**TASK 1:**

* In the first quarter of every year, "my way" transactions consistently peak, reaching around 20 million in total sum, indicating a high volume of transactions during this period.
* The second quarter also witnesses significant "my way" transactions, albeit slightly less than the first quarter, hovering near 15 million, suggesting a slight decrease compared to the preceding quarter, yet the volume remains substantial.
* Among all the years in the dataset, 2023 emerges as the standout year with the highest total sum of "my way" transactions, indicating the most significant volume compared to other years.
* In April 2023, "my way" transactions experience a notable decrease compared to September 2023, highlighting significant variations in transaction volumes between these months.
* March stands out as the month with the highest paper ticket transactions, indicating heightened usage during this period.
* Additionally, June, September, and November exhibit equal paper ticket transactions, suggesting consistent transaction volumes across these months.
* "My way" transactions fall within the frequency range of 1000 to 2500, with a total frequency count of 200, highlighting moderate usage within this range.
* For "paper ticket" transactions, the frequency exceeds 175, indicating relatively high usage compared to "my way" transactions. Across all years in the dataset, the month of March consistently records the highest volumes of both "my way" and "paper ticket" transactions compared to other months.
* This trend indicates a recurring pattern where March stands out as a period of heightened transaction activity for both payment methods.
* Following March, the month of April consistently holds the record for the second-highest volumes of both "my way" and "paper ticket" transactions across all years in the dataset.
* This indicates a recurring trend where April exhibits notable transaction activity for both payment methods, slightly lower compared to March.
* The consistent performance of April suggests ongoing demand and usage of both "my way" and "paper ticket" transactions during this period.
* Understanding the factors contributing to the transaction volumes in April could provide valuable insights for optimizing service delivery, marketing strategies, and resource allocation.
* The combined sum of "my way" and "paper ticket" transactions amounts to 8 million in the months of February and March, indicating consistent transaction volumes during this period.

**TASK 2:**

* p-value in My Way column: 4.621214e-27
* Number of Observations Used in My Way column: 1767
* Day 1: 54,229.12
* Day 2: 49,931.01
* Day 3: 52,322.00
* Day 4: 57,668.64
* Day 5: 58,750.17
* Day 6: 56,576.76
* Day 7: 54,795.47
* These forecasts provide insights into the expected patronage levels for each day, which can be valuable. It's important to monitor actual patronage against the forecasts to view the accuracy of the model and make predictions in the future.
* The forecasting has been successfully conducted for 7 days using the ARIMA model.
* The next seven days forecasting has been done using the ARIMA model.
* The ARIMA model is an important one that has been used in the Time series forecasting.