### 

#### **Task 1: Total Expenses by Category - Bar Chart**

This bar chart provides a clear breakdown of total expenses for each category during March 2023. The X-axis represents the categories (such as Groceries, Dining, Transportation), while the Y-axis shows the total amount spent in each category. The chart highlights which areas of spending were the most significant, offering insights into where the bulk of expenses occurred. For example, categories like **Groceries** and **Dining** might dominate the chart, showing where most of the budget was allocated.

#### **Task 2: Expense Trends by Day - Line Graph**

The line graph tracks daily expenses throughout March 2023, with the X-axis representing the day of the month (from 1 to 31) and the Y-axis showing the total amount spent on each day. The chart reveals fluctuations in spending patterns over the course of the month.

Upon reviewing the graph, certain days may show consistently higher expenses, possibly due to recurring bills or specific events, while other days reflect lower spending. This can help in identifying particular days of high or low financial activity, offering opportunities to better control expenses.

**Task 3: Spending Proportions by Category - Pie Chart**

The pie chart visually represents the proportion of total expenses contributed by each category. Each slice corresponds to a category, with the size of the slice indicating its share of the overall spending. Categories with the largest slices, such as **Groceries** or **Transportation**, indicate where the highest proportion of funds were allocated during March 2023.

This chart offers a quick glance at how spending is distributed across different areas, helping to quickly identify the most costly categories. It's useful for balancing spending in the future by highlighting areas that could benefit from budget adjustments.

From the data, several spending patterns and trends emerge:

### **1. Frequent Purchases of Beverages and Snacks:**

* Items like chai (tea), coffee, juice, and coldrink are consumed daily, often multiple times.
* Snacks (e.g., "chai with snacks") are paired with chai consistently.
* Most purchases occur in the morning (around 7 AM) and in the afternoon (around 4–6 PM), indicating a habit of regular beverage/snack breaks.

### **2. Spending Categories:**

* **Alone vs. Friend**: Purchases are often categorized as either "alone" or "friend," showing that spending varies depending on whether the individual is alone or socializing.
* "Friend" purchases tend to involve slightly higher amounts, often for items like juice, biryani, samosa, or meals.

### **3. Transportation Costs:**

* Rikshaw expenses appear sporadically (e.g., on 1st, 2nd, and 27th of March), likely reflecting transportation needs during the day.

### **4. Larger Purchases or Special Items:**

* Occasionally, there are higher-ticket items like "shoe" (₹500 on March 5th), "wifi" (₹350 on March 8th), and "recharge" (₹210 on March 12th), representing one-time or less frequent expenses.
* Meals with friends, like biryani and franky, are also larger expenses compared to regular snacks or chai.

### **5. Spending Time and Day Trends:**

* Purchases happen consistently at specific times (e.g., morning chai around 7 AM, evening snacks around 5–6 PM).
* Most days have multiple transactions, especially for smaller items like chai and snacks.
* Weekends (Saturday, Sunday) tend to see more spending, including both alone and friend-related purchases, possibly reflecting social or leisure activities.

### **6. Repetition of Specific Items:**

* Certain items are purchased repeatedly, such as "chai with snacks," "coffee," and "juice."
* Coldrink also appears several times, especially in the evening, possibly as a refreshment during outings.

### **7. Weekday and Weekend Behavior:**

* Weekdays have consistent small purchases, while weekends have additional expenses on food or larger items, possibly indicating social gatherings or relaxation.

### **8. Miscellaneous/Other Items:**

* A category labeled "others" appears frequently (e.g., on 1st, 3rd, 11th, 26th March), representing various small, uncategorized expenses.