

## Cafe sales — concise summary and dashboard highlights

This dataset contains transaction-level sales from a café for 2023 (fields include Transaction ID, Item, Quantity, Price Per Unit, Total Spent, Payment Method, Location, Transaction Date). The raw file had quality issues (ERROR/UNKNOWN/blanks). Using the provided menu prices, we cleaned prices, recomputed Total Spent, removed invalid rows in key columns, and produced cleaned tables, charts, a one-slide PowerPoint-style dashboard, and an interactive web dashboard.

### Key takeaways (top-level)

- Revenue is steady month-to-month with no extreme spikes — the business shows consistent monthly performance.
- Food items (Salad, Sandwich, Smoothie) drive the most revenue overall; lower-priced items contribute less to total sales.
- Digital Wallet, Cash, and Credit Card are the dominant payment methods with similar transaction volumes.
- Data quality issues were present initially (ERROR/UNKNOWN/missing). These were addressed: numeric prices corrected using the menu, Total Spent recalculated, and rows with invalid Transaction Date/Quantity/Item removed. Remaining UNKNOWN/ERROR in Payment Method and Location were also removed where requested.

### Example transactions (first five after cleaning)

- The earliest five clean transactions (ordered by date) show typical orders such as Coffee, Sandwich, Cake and a mix of payment methods and locations — useful as a quick sample of customer behavior and transaction structure.
- Table preview (first 5 rows after cleaning):

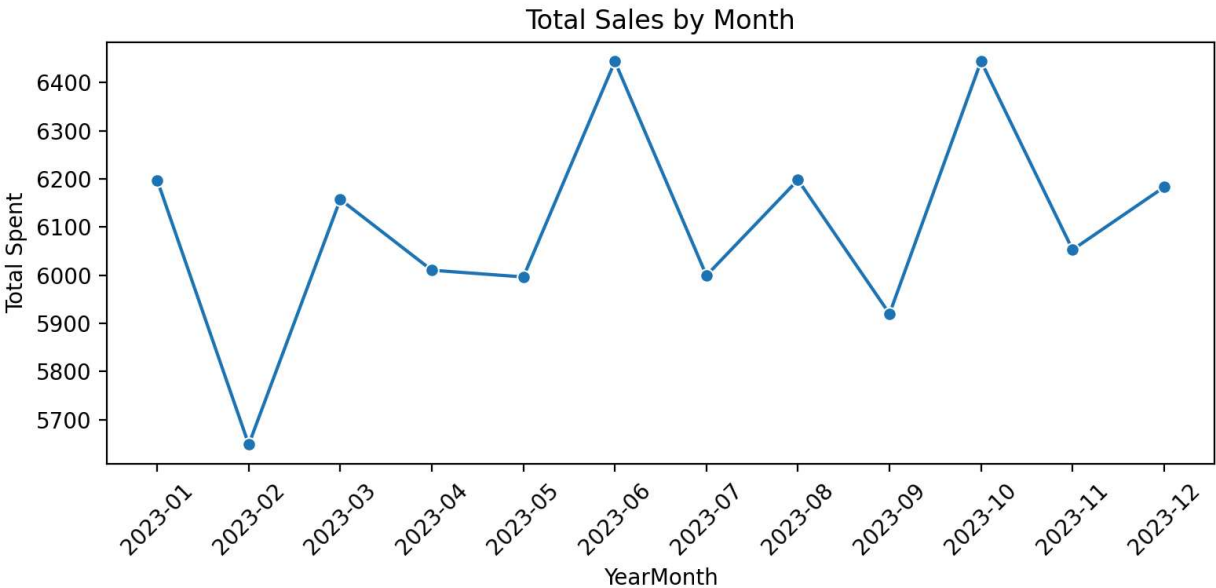
Transaction ID	Item	Quantity	Price Per Unit	Total Spent	Payment Method	Location	Transaction Date
TXN_1581562	Coffee	2.0	2.0	4.0	Cash	In-store	2023-01-01
TXN_1604072	Coffee	2.0	2.0	4.0			2023-01-01
TXN_2024598	Sandwich	1.0	4.0	4.0	Digital Wallet	In-store	2023-01-01
TXN_2104473	Cake	3.0	3.0	9.0			

Digital Wallet | Takeaway | 2023-01-01 | | TXN\_2192787 | Sandwich | 5.0 | 4.0 | 20.0 | Cash  
| In-store | 2023-01-01 |

(These show the cleaned structure and that Total Spent = Quantity × Price Per Unit.)

Total sales by month (supporting chart and table)

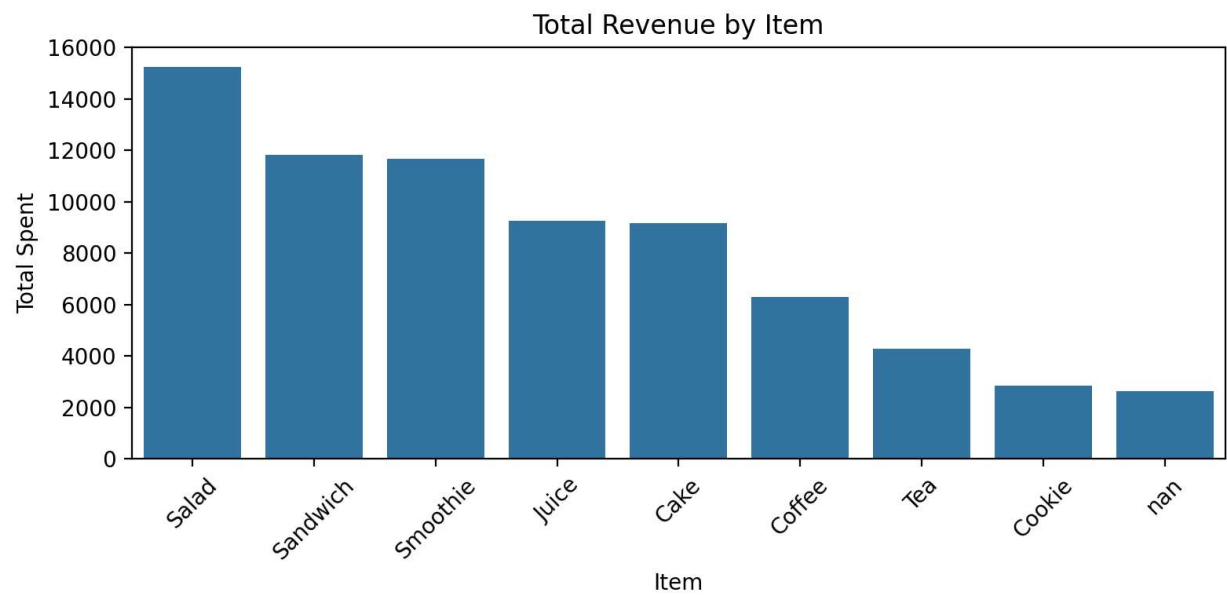
- Monthly revenue is consistent across the year; no large volatility was observed.
- Monthly revenue sample (first five months after cleaning): | YearMonth | Total Spent | |---|  
|---:| | 2023-01 | 6,197.50 | | 2023-02 | 5,648.50 | | 2023-03 | 6,157.50 | | 2023-04 | 6,010.50  
| | 2023-05 | 5,996.50 |
- Chart:



Insight: stable monthly revenue suggests predictable demand; opportunities exist to lift average ticket or focus promotions during slightly lower months.

Total revenue by item (supporting chart and table)

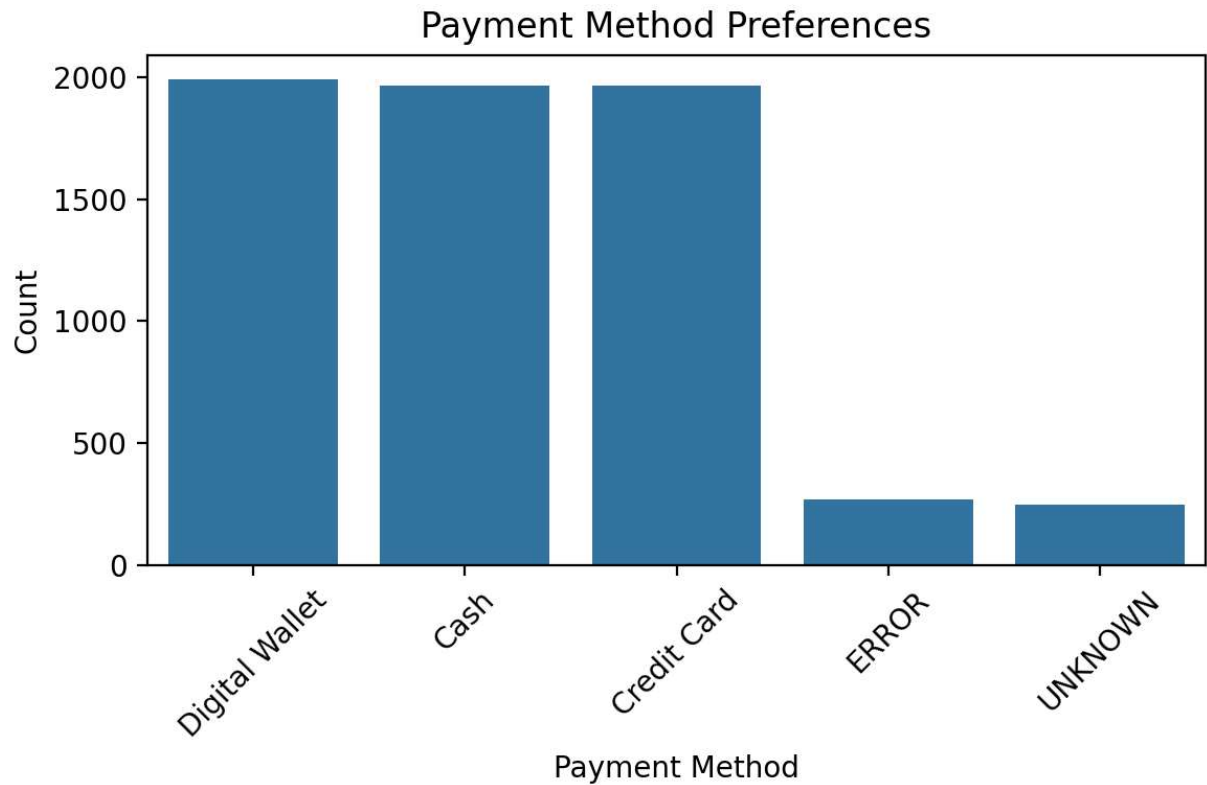
- Top revenue items (whole period): | Item | Total Spent | |---|---:| | Salad | 15,250.00 | |  
Sandwich | 11,824.00 | | Smoothie | 11,680.00 | | Juice | 9,264.00 | | Cake | 9,168.00 |
- Chart:



Insight: higher-priced or higher-margin food items are the revenue leaders. Consider promotions to increase frequency of these items or bundling lower-revenue items with top sellers to raise average spend.

Payment method preferences (supporting chart and table)

- Transaction counts by payment method (cleaned data): | Payment Method | Count | |---| |---:| | Digital Wallet | 1,991 | | Cash | 1,965 | | Credit Card | 1,964 | | ERROR | 268 | | UNKNOWN | 249 |
- Chart:



Insight: payment preferences are fairly balanced between Digital Wallet, Cash, and Credit Card, with Digital Wallet slightly ahead. Some residual ERROR/UNKNOWN entries appear in raw exports; these were removed in the strictly cleaned dataset used for final analysis.

## Dashboard and deliverables produced

- Interactive HTML dashboard with KPIs and filters (Location, Payment Method, Month) that updates charts and KPIs client-side: `cafe_sales_web_dashboard.html` (downloadable).
- HTML dashboard with KPIs and filters (alternate layout): `cafe_dashboard_kpi_filters.html`.
- One-slide PowerPoint-style dashboard with KPIs and charts: `Cafe_Sales_Dashboard_OneSlide.pptx`.
- Static charts used in the slide and report (monthly, item revenue, payment usage) and the cleaned tables underlying the analysis.

## How the data supports the story

- Monthly sales table + monthly trend chart show steady revenue — supports a narrative of a stable, predictable business.
- Item revenue table + bar chart show which products are most valuable — supports menu/pricing and promotion recommendations.
- Payment method counts support operational decisions (e.g., staffing cash vs. card handling, push for wallet payments).

## Next recommended actions

- Use the interactive web dashboard for stakeholder exploration; it supports filters and live KPI updates.
- Consider adding:
  - A pivot (Item × Month) to identify seasonality per product.
  - Location-level dashboards (if locations exist) to compare outlets.
  - A small A/B test or promotion to bump average ticket size (bundle top items with add-ons).
- If you want a production web app with server-side filtering, I can convert the current static HTML into a Dash/Streamlit app with persistent filters and user controls.

## Summary

- Data cleaned and validated using the cafe menu; Total Spent recalculated.
- Revenue is steady; salads, sandwiches, and smoothies are top revenue drivers.
- Digital Wallet usage is slightly ahead but payment methods are broadly balanced.
- Deliverables: interactive web dashboard (with KPIs + filters), HTML dashboards, and a presentation slide-ready PPTX — ready to show stakeholders.