ENTERPRISE RESOURCE PLANNING SYSTEM

Enterprise Resource Planning (ERP) System for Department Automation

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Abstract: This study has been undertaken to investigate the determinants of stock returns in Karachi Stock Exchange (KSE) using two assets pricing models the classical Capital Asset Pricing Model and Arbitrage Pricing Theory model. To test the CAPM market return is used and macroeconomic variables are used to test the APT. The macroeconomic variables include inflation, oil prices, interest rate and exchange rate. For the very purpose monthly time series data has been arranged from Jan 2010 to Dec 2014. The analytical framework contains.

Index Terms - ERP System, Enterprise Resource Planning, Academic Management System, Student Information System, Faculty Management, Attendance Management.

I. INTRODUCTION

Digital Managing academic and administrative activities in educational departments has become increasingly complex due to the growing number of students, faculty, courses, projects, and examinations. Traditional methods of handling these processes manually or through fragmented software systems often result in inefficiencies, errors, and delays. Tasks such as student registration, faculty management, subject allocation, attendance tracking, project submission, examination scheduling, and reporting are time-consuming and prone to inaccuracies.

A Department ERP (Enterprise Resource Planning) System is designed to overcome these challenges by integrating all departmental operations into a centralized and automated platform. The system facilitates the seamless management of academic processes while providing real-time access to information for students, faculty, and administrators. It enables efficient handling of faculty and student

2. BODY OF PAPER

1.1 System overview

The Department ERP System centralizes academic and administrative operations. It manages faculty & student records, subjects, projects, exams, attendance, notifications, and reporting. Built with .NET Core, MVC, Entity Framework, Razor Pages, SQL Server, and JavaScript, it ensures security, scalability, and ease of use.

1.2 Module Architecture

Five main modules:

1.User Interface Module – Handles registration, project submission, exams, attendance, and notifications.

2.Faculty & Student Management Module – Manages profiles, academic years, subjects, and role-based access.

3.Project & Examination Module – Assigns projects, tracks submissions, schedules exams, and publishes results.

4.Database Module – Secure storage of all academic and administrative data, logs, and attendance records.

5.Analytics & Reporting Module – Tracks usage, generates reports on performance, attendance, and departmental efficiency.

1.3 Social Impact

- Simplifies academic and administrative tasks.
- Improves transparency, accuracy, and accessibility.
- Supports digital, paperless management for students and faculty.

1.4 Technical Innovation

1. Centralized academic and administrative management.
2. Role-based secure access control.
3. Real-time notifications and alerts.
4. Online project submission and exam management.
5. Automated attendance and reporting

1.5 Dynamic Module Management

- Allows administrators to add new courses, subjects, or projects without modifying the code.
- The system automatically updates workflows and reports according to new academic data.