ONLINE TRAINING COURSE REGISTRATION SYSTEM COURSE LEARNER MODULE

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ABSTRACT

The final year project, Online Training Course Registration System (OTCRS) is a web based application designed to enable course learners search for training courses and register the training courses that were uploaded by more than one course provider. Here, training courses normally are also known as short term courses that are held in one day or a few days only. The system is divided into two major modules: course learner module and course provider module. This research project will discuss expressly the course learner module. Basically, the module provides search course facilities and online training course registration for course learners. Course learners can search availability course that can be registered online. OTCRS provides free member registration services that allow course learners to become the members of the system and register the courses which they are interested in. Besides that, course providers also register as members through the member registration system and login the system. Through the system, they can add their new courses and upload the relevant course information. The system administrator maintains the system by creating new course categories, deleting course categories, managing registered users and permissions. ASP.NET is used as server-side scripting language in creating dynamic web pages. Microsoft SQL 2000 is used as the database management and design system. IIS web server is used for managing HTTP request and response.



ABSTRAK

Online Training Course Registration System (OTCRS) merupakan sistem laman web vang direka untuk pelajar di Negara ini mencari khusus-khusus yang telah disediakan oleh lebih daripada satu penyedia khusus. Pelajar juga boleh mendaftar khusus berkenaan melalui sistem ini. Khusus yan disediakan biasanya merupakan khusus jangka masa pendek jaitu mungkin diadakan dalam tempoh satu hari atau beberapa hari sahaja. Sistem ini terdiri daripada 2 komponen utama iaitu komponen pelajar dan komponen penyedia khusus. Namun demikian, projek penyelidikan ini lebih mengutamakan dan membincangkan komponen pelajar dengan lebih jelas dan teliti. Komponen ini menyediakan perkhidmatan pencarian maklumat khusus dan pendaftaran khusus untuk pelajar. Sistem ini juga menyediakan pendaftaran ahli dengan percuma supaya membenarkan pelajar menjadi sistem ahli dan daftar masuk ke dalam sistem ini untuk mendaftar khusus yang diingini. Selain itu, penyedia khusus juga dikehendaki mendaftar sebagai ahli kepada sistem ini dan daftar masuk ke dalam sistem untuk menyediakan informasi kepada khusus. Sistem admin pula mempunyai hak yang tertinggi berperanan mengawal fungsi seluruh sistem supaya beroperasi dengan sempurna. Akhir sekali, ASP.NET digunakan sebagai bahasa pengaturcaraan dalam rekabentuk sistem operasi. Microsoft SQL 2000 digunakan dipilih sebagai pangkalan data untuk penyimpanan sistem maklumat manakala IIS digunakan sebagai medium penghantaran data.



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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Online training course registration system (OTCRS) is a web-based management system that is designed to improve the effectiveness and efficiency of course learner registration management. The project is designed to help course learners search and register their interested training courses that are provided by many course providers through the internet and advanced web technology. Here, training courses normally are also known as short term courses that operate in one day or few days only. Course providers use the system to advertise their training courses and upload the relevant syllabus of the training courses. Therefore, course learners can access to search and register to the training courses without time and distance barriers.

Online Training Course Registration System (OCTRS) can provide more collaboration and interaction with course learners and course providers as compared to traditional instruction. It provides course learners searching information, registration system, and view courses information such as syllabus of the courses that are uploaded by the more than one course providers as some techniques that could help create an interactive online environment.

These facilities allow course learners apply to suitable courses instantly and get closer to the course they want. The system delivery course information straight to the course learners, quickly and conveniently, via search services. Besides, the system provides user either course learners or course providers maintain and update their information easily. For example, course providers can add, delete and modify the courses.



1.2 PROBLEM BACKGROUND

Traditional registration system is no longer suitable to accommodate the highly demands of usage from different user categories. Such that, a webbased application is introduced to keep track the problem that was encountered in earlier. Each transaction is performed via Internet to create a more satisfactory and better environment for system users.

During requirement gathering and customer communication, certain topic issues have been identified and must be resolved consistently. Here, we look carefully on each problems found in currently conducted business environment, categorized in 2 different environment.

1.2.1 Manually conducted standalone system

Registration is still transacted manually, with storing particular course learners in a paper record. Problems become troublesome when some stored record is lost due to improper file management record in a consistent way. Such that, we would like to manage all the record in a digitalized forms method. Records are stored in a database, in which the data is stored in a consistent state which is retrievable.

A manually conducted registration requires abundant of work and takes longer time to complete a transaction. This is a waste of time and cost. In addition, issue of geographical distances in obtaining information can be resolved. Everything is conducted easily in fingertips with more information and data that can be search through OTCRS system. However, the unwillingness of minority small companies to adapt to a web-based approach (registration purposes) is found during some interviews that we have performed.

The lack of computer knowledge to operate a computer system becomes the main issue of technology transformation to web-based approach. Even some companies prefer the use of media for course publication method, when they claims that users is more alert to daily issues





materials through the attention to newspapers, magazines, television and radio. Companies argue that users less prefer in information searching through internet as they would stay frustrated especially during peak load time when information loading is slow.

1.2.2 Existing web-based application system

Although many standalone systems having their registration operation to be handled electronically, this seems to be an unwelcome situation when course learners can only view the courses information in that particular training course organization website only. Course learners have to search for their intended course information in every single website form each single company.

However, OTCRS overcomes these problems when a particular course learner can view a list of published course information in the same website, relevantly to the training course companies.

It founds to be that some companies with their own web-site unable to conduct their course publication effectively. Inefficiency in managing their own company site is then resolved by OTCRS system web master with a powerful management of daily course publication. Perhaps, functional operations are enhanced, in ensuring system performance and customer satisfaction, while maintaining its non-functional requirement THAT again promising a powerful system delivering.

However, the key factor of how secure and reliable the system to be used, which is exposed to all unpredicted system vulnerabilities in a network environment should be the objective of our system development. Security and system attack issues in existing system must be carefully handled. All data must be kept in the lowest risk from any means of data lost.



1.3 PROBLEM STATEMENT

"Is there the possibilities of delivering a computer system for use in rural areas?"

No. Users without computer knowledge are unable to conduct their transaction in electronic method. Somehow, kids and children are unable to operate the use of computer system on their own.

"Is there a possibility to deliver the knowledge of computer skills as was found in rural areas?"

Yes. However, this depends on the willingness to adapt the new environment of computer usage, as well as how far the government in ways of eliminating the computer illiterate issues and ensuring ICT acceptance among all Malaysian.

"You have selected to publish your course publication through media such as newspaper, radio, magazines. Why don't you think of transforming this using online system for publication?"

We are dealing with small scale of registration only. Not much students is handled and still we can apply the manually conducted registration. (Paper method)

"Why don't you think of publish your companies information regarding your course offer rather than maintaining your own company website?"

I still stick to publish my course offer through my company's own website, managed by my own company administrator rather than through your OCTRS administrator. All information of my company perhaps may be displayed and open to public.

"Unable to integrate all views while requirement specifications that have been conducted."

We are in troublesome on how to develop system that suit against all views and requirements from different customers. However, a careful and deep



analysis is the only solution that resembles the need of real-life system circumstances.

"Are there any other sort of problems that may restrain your development project?"

Yes. The lack of skills in understanding real life business conditions and the strength marketing strategies may restrain our effort. However, this is solved by conducting interviews from different stakeholders that have more understanding on business environment.

"Current shortage which may bring to data lost."

With the existence of recovery system and backup copies in offline storage media, hopefully problems encountered can be solved easily.

1.4 GOALS

The main purpose of system development against organization and business targeted that best perform the powerful use of system. Here, this becomes the advantages of system development in terms of customer satisfaction. The project goal is create a web based application that can enables course learners to search for many of courses that were uploaded by many number of course providers through the suggested web application.

1.5 OBJECTIVES

In this project, there are several objectives that are needed to be achieved.

- OTCRS is developed to help course learners search the courses through the web easily.
- The system connected to the internet that forming an environment provides course learners to register the courses that are provided by the course organizers.
- Course organizers can upload their information of courses and published them to the course learners.



 Provide maintenance module enable course providers add, delete and update course.

1.6 PROJECT SCOPE

The main system is developed for registration purposes. This project mainly focuses on course registration management for all training courses organizers and their course learners in Malaysia only. The system offers training courses normally are also known as short term courses that operate in one day or few days only.

This implementation of system is developed into 2 major modules, which are the course learner module and course organizer module. This is described also as the scope of project development considering the operations provided on each modules.

Online Training Course Registration System (OTCRS) is developed by 2 undergraduates of UMS in a team. Each member has their own module and own tasks.



Figure 1.1: Functional Decomposition Diagram (FDD)

The project scope on course learner module described in this thesis is varied from guests and registered course learners' categories. Visitors or guests are provided with search courses function and view only the free content of the system. They can be the member of the system as a course learner by registering as a new member of OTCRS and have a personal profile if they are intent to login the system to register courses that have been uploaded by the course organizer.



CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

A review and comparison of existing online course registration systems is brought towards discussion.

This is the analysis modeling and information gathering that must be performed initially to analyze all existing system that may relate to the overall successful of future development system. This is essential in ensuring the acceptance of future developed system which provides satisfactions, that conforms to client requirement, and thus ensuring a successful system for business objectives.

In such a way that, OTCRS is implemented, to serve all the system problems as mentioned above. Together, four case study is learned and analyzed to check the system features and characteristics, to check the whether it should be supported or should be enhanced to provide the absolute system usage to all user community through online system. Again, this has been a useful input for system requirements collections that should be considered in OTCRS.

2.2 WHAT IS ONLINE COURSE REGSTRATION SYSTEM?

Online Course Registration System has been evolved since the evolution of Internet. The transformation of information has been conducted electronically through a network.

An online system handles transactions when system is able to provide output directly to users. A portal is an entrance to multifunction Web site. After entering a portal, a user can navigate to a destination using various tools and features provided by the portal designer. In Web-based system, portal design provides an important links between the user and the system. (B. Shelly, J. Cashman, J. Rosenblatt, 2001)



Intelligent agents represent software programs that independently perform requests on behalf of a user. (Brenner) The search engine has increase efficiency and effectively that brings to customer satisfaction. Information agent is capable of locate information sources, extract information from the sources and filter information based on user's interest profile. (Brenner)

2.3 HOW IS IT CONDUCTED?

Management of course registration can be conducted through web-based development environment. System are developed and delivered in an Internet-based framework such as .NET or Web Sphere.

2.4 WHY CHOOSE WEB-BASED APPLICATION?

Below are the reasons on why developers choose to implement course registration using web-based application?

- Web-based systems are easily scalable, and can run on multiple hardware environments.
- 2. Dynamic web application enables a powerfully interaction of system users.
- Large firms tend to deploy Web-based systems as enterprise-wide software solutions for applications such as order processing and material management.
- Web-based software treats the software application as a service that is less dependent on desktop computing power and resources.
- Web-based software as a service that can limit in-house involvement to a minimum and have the vendor to install, configure and maintain the system by paying agreed-upon fees.
- Reuse components that reduce of works and simplify project development and delivery.
- Use of middleware, which enables communication with existing software and legacy systems.

2.5 ARCHITECTURE DESIGN

According to an article published by IBM, "the old mind set of 'open the file and read one record at a time' has gotten many client-server projects and tools into far too much trouble. And it gets very expensive when a business



learns this lesson when trying to go fro 60 to 90 users, only to find out that the wall is somewhere in between." (www.919.ibm.com)

In centralized environment, processing speed is enhanced because program instructions and data both travel on an internal system bus, which moves data more efficiently than an external network. In contrast to centralized system, system performance of client-server architecture degrades when the number of clients and services demands increases.

Client-Server architecture refers to systems that divide processing between one or more networked clients and a central server. Clients handle the entire user interface, while sever stores the data and provides data access and proper database management functions. (B. Shelly, 1995)

As large-scale networks grew more powerful, client-server systems became more cost-effective. Companies adopt this type of technology to achieve a more powerful computing environment, flexibility and support for changing business operations.

Below shows distinction on features, services, programming language used, user interface design and non-functional requirements of 5 reviewed online course registration system. Here, the distinction among each system is tabulated in table representation.

Reviewed System

- 1. C-Registration System (Wylie College)
- 2. Online Registration System (ORS)
- 2. Mind Flash System
- 3. Class Registration Solution (CRS)
- 4. Self Teaching Elementary Programming System (STEPS)



Features	1	2	3	4	5
online help instructions				*	-
course billing system	*		*	*	-
course catalogue	*	*	*	*	*
login system	*	*	*	*	*
course registration system	*	*		*	*
course maintenance system (add course/update added course/delete course)	*	*	*	*	*
maintaining of user info	*		*		*
contact system/Message board		*			*
member registration system		*	*	*	*
course management system (course schedule/participant report)		*	*	*	*

Table 2.1 : Comparison of the Features

Indication

*

Available in the particular web site

Not available for the web site

Reviewed System

- 1. C-Registration System (Wylie College)
- 2. Online Registration System (ORS)
- 2. Mind Flash System
- 3. Class Registration Solution (CRS)
- 4. Self Teaching Elementary Programming System (STEPS)



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