Lab task

1. Perform all necessary data cleaning steps.
2. Add new feature **Total_Amount** with help of **Price**, **Quantity** and **Discount_Amount**
3. Add new feature **Discount_Percentage**
4. Add new feature **CLV**(**Customer Lifetime Value**)
    a. Aggregate transactions by **Customer_ID** to calculate the total amount spent by each customer.
    b. Then normalize the **CLV** values using Min-Max scaling to rate each customer's CLV on a scale from 0 to 10.

$$\text{xscaled}= \frac{x - min(x)}{max(x) - min(x)} *10$$

EDA

- **Average Spend per Category:**
  Calculate the average spend for each customer within each Category.
- **Frequency of Purchase:**
  Count the number of transactions for each Customer_ID and Store_Location
- **Preferred Payment Method:**
  Identify the most frequently used payment method for each customer.
- **Online/Offline Preference:**
  Determine the percentage of online vs. offline purchases for each customer.
- **Product Popularity:**
  Count the number of times each Product_Type is purchased and rank them.

Data Visualization

1. **Statically and Visually check skewness and correlation** for numeric features individually only.
2. Perform **single suitable visualization of categorical features.**