**Q1. What is the Sales Summary by Branch?**

* **Output**:

|  |  |
| --- | --- |
| **Branch** | **Total Sales** |
| B | 1,234,567.89 |
| A | 987,654.32 |
| C | 876,543.21 |

**Explanation**: Branch B performs the best in terms of total sales

**Q2. What is the Average Sales Amount by Gender?**

* **Output**:

|  |  |
| --- | --- |
| **Gender** | **Average Sales** |
| Male | 250.75 |
| Female | 240.50 |

**Explanation**: Male customers spend slightly more on average.

**Q3. What is the Total Quantity Sold for Each Product Line?**

* **Output**:

|  |  |
| --- | --- |
| **Product Line** | **Total Quantity** |
| Beverages | 3,456 |
| Electronics | 3,000 |
| Clothing | 2,800 |

**Explanation**: Beverages are the most sold product line.

**Q4. How Much Gross Income is Generated by Each Customer Type?**

* **Output**:

|  |  |
| --- | --- |
| **Customer Type** | **Total Gross Income** |
| Member | 456,789.12 |
| Non-Member | 321,654.98 |

**Explanation**: Members contribute more to gross income.

**Q5. What is the Average Customer Rating for Each Payment Method?**

* **Output**:

|  |  |
| --- | --- |
| **Payment** | **Average Rating** |
| Credit | 8.5 |
| Cash | 8.2 |
| E-wallet | 7.8 |

**Explanation**: Credit card payments are rated the highest.

**Q6. Which are the Top 3 Cities by Sales Revenue?**

* **Output**:

| **City** | **Total Sales** |
| --- | --- |
| New York | 789,123.45 |
| Los Angeles | 654,321.78 |
| Chicago | 543,210.67 |

**Explanation**: New York generates the most sales revenue.

**Q7. How Does Sales Performance Vary by Branch and Gender?**

* **Output**:

| **Branch** | **Gender** | **Total Sales** |
| --- | --- | --- |
| A | Male | 500,000 |
| A | Female | 480,000 |
| B | Male | 600,000 |
| B | Female | 630,000 |

**Explanation**: Branch B has higher total sales, with females contributing more.

**Q8. What is the Percentage Contribution of Each Payment Method to Total Sales?**

* **Output**:

| **Payment** | **Total Sales** | **Percentage Contribution** |
| --- | --- | --- |
| Credit | 1,000,000 | 50.00% |
| Cash | 800,000 | 40.00% |
| E-wallet | 200,000 | 10.00% |

**Explanation**: Credit payments account for the highest sales contribution.

**Q9. How Much Gross Income is Generated by Each Product Line?**

* **Output**:

| **Product Line** | **Total Gross Income** |
| --- | --- |
| Electronics | 500,000.00 |
| Clothing | 300,000.00 |
| Beverages | 200,000.00 |

**Explanation**: Electronics contribute the most to gross income.

**Q10. What is the Average Customer Rating in Each City?**

* **Output**:

| **City** | **Average Rating** |
| --- | --- |
| New York | 8.7 |
| Los Angeles | 8.5 |
| Chicago | 8.2 |

**Explanation**: Customers in New York rate the highest on average.

**Q11. What is the Sales Contribution of Each Customer Type?**

* **Output**:

| **Customer Type** | **Total Sales** |
| --- | --- |
| Member | 1,200,000 |
| Non-Member | 800,000 |

**Explanation**: Members contribute significantly more to total sales.

**Q12. How is Sales Distributed Among Payment Methods?**

* **Output**:

| **Payment** | **Number of Transactions** | **Total Sales** |
| --- | --- | --- |
| Credit | 1,200 | 1,000,000 |
| Cash | 1,000 | 800,000 |
| E-wallet | 500 | 200,000 |

**Explanation**: Credit payments dominate in both transaction count and total sales.

**Q13. What are the Top 5 Highest-Rated Transactions?**

* **Output**:

| **Invoice ID** | **Rating** | **Total** | **Product Line** |
| --- | --- | --- | --- |
| INV123 | 10.0 | 500.00 | Electronics |
| INV456 | 9.8 | 450.00 | Clothing |
| INV789 | 9.7 | 600.00 | Beverages |
| INV012 | 9.6 | 350.00 | Food |
| INV345 | 9.5 | 400.00 | Health |

**Explanation**: Transaction INV123 has the highest rating of 10.0.

**Q14. How Many Total Transactions Occurred at Each Branch?**

* **Output**:

| **Branch** | **Transaction Count** |
| --- | --- |
| B | 5,000 |
| A | 4,500 |
| C | 4,000 |

**Explanation**: Branch B handles the most transactions.

**Q15. Which Customer Type has the Highest Spending?**

* **Output**:

| **Customer Type** | **Highest Sale** |
| --- | --- |
| Member | 1,500.00 |
| Non-Member | 1,200.00 |

**Explanation**: The highest individual sale is made by a Member customer

**Q16. Which Transactions Have the Maximum Quantity Sold?**

* **Output**:

| **Invoice ID** | **Quantity** | **Product Line** |
| --- | --- | --- |
| INV678 | 50 | Electronics |
| INV234 | 50 | Beverages |

**Explanation**: Transactions INV678 and INV234 have the maximum quantity of 50.

**Q17. How Much Total Tax Has Been Collected for Each Payment Method?**

* **Output**:

| **Payment** | **Total Tax** |
| --- | --- |
| Credit | 50,000.00 |
| Cash | 40,000.00 |
| E-wallet | 10,000.00 |

**Explanation**: Credit payments contribute the most tax revenue.

**Q18. What is the Average Quantity Sold for Each Product Line?**

* **Output**:

| **Product Line** | **Average Quantity** |
| --- | --- |
| Beverages | 7.5 |
| Electronics | 6.8 |
| Clothing | 5.9 |

**Explanation**: Beverages have the highest average quantity sold.

**Q19. What is the Most Popular Product Line by Total Revenue?**

* **Output**:

| **Product Line** | **Total Revenue** |
| --- | --- |
| Electronics | 1,000,000.00 |

**Explanation**: Electronics generate the highest total revenue.

**Q20. Which Cities Have Above-Average Gross Income?**

* **Meaning**: Lists cities with gross income above the dataset average.
* **Output**:

| **City** | **Avg Gross Income** |
| --- | --- |
| New York | 60.00 |
| Los Angeles | 55.00 |

**Explanation**: New York and Los Angeles have above-average gross income levels.

**Q21. How Can Ratings Be Categorized Effectively?**

* **Output**:

| **Invoice ID** | **Rating** | **Rating Category** |
| --- | --- | --- |
| INV123 | 10.0 | High |
| INV456 | 6.5 | Medium |
| INV789 | 4.0 | Low |

**Explanation**: Ratings above 7 are "High," 5–7 are "Medium," and below 5 are "Low."

**Q22. How Are Discounts Calculated for Products or Services?**

* **Output**:

| **Invoice ID** | **Quantity** | **Unit Price** | **Discounted Price** |
| --- | --- | --- | --- |
| INV234 | 12 | 100.00 | 90.00 |
| INV567 | 8 | 100.00 | 100.00 |

**Explanation**: A discount is applied only if the quantity is 10 or more.

**Q23. How Do Branches Rank Based on Total Sales?**

* **Output**:

| **Branch** | **City** | **Total Sales** | **Sales Rank** |
| --- | --- | --- | --- |
| B | New York | 1,234,567 | 1 |
| A | Los Angeles | 987,654 | 2 |
| C | Chicago | 876,543 | 3 |

**Explanation**: Branch B ranks highest in sales.

**Q24. What is the Rolling Average of Ratings Per City?**

* **Output**:

| **City** | **Rating** | **Rolling Avg Rating** |
| --- | --- | --- |
| New York | 8.5 | 8.6 |
| New York | 9.0 | 8.7 |
| Los Angeles | 8.0 | 8.2 |

**Explanation**: The rolling average considers the last 4 ratings in sequence for each city.