

## Design and implementation of online Conference Management System

**Lecturer Hana Rashied Esmaeel**

**Hamza Jafar Habeeb**

### Abstract

In this paper, a design and implementation of online conference management system (OCMS) is achieved. The proposed System provides a complete functionality for conference registration, paper submission, peer review, decision making process, preparation of conference proceedings, and submission of final papers.

OCMS enables interaction of all participants in various roles such as corresponding author, reviewer and Administrator. Security features has been implemented (using SHA1 function) to keep Integrity of information in the system. The architecture of the system and its internal modular structure is presented.

OCMS has been implemented using several internet programming languages such as HTML, CSS, JavaScript, PHP and MySQL.

Dreamweaver (a builder package) was used to design a web page, Sessions (a small temporary file in server) was used to design user profile for private activities to each user.

CMS was tested using WAMP server.

**Keywords:** conference management system, php, mysql, JavaScript, paper submission

1. **Introduction:** Traditional conference management depends on manual operations. In the mid 90s, email became a reliable and cost-effective way to send binary file attachments and it opened the possibility of sending papers electronically instead of by "snail" mail [2]. However, when the number of paper submissions increases

To some scale, the task of dealing with these submissions manually becomes tedious. This often results in problems such as collecting the wrong author's information, neglecting some submissions and slowing down the process of conference organization. In the last few years, several Web-based conference management systems have been developed and used by many international conferences. They have implemented such functions as publishing conference information, handling paper

Submissions and reviews. These functions provide reliability and security and speed up the process of conference organization.

### 2. Objective

**OCMS** Enables Author to online submissions of abstracts (and, later on, full papers) and online reviewing of contributions. When the Author has been registered the activation code has been sent by the system to his/her email address to allow him login on his/her account after send the activation code in the link that associated with it in the email message .Security features has been implemented to keep Integrity of information in the system.

### 3. System design:

3.1 Software Requirements: The website was designed and implemented using the following software:

3.1.1 Dreamweaver (a builder package) was used to design a web page.

3.1.2 WampServer that contains Apache server, MySQL Database Management System and PHP.

3.1.3 HTML, an abbreviation of (Hypertext Markup Language), it is the markup language for web pages. [6]

3.1.4 PHP is a general-purpose scripting language for server side; it is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. [9].

3.1.5 MySQL [Relational Database Management System (RDBMS)]: It uses a standard form of the well-known SQL data language. It is released under an open source license, and is available for free. It works on many operating systems, and with many languages. PHP ships with a number of functions designed to support MySQL databases [10].

3.1.6 JavaScript is a scripting language used to enable programmatic access to objects within other applications. It is primarily used in the form of client side[8].

3.1.7 Sessions (a small temporary file in server) was used to design user profile for private active (ities to each user.

3.1.8 CSS (Cascading Style Sheets) is a style sheet language used to describe the presentation (that is, the look and formatting) of a document written in a markup language[7].

3.2 System Block Diagram: The main component of propose system is administrator, Reviewer and User (Author) as shown in figure (1) below.

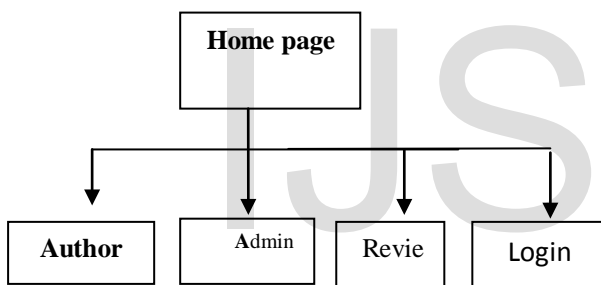


Figure (1) System Block Diagram

3.3 Database Design: Is concerned with the identification of tables that used in the system and the relationship between these tables and their attributes[ the database is called *Management* and its have three tables as shown in figure (2) below

Table	Action	Records <sup>1</sup>	Type	Collation	Size	Overhead
conferences		4	MyISAM	latin1_swedish_ci	2.4 KiB	-
papers		6	MyISAM	latin1_swedish_ci	2.8 KiB	-
users		14	MyISAM	latin1_swedish_ci	5.4 KiB	-
3 table(s)	Sum	24	MyISAM	latin1_swedish_ci	2.8 KiB	0 B

Figure (2) shows database management's tables

3.2.1 Conferences Table: which contain the information about the conferences that supported by the website, as shown in figure (3) below:

Field	Type	Collation	Attributes	Null	Default
conference_id	int(6)			No	None
conference_name	varchar(30)	latin1_swedish_ci		No	None
conference_category	varchar(20)	latin1_swedish_ci		No	None
conference_description	text	latin1_swedish_ci		No	None
conference_date	date			No	None
papers_date	date			No	None
papers_reviewer	varchar(50)	latin1_swedish_ci		No	None

Figure (3) shows the conference table structure

3.2.2 Papers Table: which contain the information about the attached papers as shown in figure (4) below.

Field	Type	Collation	Attributes	Null	Default
papers_id	int(10)			No	None
papers_name	varchar(40)	latin1_swedish_ci		No	None
papers_type	varchar(20)	latin1_swedish_ci		No	None
papers_size	int(20)			No	None
papers_content	mediumblob		BINARY	No	None
papers_category	varchar(20)	latin1_swedish_ci		No	None
conference_id	int(20)			No	None
status	varchar(10)	latin1_swedish_ci		No	None
user_id	int(20)			No	None
date	datetime			No	None

Figure (4) shows the papers table structure

3.2.3 Users Table: which contain the information about the users (Authors), as shown in figure (5) below, it include the following fields:

user_id	int(10)			No	None
first_name	varchar(20)	utf8_unicode_ci		No	None
last_name	varchar(20)	latin1_swedish_ci		No	None
email	varchar(40)	latin1_swedish_ci		No	None
degree	varchar(50)	latin1_swedish_ci		No	None
password	varchar(40)	latin1_swedish_ci		No	None
user_type	varchar(13)	latin1_swedish_ci		No	None
active	text	latin1_swedish_ci		Yes	NULL
registration_date	datetime			No	None

Figure (5) shows the users table structure

### 3.4 Home Page Design

At the beginning when a nonregistered user visits the website or before logged in on pre-

registered account the following page would appear figure (6)

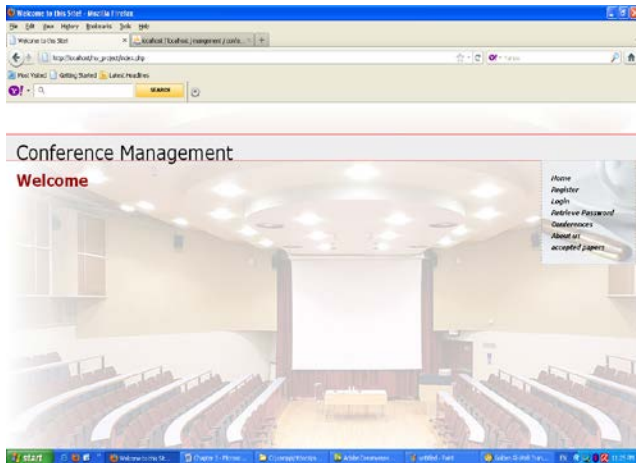


Figure (6) the Home page

#### 4. System organization chart & implementation

4.1 Administrator organization: Figure (7) below show the basic job of the system Administrator:

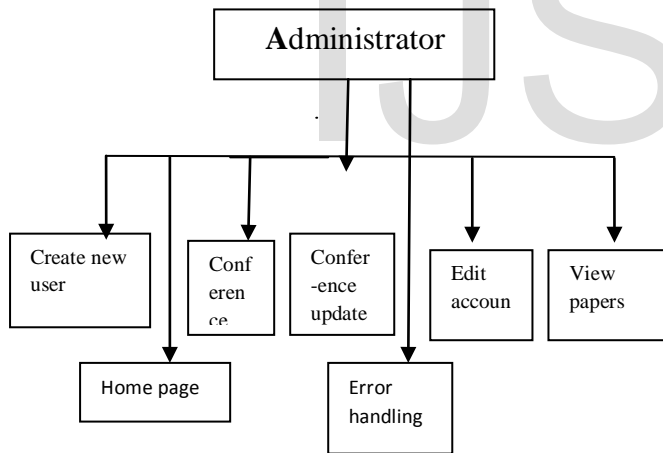


Figure (7) Admin organization chart

when the administrator wants to delete a paper he should submit the deletion confirmation as shown in figure (8) below .



Figure (8) confirmation form for delete paper  
-The administrator shows all users with their information as shown in figure (9) below.

Edit	Delete	First Name	Last Name	email	degree	Date Registered
		hanzak	jeffar	hanza_je@yahoo.com	B.Sc. In Information Engineering	March 15, 2011
		amyar	ahmed	amyar@yahoo.com	B.Sc. In Information Engineering	March 25, 2011
		mo'baz	mo'az	one_two@yahoo.com	B.Sc. In Information Engineering	March 25, 2011
		mehdi	abbas	mehdi@yahoo.com	B.Sc. In Civil Engineering	March 25, 2011
		hanza	jeffar	hanza_1202@yahoo.com	B.Sc. In Information Engineering	March 26, 2011
		mohamed	bader	mohamed@yahoo.com	B.Sc. In chemistry Engineering	April 11, 2011
		omar	hadi	omar_hadi@yahoo.com	B.Sc. In science of computer	April 20, 2011
		mohammed	gofan	mohammed_gofan@yahoo.com	B.Sc. In Information Engineering	April 20, 2011
		amjad	jeffar	amjad@yahoo.com	B.Sc. In Information Engineering	April 20, 2011
		osama	mohammad	osama@yahoo.com	B.Sc. In science of political	April 22, 2011

Figure (9) view user's link page

The administrator able to create an advertisement to particular conference by entering the information of that conference in the appropriate forms as shown in figure (10)

.Figure (10) create a conference forms.

Also when the administrator create the conference should assign at least one reviewer to that conference, when reviewer assignment made an E-mail automatically sent to each assigned reviewer as a notification as shown in figure (11).

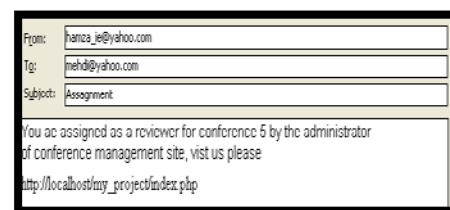


Figure (11) Reviewer assignment E-mail

Update a conference Link: show all conferences available on the web site as shown in figure (12), to update a particular conference Click on that conference and the form would appear as shown in figure(13) the administrator can change the conference date and group of reviewers.

Number	Conference_name	Conference_category	Conference_date	Last_date_to_receive_the_papers
1	conference 1	scientific	2011-01-01	2011-01-01
2	conference 2	scientific	2011-05-01	2011-05-20
3	conference 3	engineering	2011-05-02	2011-05-18
4	conference 4	engineering	2011-01-02	2011-05-15
5	conference5	scientific	2011-07-05	2011-06-05

Figure (12) update a conference link page

**Edit a Conference**

Date of conference / Day: [Month] [Year] The current date is // 2012-02-01

Last date for receiving paper / Day: [Month] [Year] The current date is // 2012-02-02

Select at least one reviewer

moa'taz maez-el

mehdi abbas

hamzah jaffar hatccob

[Update]

Figure (13) Edit conference forms.

- The administrator can create a user, reviewer and administrator by typing the following information first name, last name email and select user type (Administrator, reviewer and user) as shown in figure (14).

**Register**

First Name: [Text Box]

Last Name: [Text Box]

Email Address: [Text Box]

Administrator [Dropdown]

Administrator [Dropdown]

Reviewer [Dropdown]

User [Dropdown]

[Register]

Figure (14) create user page.

When the user created the following E-mail send to him as shown in figure (15).The message contain the activation code and the temporary password for that user

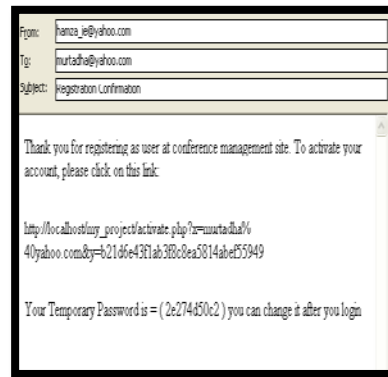


Figure (15) create user E-mail message.

4.2 Reviewer organization:: The reviewer can view the paper from Conference setup link then he makes his decision to accept a paper according to four conditions:

- a-The originality of the paper.
- b-The subject of the paper is up to date.
- c-The paper within the pivots of the conference.
- d-The paper not published previously.

Then he sends his decision to the Administrator, who tells the author the paper status by email. Figure (16) show the activity of the reviewer.

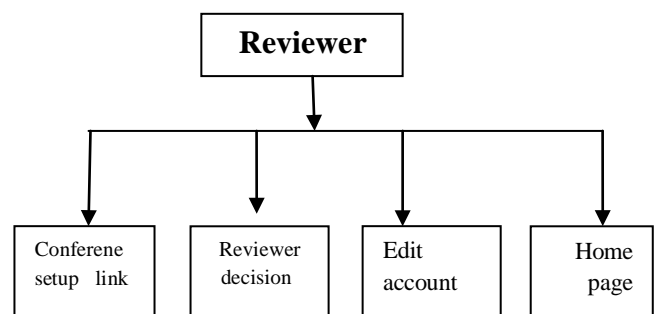


Figure (16) Reviewer organization chart

The reviewer view conference through Conference setup link as shown in figure(17) below

Number	Conference_name	Conference_category	Conference_date	Last_date to receive the papers
1	conference 1	scientific	January 01, 2012	January 01, 2012
2	conference 2	scientific	June 01, 2011	May 20, 2011
3	conference 3	engineering	June 02, 2011	May 18, 2011
4	conference 4	engineering	January 02, 2011	May 15, 2011
5	conference5	scientific	July 05, 2011	June 05, 2011

Figure (17) conferences link page

If the reviewer not assigned for the conference the link would make the reviewer able to participate in the conference as shown in figure (18).

Figure (18) participate a conference form.

The admin send to the reviewer to tell him the decision to assigned him as a reviewer to the conference as shown in figure (19) below.

Author name	Paper name	Type	Size	Date	View	Status
amyar ahmed	ASP	PDF	683 KB	April 28, 2011 09:04		pending
amyar ahmed	case	PDF	668 KB	April 28, 2011 09:04		pending
amyar ahmed	HTML	PDF	370 KB	April 28, 2011 09:04		pending
omar hadi	php	PDF	100 KB	May 03, 2011 09:05		pending
Mohammed Aziz	Javascript	PDF	406 KB	May 04, 2011 01:05		pending

Figure (19) papers for reviewer (with status pending).

After the viewer have decided ,an email is sent to the Author to notify him /her about the status of their paper as shown in figure (20) below.

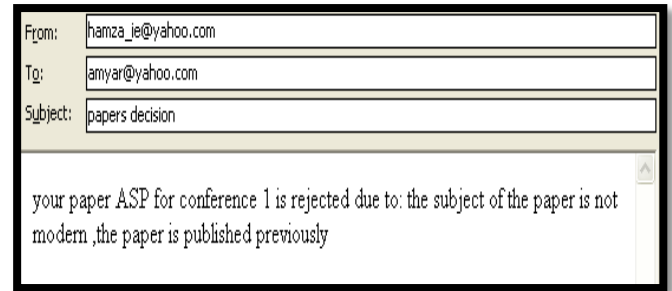


Figure (20) reviewer decision E-mail

### 4.3 Author organization: Figure (21) below show the activity of the user (author)

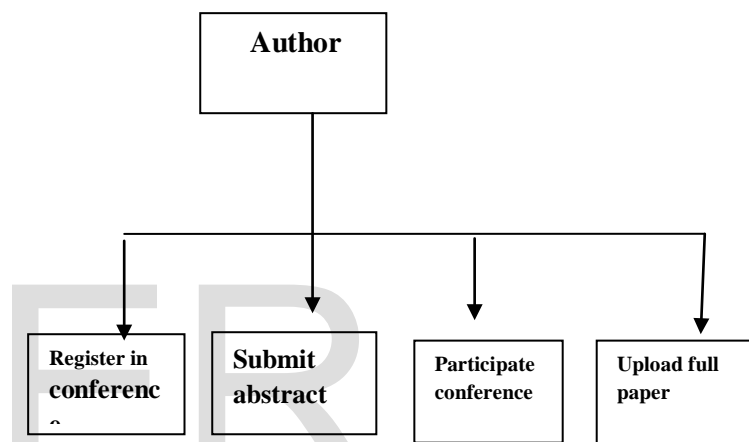


Figure (21) Author organization chart

**Register Page:** to register a new user should enter the full and correctly his/her information in the forms appear in the register page as shown in figure (22) below

Figure (22) shows the register forms.

When the user has been registered the activation code has been sent by the Admin to the user by his/her email address to allow him login on his/her account as shown in figure (23) below.



50	Mohamed	Aziz	biohazan@yahoo.com	7110e64409602ca264428	activation code	NULL
51	hasan	mohamed	hasan_mohamed@yahoo.com	7110e64409602ca264428		NULL
52	hamid	hameed	hamid@yahoo.com	7110e64409602ca264428002672a01c0c0200	user	f682074212e68712f166816cc00c0c0

Figure (23) shows the activation code in the database

Then a message appear to the new registered user as shown in figure(24) and the email message that sent to user email address shown in Figure(25) below.

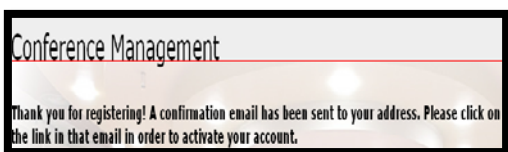


Figure (24) shows the user registered message

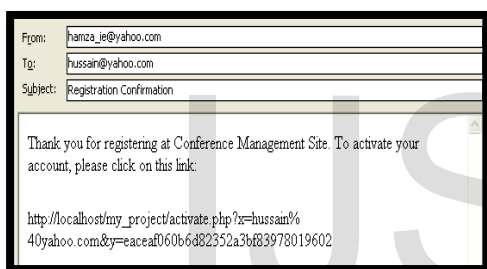


Figure (25) shows the email message that send to the new registered user.

### 5. Conclusion

The propose system (OCMS ) has been implemented using several internet programming languages such as HTML, CSS, JavaScript, PHP and MySQL. Dreamweaver was used to design a web page, Sessions was used to design user profile for private activities to each user. The architecture of the system and its internal modular structure is presented. Security features has been implemented (using SHA1 function) to keep Integrity of information in the system. CMS was tested using WAMP server. OCMS has proved to be a user friendly interface. The architecture of the system and its internal modular structure is presented.

### 6. Future works

1-Enables Author to publish his/her paper over the website.

2-Make the web site include a recorded conferences and available for download by the users.

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