

**University of Science & Technology**  
**Faculty of Computer Science & Information Technology**  
**Postgraduate Program**

**Title :**

***Development and Integrating a QOS Tool with  
RTSP Protocol***

**A Thesis Submitted in Partial Fulfillment for the Requirement of the *M.Sc*  
Degree in Information System**

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# ***Abstract***

The information systems became related to the communities development in different manners in these days, and it's most important means to developing societies to be more advanced societies. The information systems contribute directly to build a new society based on electronic information services such as the communication, learning and knowledge services.

In this research we've developed a system to help Higher Education Training Department and also to help universities and researchers in looking for Sudanese universities that have faculties of graduate studies in the field of computer science and information technology. This system had been developed using PHP language and also using an Object-Oriented Analysis Design (OOAD) method.

The system has a number of interfaces associated together to facilitate the communication process between the user and the system, therefore the user can be capable of to find out all the information relative to the system domain.

# ملخص البحث

أصبحت نظم المعلومات مرتبطة بتطوير المجتمعات بطرق مختلفة هذه الأيام، كما انها من أهم الوسائل لتطوير المجتمعات لتكون مجتمعات اكثر تقدما. نظم المعلومات تساهم بشكل مباشر في بناء مجتمع جديد تقوم على خدمات المعلومات الإلكترونية مثل خدمات الاتصال والتعلم والمعرفة.

في هذا البحث قمنا بتطوير نظام يساعد ادارة التدريب والبحث العلمي وايضا يساعد الجامعات والباحثين في البحث عن الجامعات السودانية التي لها كليات للدراسات العليا في مجال علوم الحاسوب وتقانة المعلومات. تم تطوير هذا النظام باستخدام لغة PHP وايضا تم استخدام التحليل والتصميم الموجه للكائنات (Object-Oriented Analysis Design (OOAD).

يحتوي النظام على عدد من واجهات المرتبطة معا لتسهيل عملية الاتصال بين المستخدم والنظام، وبالتالي يكون المستخدم قادرة على معرفة كل الجامعات السودانية التي تقدم برامج للدراسات العليا في مجال علوم الحاسوب وتقانة المعلومات، وبالتالي تقلل من الوقت والجهد المستهلك

## **1.1 Introduction**

Information system (IS) is the study of complementary networks of hardware and software that people and organizations use to collect, filters, and process, create, and distribute data. The study bridges business and computer science using the theoretical foundations of information and computation to study various business models and related algorithmic processes within a computer science discipline. Computer Information System(s) (CIS) is a field studying computers and algorithmic processes, including their principles, their software and hardware designs, their applications, and their impact on society while IS emphasizes functionality over design.

Modern business organizations become more and more dependent on their information systems to deal with the complexity and changeability of the context in which they operate and consequently their internal organization structures. Up-to-date, complete and accurate information has become a necessity to survive in an increasingly competitive world. Developments like dynamic cooperation networks, mass customization of products and services, and end-to-end process control require automated means to control operational business processes, for the simple reason that humans cannot oversee the entire operation in an efficient and effective way anymore. Consequently, business requirements to information systems increase at a dazzling pace.

## **1.2 Research problem**

The unavailability of sufficient public information about graduate students in the Sudanese university is a real life problem that faces the universities, government and Ministry of Higher Education and Scientific Research (MHERS) that is need various information and report about the graduate students.

### **1.3 Research objective**

The main objective of this research is to develop a data intrusive web applications that public all public information regarding graduate students in Sudan. Other objectives are:

1. To provide information about graduate students by building database.
2. To generate required reports.

### **1.4 Research tools**

We used Dreamweaver and Microsoft expression web tools to create the interfaces, Dreamweaver and Microsoft expression web is a web design software program it can be used to create pages for display on the World Wide Web to create the interfaces.

### **1.5 Research methodology**

A system of broad principles or rules from which specific methods or procedures may be derived to interpret or solve different problems within the scope of a particular discipline was applied .

The research adopts the Object-Oriented analysis design methodology. In the Object Oriented Analysis (OOA) it was concerned with developing requirements and specifications expressed as an object model of a system, as opposed to the traditional data or functional views. In the Object Oriented Design (OOD) phase it was concerned with developing object-oriented models of a software/system to implement the requirements identified during OOA.

The implementation phase concerned with implementation of the design models. It also deals with non-function, al requirements and the deployment of the executable modules onto nodes.

## **1.6 Research result**

Expected from the web application to increase the efficiency of the graduate students information, decrease times required to access and deliver graduate students information, increase data integrity, increase user access and convenience.

## **1.7 Research organization**

The research is organized as follows:

Chapter two concentrated on the system requirement issues. Chapter three overviewed the analysis process, finding classes, identifying class relationships that applied on the implemented system, identified the system design, the relations between classes and system database design. Chapter four clarified the system implementation. Chapter five the conclusion and the recommendations of the research

