

Worksheet 5(a)

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Section/Group: 3-B

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Subject Name: Python Programming Lab

Subject Code: 24CAH-606

AIM:

Write a python program to generate a simple bar graph using matplotlib. The graph should be properly labelled.

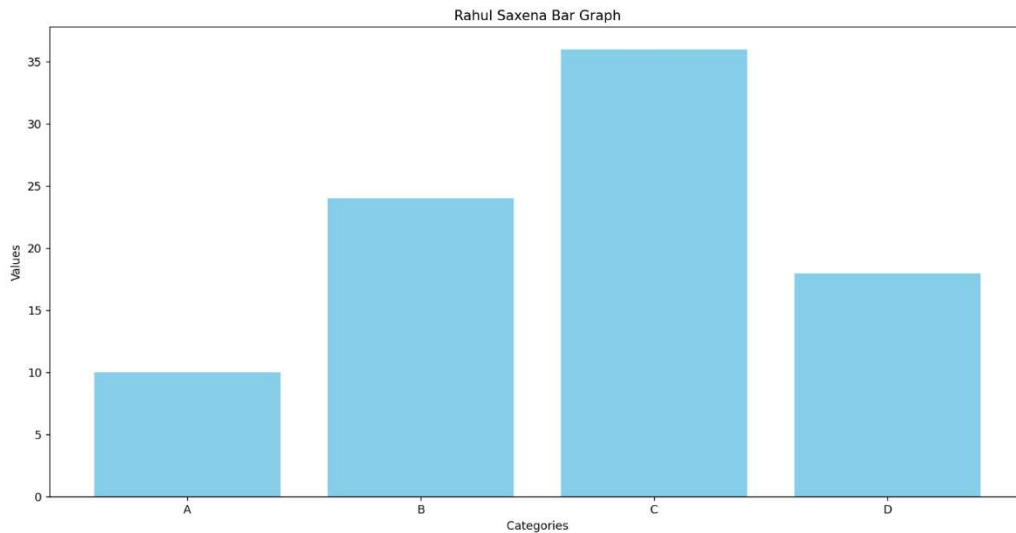
Task To be Done:

- **Install Required Libraries:** Install matplotlib using pip if not already installed.
- **Data Creation:** Define categories and corresponding values to be visualized.
- **Bar Graph Creation:** Use matplotlib to generate a simple bar graph with the provided data.
- **Labelling the Graph:** Add labels for the X and Y axes, and provide a title for the graph.
- **Visualize the Graph:** Display the generated graph using plt.show().

Source Code:

```
import matplotlib.pyplot as plt
categories = ['A', 'B', 'C', 'D']
values = [10, 24, 36, 18]
plt.bar(categories, values, color='skyblue')
plt.xlabel('Categories')
plt.ylabel('Values')
plt.title('Rahul Saxena Bar Graph')
plt.show()
```

Output:



Learning Outcome:

- **Understanding Data Visualization:** Learn how to visualize data in a graphical format, making it easier to interpret patterns and trends.
- **Bar Graph Creation Using Python:** Gain hands-on experience in creating bar graphs using the matplotlib library in Python.
- **Graph Labelling and Customization:** Understand how to label the X and Y axes and add titles to graphs for better clarity and presentation.
- **Library Usage:** Learn to utilize external Python libraries, such as matplotlib, for generating visual outputs.
- **Code Structure and Execution:** Improve your ability to structure Python code logically and execute simple data visualization tasks.