

SAI GULVE

Prn no. 20221040145

E1 516

ASSIGNMENT 5 INPUT:

```
import matplotlib.pyplot as plt
import seaborn as sns
import pandas as pd

# Create a DataFrame with the provided data
data = {
    'GrainName': ['Ragi', 'Bajra', 'Ragi', 'Bajra', 'Ragi', 'Bajra',
                  'Oats', 'Sattu', 'Sooji', 'Brown rice', 'Wheat', 'Corn',
                  'Ragi', 'Bajra', 'Oats', 'Sattu', 'Sooji', 'Brown
rice', 'Wheat', 'Corn', 'Sooji', 'Brown rice', 'Wheat',
                  'Corn', 'Ragi', 'Brown rice', 'Wheat'],
    'State': ['Maharashtra', 'Panjab', 'Maharashtra', 'Panjab',
              'Maharashtra', 'Panjab', 'Hariyana', 'Gujarat', 'Tamil Nadu',
              'Telangana', 'West Bengol', 'UP', 'Maharashtra',
              'Panjab', 'Hariyana', 'Gujarat', 'Tamil Nadu', 'Telangana',
              'West Bengol', 'UP', 'Tamil Nadu', 'Telangana', 'West
Bengol', 'UP', 'Maharashtra', 'Telangana', 'West Bengol'],
    'City': ['Nagpur', 'Amritsar', 'Nagpur', 'Amritsar', 'Nagpur',
              'Amritsar', 'Gurugram', 'Surat', 'Madurai', 'Hyderabad',
              'Asansole', 'Kanpur', 'Nagpur', 'Amritsar', 'Gurugram',
              'Surat', 'Madurai', 'Hyderabad', 'Asansole', 'Kanpur',
              'Madurai', 'Hyderabad', 'Asansole', 'Kanpur', 'Nagpur',
              'Hyderabad', 'Asansole'],
    'Months': ['JAN', 'FEB', 'JAN', 'FEB', 'JAN', 'FEB', 'MARCH',
                'APRIL', 'MAY', 'JUNE', 'JULY', 'AUG', 'JAN', 'FEB', 'MARCH',
                'APRIL', 'MAY', 'JUNE', 'JULY', 'AUG', 'MAY', 'JUNE',
                'JULY', 'AUG', 'JAN', 'JUNE', 'JULY'],
    'Year': [2023] * 27,
    'Sales': [1000000, 1500000, 1000000, 1500000, 1000000, 1500000,
               2000000, 2500000, 3000000, 3500000, 4000000, 4500000,
               1000000, 1500000, 2000000, 2500000, 3000000, 3500000,
               4000000, 4500000, 3000000, 3500000, 4000000, 4500000,
               1000000, 3500000, 4000000]
}
df = pd.DataFrame(data)

# Create the interactive dashboard
sns.set(style="darkgrid")
```

```
# Plot 1: Count of Grains plt.subplot(2,
3, 1) sns.countplot(data=df,
x='GrainName') plt.title('Count of
Grains') plt.xlabel('Grain Name')
plt.ylabel('Count')

# Plot 2: Sales by State plt.subplot(2, 3,
2) sns.barplot(data=df, x='State',
y='Sales') plt.title('Sales by State')
plt.xlabel('State') plt.ylabel('Sales')

# Plot 3: Sales by City plt.subplot(2, 3,
3) sns.barplot(data=df, x='City',
y='Sales') plt.title('Sales by City')
plt.xlabel('City') plt.ylabel('Sales')
plt.xticks(rotation=45)

# Plot 4: Sales by Month plt.subplot(2, 3,
4) sns.lineplot(data=df, x='Months',
y='Sales') plt.title('Sales by Month')
plt.xlabel('Month') plt.ylabel('Sales')

# Plot 5: Sales by Year plt.subplot(2,
3, 5)
sns.lineplot(data=df, x='Year', y='Sales')
plt.title('Sales by Year')
plt.xlabel('Year') plt.ylabel('Sales')

# Plot 6: Sales by GrainName and Month plt.subplot(2,
3, 6)
sns.boxplot(data=df, x='GrainName', y='Sales', hue='Months')
plt.title('Sales by Grain and Month') plt.xlabel('Grain
Name') plt.ylabel('Sales')
plt.legend(title='Month', loc='upper right')

# Adjust layout plt.tight_layout()

# Show the dashboard
```

```
plt.show()
```

OUTPUT:

