REPUBLIC OF THE PHILIPPINES
BICOL UNIVERSITY
BICOL UNIVERSITY POLANGUI

(Library Management System)

Week 12: Warehousing Preparation and Business Intelligence Queries

Insight Documentation Report

This collection of SQL queries takes an overall view of library operations and member activities based on key performance indicators. Query one defines the top five borrowed books, indicating member preference as well as likely best sellers which can influence purchasing or marketing moves in the future. The second query categorizes borrowing activity by month and year, showing seasonal demand or recurring borrowing patterns that can be used to staff accordingly, plan marketing promotions, or schedule events during peak demand times.

Additional queries examine user usage and resource consumption. The "Most Active Members" query identifies leading users by loan frequency, as well as their loan history, which can be utilized to incentivize loyalty or provide customized services. Calculating average member loan duration is useful to consider how long books usually stay checked out, potentially impacting policies for loan periods or reminder notices. The "Total Books Available by Category" query indicates where the library's holdings are focused and can reveal areas of collection gap. In contrast, analysis of most borrowed book categories provides insights into subject popularity, which can inform future catalog expansion and thematic programming.

From a business intelligence standpoint, decoding these outcomes into dashboards would be continually valuable. Recommended visualizations are: bar charts of the most borrowed books and categories, a line chart to monitor borrowing trends by month, and a heatmap or KPI cards for member involvement. Pie charts can show the split of available books by category. With filtering and real-time updates, these dashboards would enable librarians and managers to make better data-driven decisions more quickly, enhancing both member satisfaction and operational performance.