# Data Quality Assessments for Personal Expense Tracker

1. **Accuracy Checks**
   * **Objective**: Ensure that all user-entered expenses accurately reflect real-world transactions.
   * **Assessment**: Implement real-time validation for fields like amount (only positive numbers) and category (dropdown selection to avoid misspellings).
   * **Process**: Data is validated at the point of entry within the form, ensuring accurate capture and adherence to expected formats.
2. **Completeness Verification**
   * **Objective**: Confirm that all required fields are populated before an expense entry is saved.
   * **Assessment**: Fields such as date, amount, and category are mandatory; the form prevents submission if any are missing.
   * **Process**: Through client-side validation, incomplete entries are flagged for users, maintaining data integrity.
3. **Consistency Enforcement**
   * **Objective**: Maintain consistency in data formatting, especially with date entries.
   * **Assessment**: Dates are standardized using date-fns formatting, ensuring all date values are comparable.
   * **Process**: This ensures that when aggregating expenses by month or year, data reflects consistent formats, improving accuracy in trend analysis.
4. **Integrity of Stored Data**
   * **Objective**: Protect data against corruption during storage and retrieval processes.
   * **Assessment**: Currently, localStorage is used for data persistence; however, structured JSON handling minimizes the risk of data inconsistencies.
   * **Process**: Data is saved and retrieved in JSON format, and structured retrieval ensures that records are loaded correctly across sessions.
5. **Future Data Quality Enhancements**
   * **Objective**: Plan for improved quality checks as the application scales.
   * **Assessment**: Future data storage migrations (e.g., to cloud storage) would include server-side validation and data consistency checks.
   * **Process**: With expanded storage solutions, automated quality assessments could validate data before it is committed to persistent storage, enhancing reliability.