

**University of Science & Technology**

**Faculty of Computer Science & Information Technology**

**College of Postgraduate Studies**

**MSc in Information System**

# **Implementation of ERP**

## **Case Study**

### **The National Ribat University**

**A thesis in partial fulfillment of the requirement for  
the degree of *M.S.C* in Information System**

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**2014**

# Abstract

This project takes capability of developing an information system in educational institutes through design integrated systems for all educational activities to enable using the relationships between all integrated subsystems. Also project takes a set of basic requisites that will contribute in application an integrated system of **University Information System (UIS)** and **Management Information System (MIS)** such as information system of accounting management, central database, technological services, exam management and student information system

The project is concentrated on locally **Enterprise Resource Planning (ERP)** concerned to the Ribat National University through evaluation study for this system wherefrom accordance to some criteria which are stated to complement the evaluation.

Software development life cycle (SDLC) was followed throughout the project and different software design and implementation techniques were taken into consideration while carried out the project. Work undertaken includes requirements analysis, design, implementation, testing and evaluation.



## المستخلص

هذا البحث يتناول في طياته امكانية تطوير نظام معلومات متكامل للمؤسسات التي تعنى بشأن التعليم من خلال تصميم نظام متكامل يأخذ في اعتباره كل أنشطة العملية التعليمية ، وذلك من أجل الأستخدام الأمثل للعلاقات التي تربط الأنظمة الفرعية المكونة لهذا النظام المتكامل .

هذا البحث يضم المكونات التي تشارك وتسهم في عمل نظام متكامل يشمل كل من نظام المعلومات الجامعي (UIS) ونظام المعلومات الادارية (MIS) . كمثال على ذلك تم التطرق لنظام ادارة الحسابات بالجامعة ، نظام التسجيل ، نظام ادارة الامتحانات ، نظام شؤون الطلاب وغيرها من الخدمات .

هذا البحث تم بناؤه على تقنية ERP ، وتم اختيار جامعة الرباط الوطني كحالة دراسية لتوضيح هذه التقنية . بعد الانتهاء من هذا البحث تم تقييمه ، ووجد انه يحقق كل المعايير المطلوبة في البيئة الجامعية من الناحيتين الأكاديمية و الادارية .

لاتمام هذا العمل أستخدمت عدة تقنيات في مجال هندسة البرمجيات ، مثل تحليل وتصميم وتطبيق البرمجيات ، وكل مراحل تطوير البرمجيات تم اخذها في الاعتبار .

# Introduction

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An **Enterprise Resource Planning (ERP)** system is an integrated software solution, typically offered by a vendor as a package that supports the seamless integration of all the information flowing through any organization, such as financial, accounting, human resources, supply chain, and customer information (Davenport, 1998). ERP implementation is a lengthy and complex process, and there have been many cases of unsuccessful implementations (Parr and Shanks, 2000), which have had major impacts on business performance. ERP systems provide firms with two new and different types of functionality: a transaction processing function, allowing for the integrated management of data throughout the entire organization, and a workflow management function controlling the numerous process flows within the organization. ERP facilitates the flow of information between all the processes in an organization. ERP systems can also be an instrument for transforming functional organizations into process-oriented ones.

## 1.2 Problem Statement

The concept of integrated systems is being implemented and developed to gather all distributed systems into one unified system includes all data which are needed by various applications of the university different departments.

Building one unified Database for all system reduce the errors and discrepancies between the stored data in case of using separate database for each application, and enables treatments of information of these systems. This integration leads these systems to be qualified, active and reduces the cost of successive updating of database contents.

Due to reason that **RIBAT ERP** system is a locally designed system, so in this research, the researcher focused mainly on investigating the features of **ERP** systems and compares it with **RIBAT ERP** system.

The evaluation is restricted to the specifications that offered by this system which includes: Identifying Requirements, Business goals and strategies, Multi-user authorization, Usability, Security, Accessibility, Training and Documentation, and try to find answers to questions like the following:

- Is the system identifies its requirements properly, and attains business goals and strategies of an educational institute?
- Is the system support the concept of multi-users tasks?
- Is the system is usable and easy to implement?
- Is the system secure and safe?
- To which extent can the system access the data?
- Is the system is well trained and full of documentation?
- Is the system achieved the feasibility study prepared?

So all these questions are answered and evaluated in more details at the section of evaluation of **RIBAT ERP** system in this research.

### 1.3 Objective

The objective of this project is based on investigating an **ERP** system. The investigation is basically focused on:

- 1.The main components of the system (i.e. Financial, Academic affairs, Human Resource and Students Information System).
- 2.The main features of these systems (i.e. Usability, Security and Accessibility).
- 3.Hence, comparing these components and features mentioned above with components and features of RIBAT ERP system, concentrate mainly on the viewpoints of the all levels of users (system users, managers, support users) in order to evaluate these features. The research will try to find the answers for the following questions:

## 1.4 Research Motivation and Importance

The importance of this project concentrates mainly on the view of integrated systems. It relies on modern scientific basis built on necessity of integration of subsystems that can be found within the whole system, which is representing the university different units in order to obtain the general objective of these units. Introduction of the system would provide the following benefits:

- Speed up search for data.
- Speed up decision making.
- Increase the availability, reliability and amount of data that is available for decision making.
- Increase the overall control of management of the institution.
- Ensure that data is available to all required staff, potentially across departments, in real-time.

## 1.5 Methodology

Information systems regard as an important tool for amending the efficiency of organization, so the organizations trend toward design and build information systems so as to control the huge amount of data necessary to manage the organization and to ensure accessing reliable, correct and accurate information to all managerial levels in order to use it to make a rational decisions contributes in attaining the objectives of the organization.

### Phases in Research Methodology

#### Phase 1: Initiation and Planning

The objectives of this stage are to distinguish problem areas, project scope, objectives and aim of the research. The activities of this phase are discussed with the project supervisor to select the title for the research, recognize the problem background of the research scope, objectives and operational flow of the research.



## **Phase 2: Identify Requirements**

Here we specify the minimum requirements that make the system run well, it includes applications that is used in design, hardware setting and network equipments in addition to requirements needed by users which it reflect on the system on order to facilities work.

## **Phase 3: Check Existing System Situation**

Performing a survey on the existing systems and make evaluation according to specifications that offered by these systems through users of the system (System Users, Managers, Support Users) from various **RIBAT** departments (Academic affairs, Faculties, Registration and Exams offices) whom were benefit from this system this survey takes the form of direct interviewing focus mainly on the evaluation of these systems.

## **Phase 4: Building the Integrated Systems**

The building of integrated systems is much cost, for this reason the researcher decided to take the classical approaches for designing and implementing an integrated system and covers only the most important parts of subsystems.

## **Phase 5: Report writing**

The activity on this stage is to compose the report base on the studied data and understanding realities from various academic representatives and competition of the final report and assessment on ERP post-implementation.