

Phase 3: Development part 1

Data analysis by loading and pre-processing the dataset.

Data Collection: Download the dataset from the given link.

Data Cleaning: Clean the data to remove any inconsistencies or missing values. This step is essential for accurate analysis.

Data Transformation: Transform the data as needed. This may involve aggregating, encoding categorical variables, or creating new features.

In the given data set the values are clean those cells has no null values so we can jump into the next step.

Program:

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

# Load the dataset
data = pd.read_csv('/content/statsfinal.csv')

# Display the first few rows of the dataset
print(data.head())

# Create histograms for specific columns
plt.figure(figsize=(12, 6))
plt.subplot(2, 2, 1)
plt.hist(data['Q-P1'], bins=30, color='skyblue', alpha=0.7)
plt.title('Histogram of Q-P1')
plt.xlabel('Values')
plt.ylabel('Frequency')

plt.subplot(2, 2, 2)
plt.hist(data['Q-P2'], bins=30, color='salmon', alpha=0.7)
plt.title('Histogram of Q-P2')
plt.xlabel('Values')
plt.ylabel('Frequency')
```

```
plt.subplot(2, 2, 3)
plt.hist(data['S-P1'], bins=30, color='lightgreen', alpha=0.7)
plt.title('Histogram of S-P1')
plt.xlabel('Values')
plt.ylabel('Frequency')
```

```
plt.subplot(2, 2, 4)
plt.hist(data['S-P2'], bins=30, color='lightcoral', alpha=0.7)
plt.title('Histogram of S-P2')
plt.xlabel('Values')
plt.ylabel('Frequency')
```

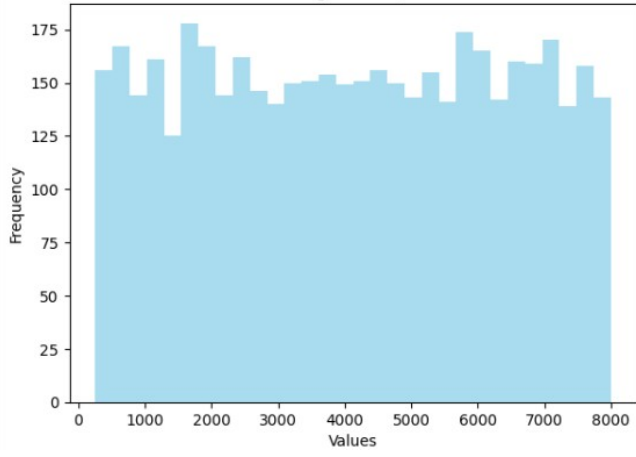
```
plt.tight_layout()
plt.show()
```

OUTPUT:

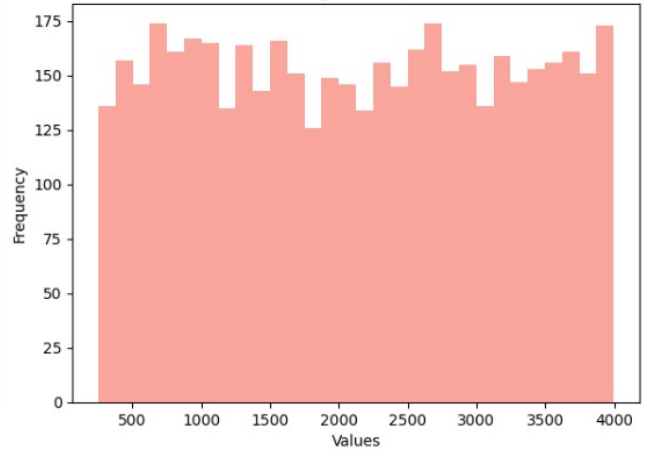
Unnamed: 0	Date	Q-P1	Q-P2	Q-P3	Q-P4	S-P1	S-P2 \
0	0	13-06-2010	5422	3725	576	907	17187.74 23616.50
1	1	14-06-2010	7047	779	3578	1574	22338.99 4938.86
2	2	15-06-2010	1572	2082	595	1145	4983.24 13199.88
3	3	16-06-2010	5657	2399	3140	1672	17932.69 15209.66
4	4	17-06-2010	3668	3207	2184	708	11627.56 20332.38

	S-P3	S-P4
0	3121.92	6466.91
1	19392.76	11222.62
2	3224.90	8163.85
3	17018.80	11921.36
4	11837.28	5048.04

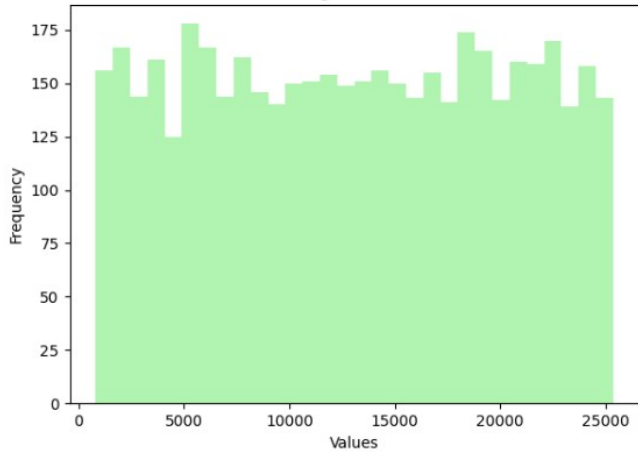
Histogram of Q-P1



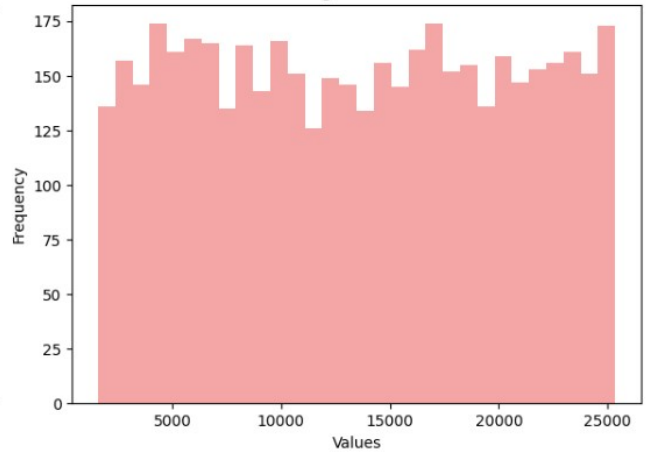
Histogram of Q-P2



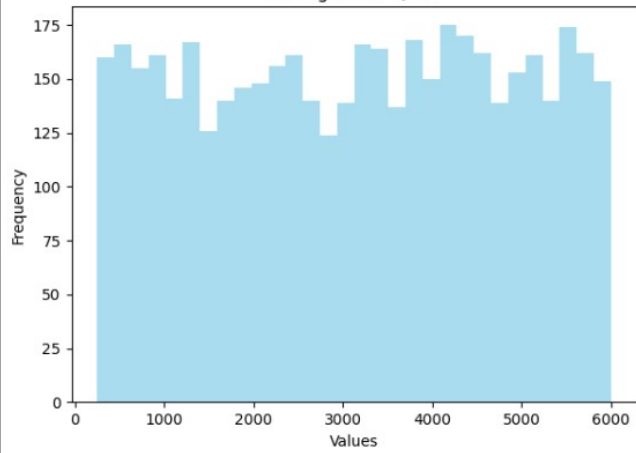
Histogram of S-P1



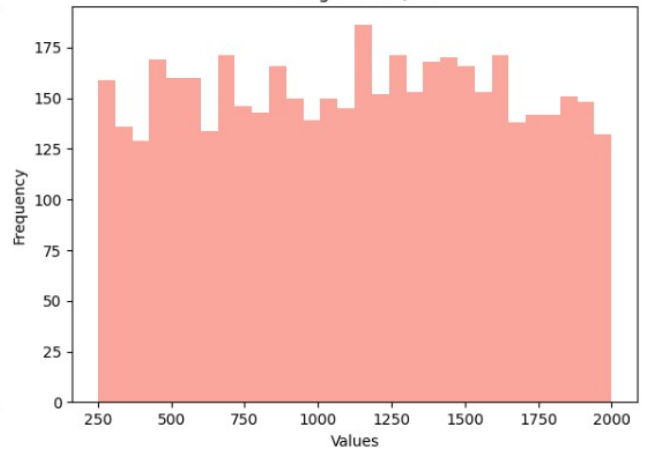
Histogram of S-P2



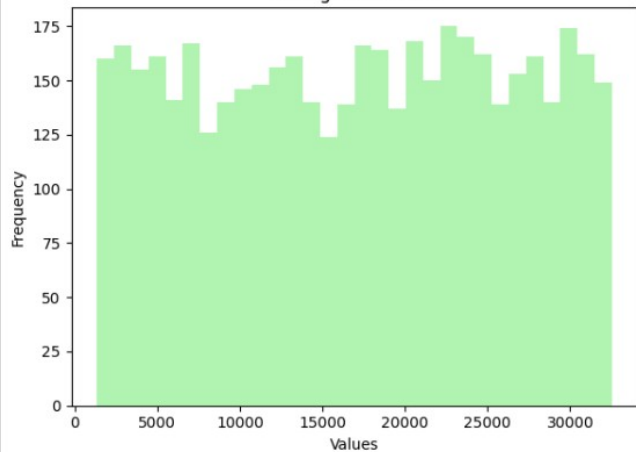
Histogram of Q-P3



Histogram of Q-P4



Histogram of S-P3



Histogram of S-P4

