

GENERAL SUMMARY OF WORK OF GRADE

TITLE: REPORT GENERATION AND INTERACTIVE DASHBOARD FOR BENEDICTO XVI LIBRARY

AUTHOR(S): Sofía Alejandra Salas Aquino
David Santiago Cárdenas Rivera

FACULTY: Facultad de Ingeniería de Sistemas e Informática

DIRECTOR: Elkin Alfredo Albarracín Navas

ABSTRACT

This project presents the development and implementation of a web-based interactive dashboard for the Benedicto XVI Library at the Pontifical Bolivarian University's Bucaramanga branch. The solution is structured in three main modules: visualization of key performance indicators (KPIs), report generation and data analysis using projections and trend identification. The system consumes the library's database, hosted on MySQL 5.0. The application is built with AngularJS on the frontend, and a backend based in Node.js with Express Router using TypeScript as the main programming language, applying reusable code practices such as middlewares and interfaces. The web application is deployed in a Red Hat Enterprise Linux 9.6, located within the university's infrastructure. The project followed the dashboard development methodology and was managed under Scrum framework.

KEYWORDS:

dashboard, data analysis, library, KPIs, projection, tendencies

V° B° DIRECTOR OF GRADUATE WORK