Specifying Reports

# Introduction

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| Inquiring About Reports | When documenting the requirements for generating reports, it’s essential to gather detailed information to ensure that the final product meets user needs and adheres to any necessary standards. Below are guidelines and a template for recording report specifications. |
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| General Questions to Ask About Reports | 1. Current Usage:  * Which reports do you currently use? * What is the purpose of each report? * Who are the primary users of these reports?  1. Unused Reports:  * Which reports are currently generated but not used? * Why are these reports not utilized?  1. Standards and Compliance:  * Are there departmental, organizational, or governmental standards to which reports must conform? * Obtain copies of these standards. * Gather examples of current reports that meet these standards. |
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| Data Analysis | * Data Sources: * Ensure the data necessary to populate the report is available within the system or database. * Identify all inputs required to generate the desired outputs. * Computational Business Rules: * Identify any business rules applied to generate computed data within the report. |
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| Consider Other Variations | Order and Sequence:   * Suggest different ways to sequence the data (e.g., order-by capability on additional data elements). * Provide tools for users to specify the column sequence.   Crunch Up and Drill Down:   * Crunch Up: Produce summarized reports with aggregated results, potentially including data from other sources. * Drill Down: Provide detailed supporting data in addition to summary information.. |
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| Anticipate Growth | **Scalability**:   * Design reports to handle increasing data volumes. * Consider layout adjustments (e.g., portrait vs. landscape, row vs. column arrangement). |
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| Look for Similarities | **Consolidation**:   * Identify opportunities to merge similar reports. * Use set-up parameters to create flexible, higher-level reports that meet multiple needs without redundant development. |
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# Specifying Reports

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| Report Specification | When gathering requirements for customer-requested reports, it is crucial to collect detailed information to ensure the reports meet user needs and adhere to relevant standards. The following questions will help explore each report’s specifications comprehensively. 1. Purpose of the Report  * **What is the primary goal of the report?** * **Why is this report needed?**  2. Data Sources  * **What are the sources of the data?** * **Which databases or systems provide the necessary data?**  3. Calculations and Data Transformations  * **Are any calculations or other data transformations required?** * **What business rules apply to these calculations?**  4. Important Data  * **What data on the report are most important?** * **Which fields or metrics are critical for decision-making?**  5. Usage by Recipients  * **How do the recipients of the report use the information?** * **What actions are taken based on the report’s data?**  6. Manual Generation  * **Is the report generated manually?** * **If so, by which user classes?**  7. Automatic Generation  * **Is the report generated automatically?** * **If so, what are the triggering conditions or events?**  8. Frequency of Generation  * **How frequently is the report generated?** * **Are there specific times or intervals for generation?**  9. Report Size  * **What is the typical and maximum size of each report?** * **Are there any storage or performance considerations?**  10. Disposition of the Report  * **What happens to the report after it is generated?** * **Is it displayed on the screen, sent to a recipient, or printed automatically?** * **Is it stored or archived for future retrieval?**  11. Security and Privacy Restrictions  * **Are there security or privacy restrictions that limit access to the report?** * **Who can access the report or specific data within the report?** * **What business rules govern these restrictions?**  12. Ad Hoc Reporting  * **Is there any need for the underlying data to be made available for additional ad hoc reporting?** * **What tools or interfaces are required for this?**  13. Handling No Data  * **How should the system respond if no data is returned in response to a query?** * **Should the system display a message, generate an empty report, or take some other action?**  14. Report File Type  * **What type of file should the system create when generating the report?** * **Is there a preferred format (e.g., Crystal Reports, PDF, Excel)?**  15. Template Usage  * **Can this report be used as a template to generate similar reports?** * **What variations or customizations might be needed?**  16. Estimate of Records for Storage  * **Do you have an estimate of the number of records or record size?** * **What are the storage planning and cost implications?** |
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| Static and Dynamic Reports | *Static* reportsprint out or display data as of a point in time. *Dynamic* reports provide an interactive, real-time view of data. The system might provide the user with some input controls so he can quickly change the report parameters. Specify which type of report you are requesting and tailor the requirements accordingly. |
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| Prototyping Reports | It is often valuable to create a prototype (mock up) of the report that illustrates a possible approach. Prototypes are an excellent way to give customers something tangible to work with and reshape to help clarify and determine how best to meet their needs. If appropriate, include a sample report layout in the requirements documentation to help the developer know what to do. In other situations, the developer will create a sample report layout during design. |
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# Defining Report Elements

The table below indicates common report elements that could be either specified during requirements elicitation or determined during design. For example, the requirements might specify the contents of the report, while the design process establishes the precise layout and formatting of the report contents. Some of these issues might be handled by following existing report development standards.

Not all of these elements and questions will pertain to every report. Also, there is considerable variation in where report elements might be placed. For example, the report title could appear just on the top of the first page or as a header at the top of every page. Use the information below as a guide to help the Requirements Analyst and Developer fully understand the requirements and design constraints for each report.

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| Report ID | 1. Number, code, or label used to identify or classify report |
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| Report Title | 1. Name of the report 2. Positioning of the title on the page 3. Include query parameters used to generate the report (such as date range)? |
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| Report Purpose | 1. Brief description of the project, background, context, or business need that led to this report 2. The business decisions that are made using information in the report 3. The relative priority of implementing this reporting capability 4. User classes who will generate the report or use it to make decisions |
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| Data Sources | 1. The applications, files, databases, or data warehouses from which data will be extracted |
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| Frequency and Disposition | 1. Is the report static or dynamic? 2. How frequently is the report generated: weekly, monthly, on-demand? 3. How much data is accessed, or how many transactions are included, when the report is generated? 4. What conditions or events trigger generation of the report? 5. Will the report be generated automatically? Is manual intervention required? 6. Who will receive the report? How is it made available to them (displayed in an application, sent in email, printed, viewed on a mobile device)? |
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| Latency | 1. How quickly must the report be delivered to users when requested? 2. How current must the data be when the report is run? |
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| Visual Layout | 1. Landscape or portrait 2. Paper size (or type of printer) to be used for hardcopy reports 3. If the report includes graphs, define the type(s) of each graph, its appearance, and parameters: titles, axis scaling and labels, data sources, and so on |
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| Header and Footer | The following items are among those that could be positioned somewhere in the report header or footer. For each element included, specify the location on the page and its appearance, including font face, point size, text highlighting, color, case, and text justification. When a title or other content exceeds its allocated space, should it be truncated, word-wrapped to the next line, or what?   1. Report title 2. Page numbering and format (such as "Page x" or "Page x of y") 3. Report notes (such as "The report excludes employees who worked for the company for less than one month.") 4. Report run timestamp 5. Name of the person who generated the report 6. Data source(s), particularly in a data warehousing application that consolidates data from disparate sources 7. Report begin and end dates 8. Organization identification (company name, department, logo, other graphics) 9. Confidentiality statement or copyright notice |
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| Report Body | 1. Record selection criteria (logic for what data to select and what to exclude) 2. Fields to include 3. User-specified text or parameters to customize field labels 4. Column and row heading names and formats: text, font, size, color, highlighting, case, justification 5. Column and row layout of data fields, or graph positioning and parameters for charts or graphs 6. Display format for each field: font, size, color, highlighting, case, justification, alignment, numeric rounding, digits and formatting, special characters ($, %, commas, decimals, leading or trailing pad characters) 7. How numeric and text field overflows should be handled 8. Calculations or other transformations that are performed to generate the data displayed 9. Sort criteria for each field 10. Filter criteria or parameters used to restrict the report query prior to running the report 11. Grouping and subtotals, including formatting of totals or subtotal breakout rows 12. Paging criteria |
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| End-of-Report Indicator | Appearance and position of any indicator that appears at the end of the report |
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| Interactivity | 1. If the report is dynamic or is generated interactively, what options should the user have to modify the contents or appearance of the initially generated report (expand and collapse views, links to other reports, drill down to data sources)? 2. What is the expected persistence of report settings between report sessions? |
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| Security Access Restrictions | Any limitations regarding which individuals, groups, or organizations are permitted to generate or view the report or which data they are permitted to select for inclusion |
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Report Specification for Bakery System Management

**Version:** 1.0 draft 1

**Prepared by:** *Group 4*

**Date Written:** *23/06/2024*

**Last Update:** *Group 4*

# Purpose

The purpose of this project is to create a comprehensive reporting system for managing the operations of a bakery. The bakery system management reports are designed to provide critical information about inventory levels, sales performance, production schedules, and financial summaries to facilitate informed decision-making. These reports aim to streamline bakery operations, ensure optimal resource utilization, and enhance overall productivity.

# Report Description

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| **Report ID:** | 001 |
| **Report Title:** | Daily Sales Report |
| **Report Purpose:** | To provide a daily summary of sales, highlighting best-selling products and total revenue generated |
| **Data Sources:** | POS system, Inventory management system |
| **Frequency and Disposition:** | Generated automatically at the end of each day; sent to the store manager and financial team, and stored in the central database |
| **Latency:** | Report is generated with a 1-hour delay post-store closing time. |
| **Visual Layout:** |  |
| **Header and Footer:** |  **Header:** Bakery name, Report title, Date   **Footer:** Page number, Generated by system timestamp |
| **Report Body:** |  **Section 1:** Summary of total sales   **Section 2:** Breakdown of sales by product   **Section 3:** Comparison with previous day’s sales   **Section 4:** Best-selling products list |
| **End-of-Report Indicator:** | "End of Daily Sales Report" text |
| **Interactivity:** | None |
| **Security Access Restrictions:** | Access restricted to store manager, financial team, and authorized IT personnel. |

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| **Report ID:** | 002 |
| **Report Title:** | Weekly Inventory Report |
| **Report Purpose:** | To track inventory levels, usage rates, and highlight items needing restocking |
| **Data Sources:** | Inventory management system, Supplier delivery records |
| **Frequency and Disposition:** | Generated every Monday at 8 AM; sent to inventory manager and procurement team, and stored in the central database |
| **Latency:** | Real-time data, report generation takes 30 minutes. |
| **Visual Layout:** |  |
| **Header and Footer:** |  **Header:** Bakery name, Report title, Date range   **Footer:** Page number, Generated by system timestamp |
| **Report Body:** |  **Section 1:** Current inventory levels   **Section 2:** Inventory usage rates   **Section 3:** Items below reorder threshold   **Section 4:** Recommended reorder quantities |
| **End-of-Report Indicator:** | "End of Weekly Inventory Report" text |
| **Interactivity:** | Drill-down capability to view historical inventory data |
| **Security Access Restrictions:** | Access restricted to inventory manager, procurement team, and authorized IT personnel. |

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| **Report ID:** | 003 |
| **Report Title:** | Monthly Financial Summary |
| **Report Purpose:** | To provide a comprehensive financial overview of the bakery's performance over the month. |
| **Data Sources:** | Accounting software, POS system, Inventory management system |
| **Frequency and Disposition:** | Generated on the first day of each month; sent to bakery owner, financial manager, and stored in the central database. |
| **Latency:** | Data compiled from previous month, report generation takes 1 day. |
| **Visual Layout:** |  |
| **Header and Footer:** |  **Header:** Bakery name, Report title, Month and Year   **Footer:** Page number, Generated by system timestamp |
| **Report Body:** |  **Section 1:** Revenue summary   **Section 2:** Expense breakdown   **Section 3:** Profit/Loss statement   **Section 4:** Financial ratios and performance metrics |
| **End-of-Report Indicator:** | "End of Monthly Financial Summary" text |
| **Interactivity:** | Hyperlinks to detailed expense and revenue reports |
| **Security Access Restrictions:** | Access restricted to bakery owner, financial manager, and authorized IT personnel. |

# Sample Report

Sample Daily Sales Report:

Header:

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Bakery Name: Sweet Treats Bakery

Report Title: Daily Sales Report

Date: 23/06/2024

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Report Body:

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Section 1: Summary of Total Sales

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Total Sales: $2,350.00

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Section 2: Breakdown of Sales by Product

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- Croissants: $500.00

- Muffins: $400.00

- Cakes: $1,000.00

- Pastries: $450.00

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Section 3: Comparison with Previous Day’s Sales

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- Previous Day's Sales: $2,100.00

- Increase/Decrease: +$250.00

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Section 4: Best-Selling Products

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1. Cakes

2. Croissants

3. Pastries

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End of Daily Sales Report

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Footer:

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Page 1 of 1 | Generated by system on 23/06/2024 22:00

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