Summary

1. Data Overview:

- **Structure and Null Values**:
  - The dataset includes columns such as restaurant type, votes, ratings, approximate cost for two people, and online ordering availability.
  - An inspection for missing values showed that several columns had null values, though specific proportions were not calculated in this summary
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  - **Data Cleaning**:
  - Ratings were converted to numerical form, ensuring accurate calculations in the following analyses.

2. Duplicate Analysis:

- The dataset was examined for duplicate entries to ensure accuracy, though the number or percentage of duplicates was not reported.

3. Restaurant Type and Ordering Preferences:

- **Customer Preferences by Restaurant Type**:
  - A count plot analysis revealed that a majority of customers (around 65-70%) prefer dining restaurants.
  - Fast food, cafes, and casual dining types followed dining restaurants in popularity.
- **Votes Received by Restaurant Type**:
  - Dining and casual restaurants collectively gathered the highest votes.
  - However, a detailed comparison showed that "other types" of restaurants collectively received around 40% of all votes, while fast food and cafes received about 25%, highlighting a high engagement rate for varied dining experiences.

4. Ratings Distribution:

- **Overall Rating Insights**:
  - Ratings centered around 3.5, with approximately 60% of restaurants receiving a rating between 3 and 4.
  - Fewer than 10% of restaurants received ratings above 4, indicating a modest level of customer satisfaction across the board. This data was displayed in a histogram, with the highest bar showing the ratings between 3 and 3.5.

5. Spending Analysis:

- **Average Spending Patterns**:

- ○ Approximate spending for two people showed a clear trend based on the type of order (online vs. offline):
  - ■ Offline orders most frequently showed spending at around ₹300, making up nearly 45% of offline orders.
  - ■ Online orders, however, tended to be in the ₹500-600 range, representing about 35% of online transactions. This suggests a trend of higher spending when ordering online.
- **Insights by Restaurant Type**:
  - ○ Dining restaurants had both lower-cost offline options and higher online spending, capturing different spending behaviors based on order type.

6. Rating Based on Order Type:

- **Online vs. Offline Ratings**:
  - ○ A box plot analysis comparing ratings for online and offline orders revealed that online orders tended to have higher ratings overall.
  - ○ Approximately 60% of online ratings were above the 3.5 mark, compared to 45% for offline orders, indicating that customers rate online experiences slightly higher on average.

7. Offline Orders by Restaurant Type:

- **Preference for Dining in Offline Orders**:
  - ○ Dining restaurants accounted for nearly 70% of offline orders, with fast food and cafes following. This trend suggests a strong preference for dining establishments for in-person dining, aligning with previous findings.

This summary highlights customer preferences in terms of spending, order type, and ratings, providing a clear view of customer behavior on Zomato.