EXP-34

Aim: To create a scatter plot where each point is represented by a circle of random size visualizing variability in data using both position and size

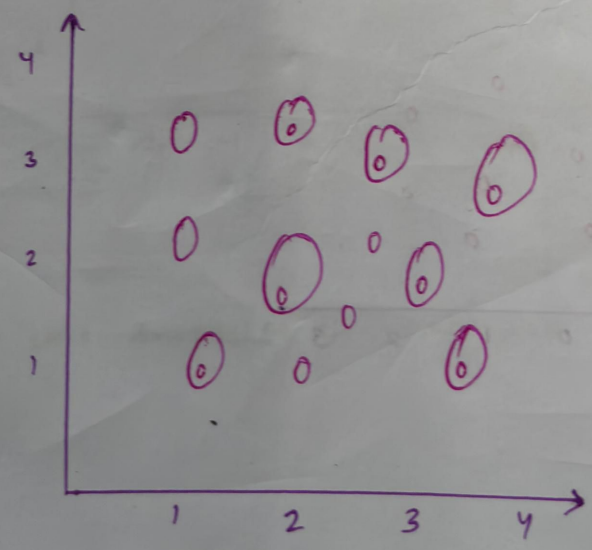
psendocode:

- import the matplotlib.pyplot and numpy
- Generate random values x and y positions using a normal distribution
- Generate random values for size of each circles
- plot the scatter plot using x and y values, with each point sized point random size generated
- Display plot

Sample input:

```
x = np.random.normal (0, 1, 100)
y = np.random.normal (0, 1, 100)
sizes = np.random.uniform (50, 500, 100)
```

Sample Output:



Result:

This code was successfully executed and got the output

```python
import matplotlib.pyplot as plt
import numpy as np
# Generating random data for x and y coordinates
x = np.random.rand(50) * 100  # 50 random x-coordinates
y = np.random.rand(50) * 100  # 50 random y-coordinates
# Generating random sizes for the balls
sizes = np.random.rand(50) * 1000  # 50 random sizes for the points
# Creating the scatter plot
plt.scatter(x, y, s=sizes, color='purple', alpha=0.5, edgecolors="w")
# Adding labels and title
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
plt.title("Scatter Plot with Randomly Sized Balls")
# Displaying the plot
plt.show()
```