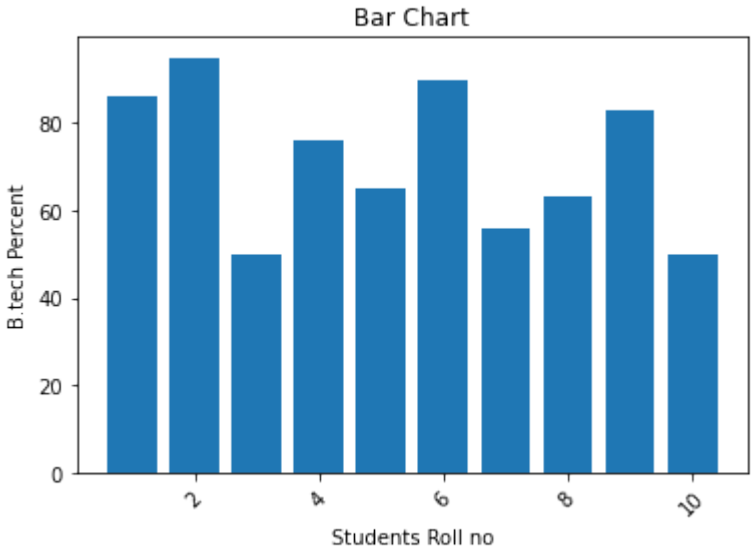
Program 5 : Bar Chart, Pie Chart, Line Graph, Area Graph, Scatter Plot & Histogram using excel in Jupyter Notebook

In [5]:
```
import pandas as pd

excel_file_path = "C:\\Users\\ACER\\Desktop\\Lab5.xlsx"
df = pd.read_excel(excel_file_path)
print(df)
```

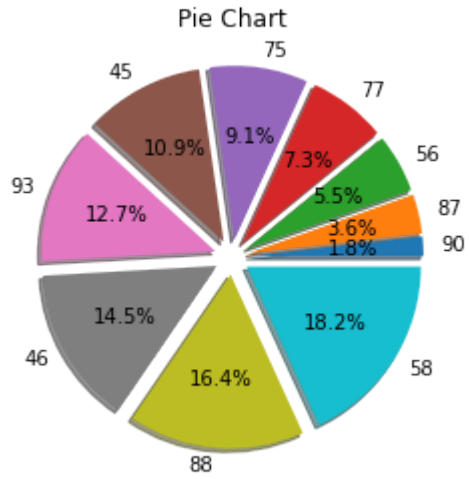
```
   Students Roll no  B.tech Percent  Class 12 Percent  Class 10 Percent
0                 1              86                90                99
1                 2              95                87                75
2                 3              50                56                82
3                 4              76                77                43
4                 5              65                75                93
5                 6              90                45                56
6                 7              56                93                72
7                 8              63                46                68
8                 9              83                88                59
9                10              50                58                93
```

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

plt.bar(df['Students Roll no'], df['B.tech Percent'])

# Adding labels and title
plt.xlabel('Students Roll no')
plt.ylabel('B.tech Percent')
plt.title('Bar Chart')

# Rotating x-axis labels for better readability
plt.xticks(rotation=45)

# Display the plot
plt.show()
```



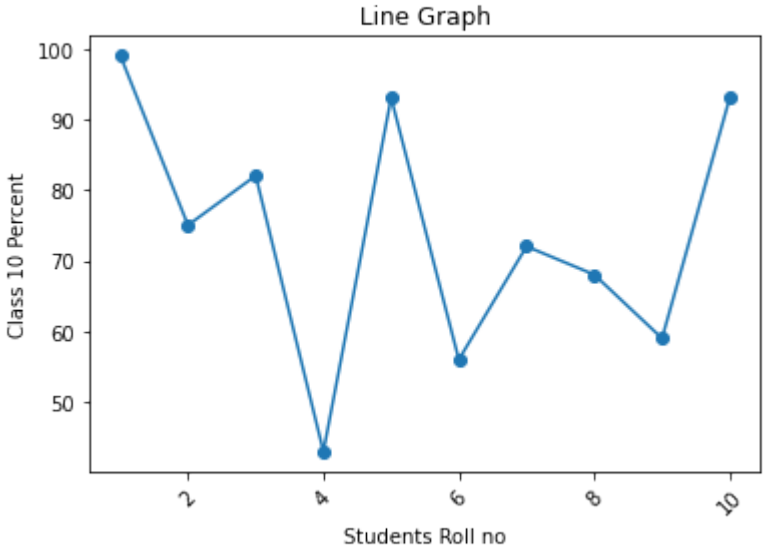
In [9]:
```
explode = [0.1] * len(df)
plt.pie(df['Students Roll no'], labels=df['Class 12 Percent'], autopct='%1.1f%%', ex
```

```
# Adding title
plt.title('Pie Chart')

# Display the plot
plt.show()
```



In [10]:

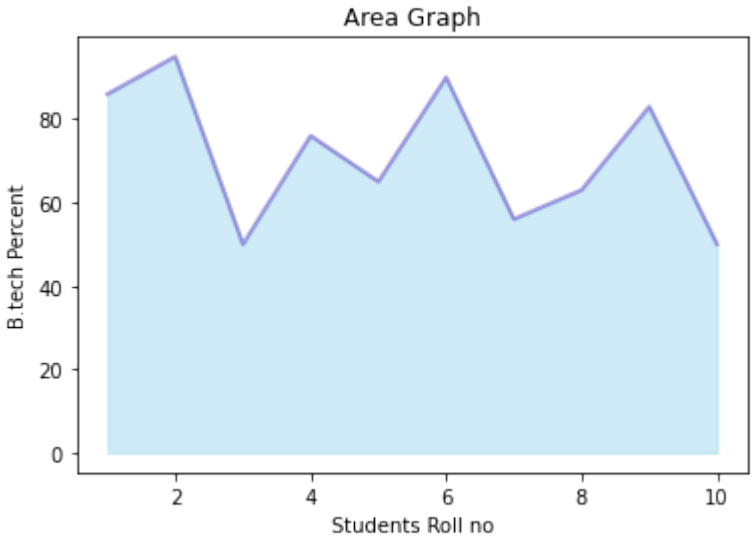
```
plt.plot(df['Students Roll no'], df['Class 10 Percent'], marker='o', linestyle='-')

# Adding labels and title
plt.xlabel('Students Roll no')
plt.ylabel('Class 10 Percent')
plt.title('Line Graph')

# Rotating x-axis labels for better readability
plt.xticks(rotation=45)

# Display the plot
plt.show()
```



In [11]:

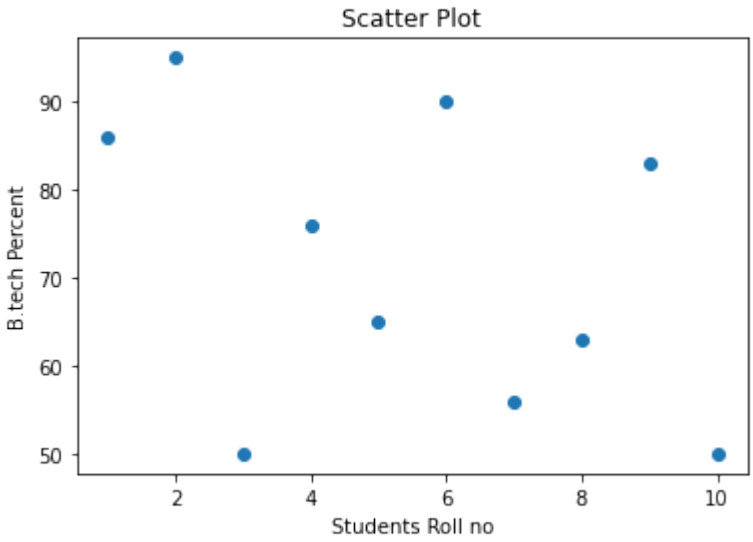
```
plt.fill_between(df['Students Roll no'], df['B.tech Percent'], color="skyblue", alph
plt.plot(df['Students Roll no'], df['B.tech Percent'], color="Slateblue", alpha=0.6,

# Adding labels and title
plt.xlabel('Students Roll no')
plt.ylabel('B.tech Percent')
plt.title('Area Graph')
```

```
# Display the plot
plt.show()
```



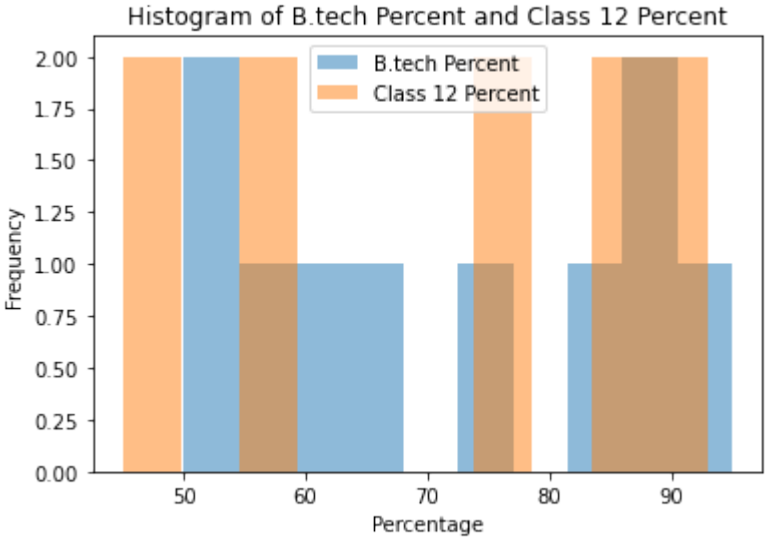
In [12]:

```
plt.scatter(df['Students Roll no'], df['B.tech Percent'])

# Adding labels and title
plt.xlabel('Students Roll no')
plt.ylabel('B.tech Percent')
plt.title('Scatter Plot')

# Display the plot
plt.show()
```



In [13]:

```
plt.hist(df['B.tech Percent'], bins=10, alpha=0.5, label='B.tech Percent')
plt.hist(df['Class 12 Percent'], bins=10, alpha=0.5, label='Class 12 Percent')

# Adding labels and title
plt.xlabel('Percentage')
plt.ylabel('Frequency')
plt.title('Histogram of B.tech Percent and Class 12 Percent')

# Adding legend
plt.legend()

# Display the plot
plt.show()
```


Histogram of B.tech Percent and Class 12 Percent
B.tech Percent
Class 12 Percent
Frequency
Percentage
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
50
60
70
80
90