Day 13

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Date : 12/08/2024

1.Reverse a string “WorldWord”. Hint: :: or join

2.Remove duplicates in [’dog’,’cat’,’tiger’,’dog’, ‘tiger’]

Hint: use set

3. Perform union and intersection using Set

4. Create virtual environment and show installation of package matplotlib and import of modules for visualization.

5. Create a range to display players list within Players class

1.Reverse a string “WorldWord”. Hint: :: or join :

Code:

```
app.py > ...
1   # Reversing a string "WorldWord"
2   string = "WorldWord"
3   reversed_string = string[::-1]
4   print("Reversed String:", reversed_string)
5
```

Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\dhanapal.m\Desktop\pyth> & C:/Users/dhanapal
ers/dhanapal.m/Desktop/pyth/app.py
Reversed String: droWdlroW
PS C:\Users\dhanapal.m\Desktop\pyth>
```

2.Remove duplicates in [’dog’,’cat’,’tiger’,’dog’, ‘tiger’]:

Code:

```
animals = ['dog', 'cat', 'tiger', 'dog', 'tiger']
unique_animals = list(set(animals))
print("Unique Animals:", unique_animals)
```

Output:

```
1.m/Desktop/pyth/app.py
Unique Animals: ['cat', 'tiger', 'dog']
PS C:\Users\dhanapal.m\Desktop\pyth>
```

3. Perform union and intersection using Set :

Code:

app.py > ...

```
1
2   set1 = {'dog', 'cat', 'tiger'}
3   set2 = {'dog', 'elephant', 'lion'}
4
5   # Union
6   union_set = set1.union(set2)
7   print("Union:", union_set)
8
9   # Intersection
10  intersection_set = set1.intersection(set2)
11  print("Intersection:", intersection_set)
12
```

Output:

```
l.m/Desktop/pyth/app.py
Union: {'lion', 'tiger', 'cat', 'dog', 'elephant'}
Intersection: {'dog'}
```

4. Create virtual environment and show installation of package matplotlib and import of modules for visualization.

Step 1:

```
C:\Users\dhanapal.m\Downloads\Weekend Assignment - 3>python -m venv dhanapal
```

Step 2:

```
C:\Users\dhanapal.m\Downloads\Weekend Assignment - 3>cd dhanapal
```

Step 3:

```
C:\Users\dhanapal.m\Downloads\Weekend Assignment - 3\dhanapal>.\Scripts\activate
```

Step 4:

```
(dhanapal) C:\Users\dhanapal.m\Downloads\Weekend Assignment - 3\dhanapal>pip install matplotlib
```

Step 5:

Create a program i n.py extension

```
import matplotlib.pyplot as plt

def colorful_bar_chart():
    # Sample data
    categories = ['A', 'B', 'C', 'D']
    values = [3, 7, 5, 4]

    # Define colors for each bar
    colors = ['#FF5733', '#33FF57', '#3357FF', '#FF33A1']  # Example
colors

    # Create a bar chart with custom colors
    plt.bar(categories, values, color=colors)
```

```
    # Add title and labels with custom font sizes
    plt.title('Colorful Bar Chart', fontsize=16, fontweight='bold')
    plt.xlabel('Categories', fontsize=14)
    plt.ylabel('Values', fontsize=14)

    # Add grid for better readability
    plt.grid(axis='y', linestyle='--', alpha=0.7)

    # Save the plot as a PNG file
    plt.savefig('colorful_bar_chart.png')

    # Display the plot
    plt.show()

if __name__ == "__main__":
    colorful_bar_chart()
```

Step 6:

Run the program:

```
(dhanapal) C:\Users\dhanapal.m\Downloads\Weekend Assignment - 3\dhanapal>python my.py
```

Output:

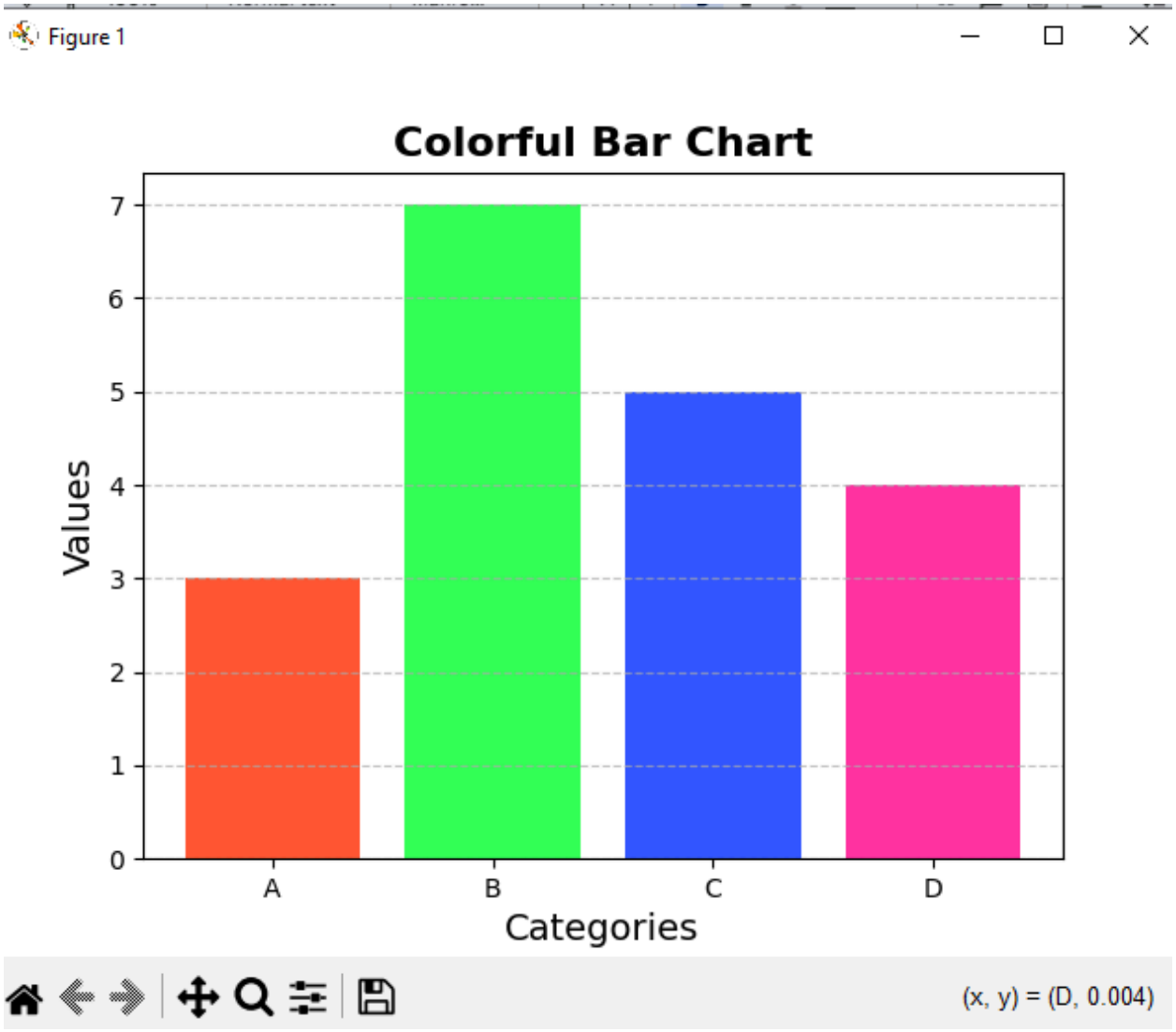
Figure 1
Colorful Bar Chart
Values
0
1
2
3
4
5
6
7
A
B
C
D
Categories
(x, y) = (D, 0.004)

5. Create a Range to Display Players List within a Class:

Code:

```
class Players:
    def __init__(self, player_list):
        self.player_list = player_list

    def display_players(self, start, end):
        return self.player_list[start:end]

# Example usage:
players = Players(['Dhanapal', 'Sid', 'Prathik', 'Balaji'])
selected_players = players.display_players(1, 3)
print("Selected Players:", selected_players)
```

Output:

```
Selected Players: ['Sid', 'Prathik']
PS C:\Users\dhanapal.m\Desktop\pyth>
```