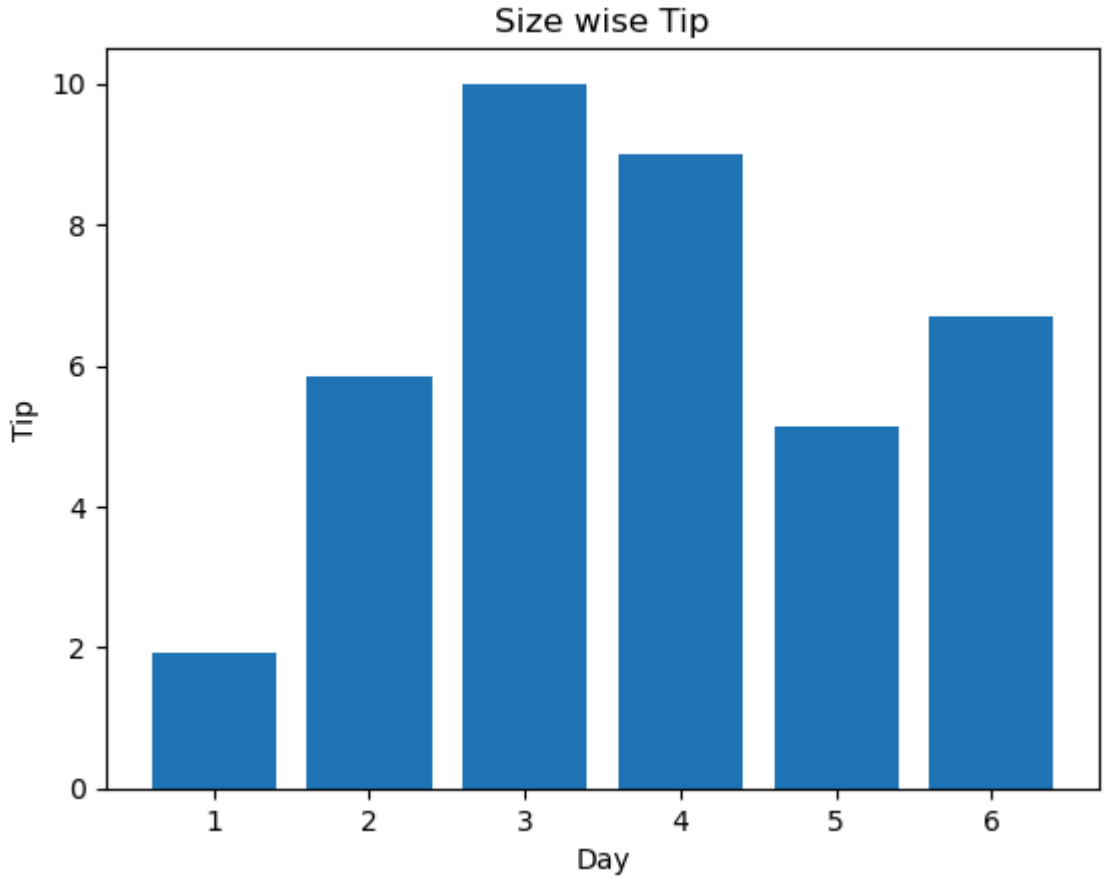
In [41]:
```
plt.bar(data['time'],data['tip'])
plt.xlabel('Time')
plt.ylabel('Tip')
plt.title('Time wise Tip')
```

Out[41]:
```
Text(0.5, 1.0, 'Time wise Tip')
```

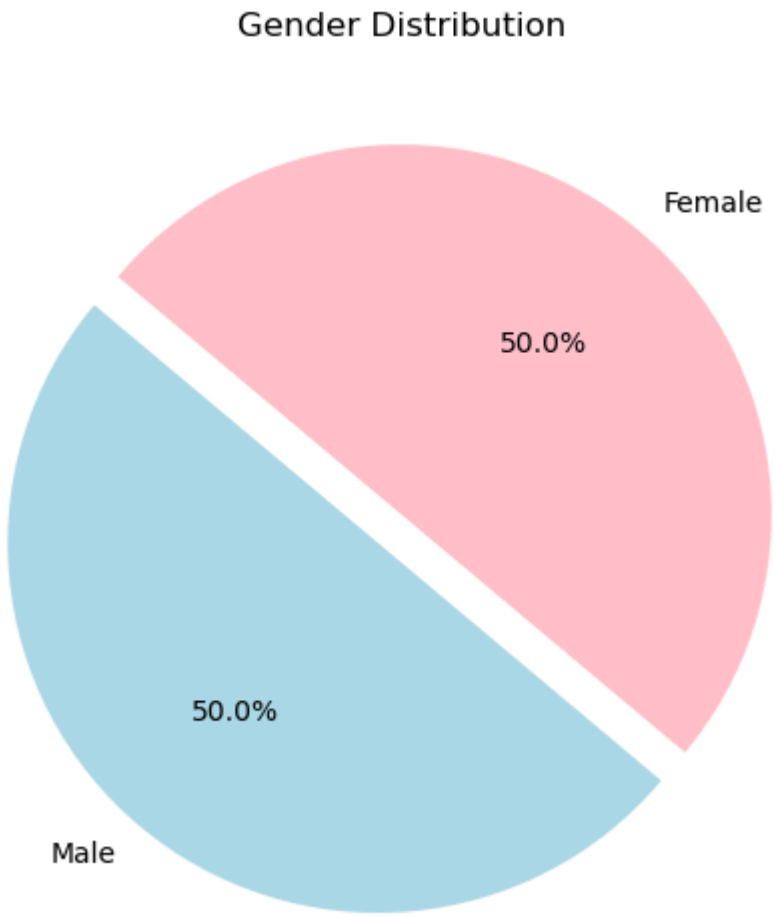


In [63]:
```
plt.bar(data['size'],data['tip'])
plt.xlabel('Day')
plt.ylabel('Tip')
plt.title('Size wise Tip')
```

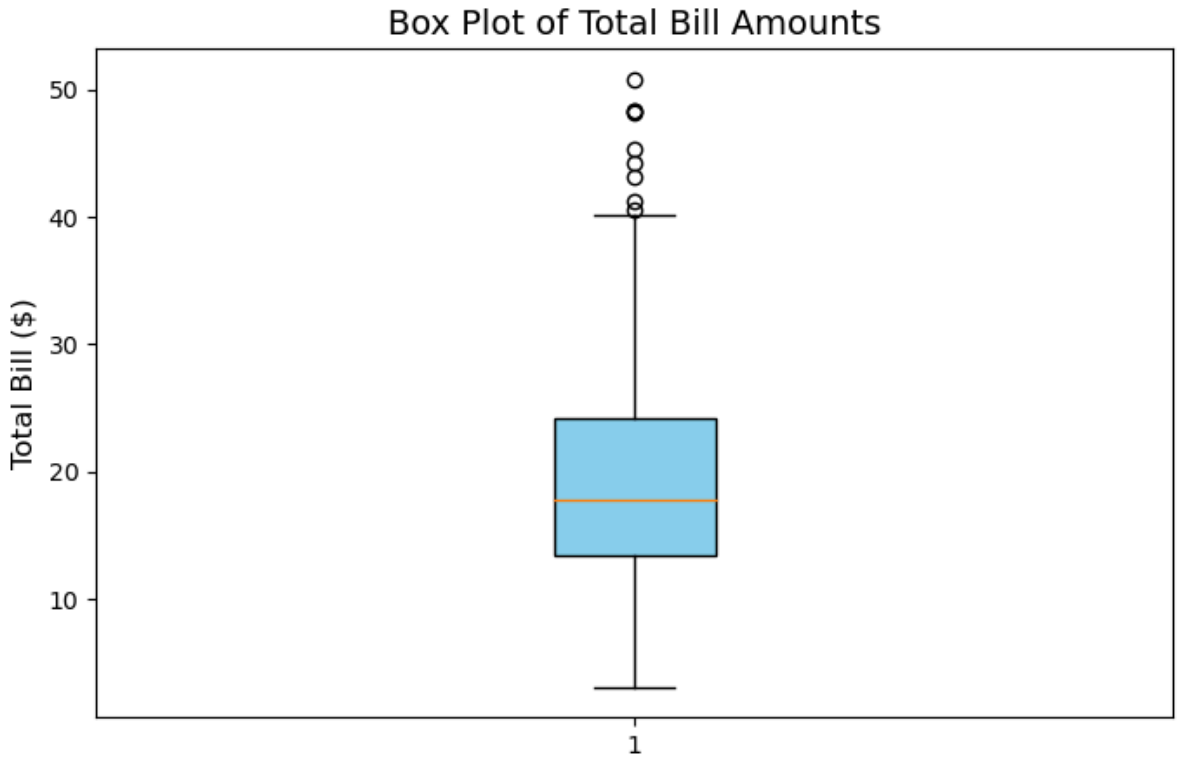
Out[63]:
```
Text(0.5, 1.0, 'Size wise Tip')
```



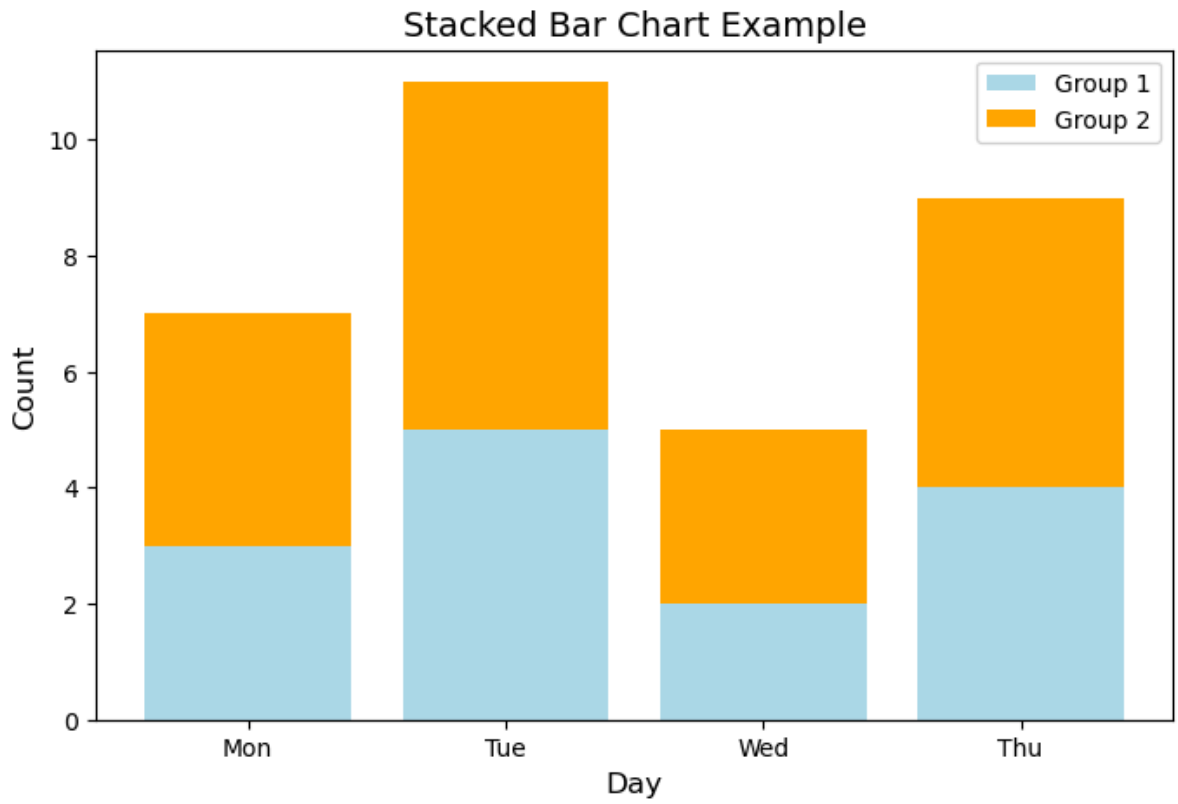
In [67]:
```
# Sample data
labels = ['Male', 'Female']
sizes = [50, 50]  # Percentages or counts
colors = ['lightblue', 'pink']
explode = (0.1, 0)  # Highlight one slice

# Create pie chart
plt.figure(figsize=(6, 6))
plt.pie(sizes, labels=labels, colors=colors, explode=explode, autopct='%1.1f%%', st

# Add title
plt.title('Gender Distribution')
plt.show()
```



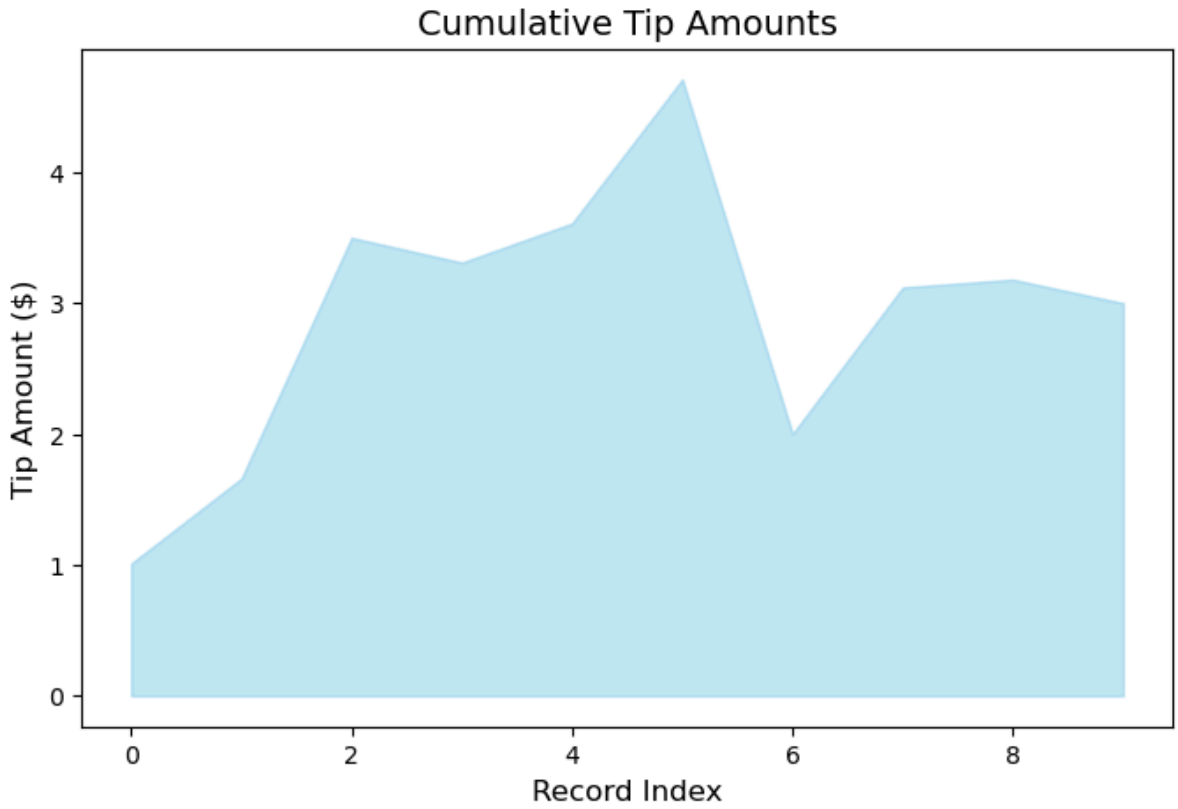
In [71]:
```
# Box plot for total_bill
plt.figure(figsize=(8, 5))
plt.boxplot(data['total_bill'], patch_artist=True, boxprops=dict(facecolor='skyblue

# Add labels and title
plt.ylabel('Total Bill ($)', fontsize=12)
plt.title('Box Plot of Total Bill Amounts', fontsize=14)
plt.show()
```



In [77]:
```
# Sample data
days = ['Mon', 'Tue', 'Wed', 'Thu']
group1 = [3, 5, 2, 4]
group2 = [4, 6, 3, 5]

# Stacked bar chart
plt.figure(figsize=(8, 5))
plt.bar(days, group1, color='lightblue', label='Group 1')
plt.bar(days, group2, bottom=group1, color='orange', label='Group 2')

# Add labels, title, and legend
plt.xlabel('Day', fontsize=12)
plt.ylabel('Count', fontsize=12)
plt.title('Stacked Bar Chart Example', fontsize=14)
plt.legend()
plt.show()
```



In [79]:
```
# Area chart for cumulative tips
tips = [1.01, 1.66, 3.5, 3.31, 3.61, 4.71, 2.0, 3.12, 3.18, 3.0]
plt.figure(figsize=(8, 5))
plt.fill_between(range(len(tips)), tips, color='skyblue', alpha=0.5)

# Add labels and title
plt.xlabel('Record Index', fontsize=12)
plt.ylabel('Tip Amount ($)', fontsize=12)
plt.title('Cumulative Tip Amounts', fontsize=14)
plt.show()
```



In [ ]: