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MyConfree: a web-based conference management system

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Abstract—Most research results are published in a conference as a scientific paper. Paper management in a conference comprises of a long and complicated process starting from call for paper until the publication of the conference proceeding. It also involves multiple parties, such as authors, reviewers, and committees. Furthermore, in a conference, there are many papers submitted by authors. Therefore, this final project has developed MyConfree, a web-based conference management system to facilitate paper management in a conference. MYCONFREE was developed using PHP programming language, Codegniter framework, and MySQL database. Hopefully, MyConfree is able to help users, because it provides features for paper management such as call for paper announcement, paper submission process, paper review process, author notification through email, and camera-ready version submission process. Moreover, MyConfree is an open-source licensed software.

Index Terms—conference, paper management, web-based, authors, reviewers, committees

I. INTRODUCTION

Currently there are many researches conducted by various institutions and individuals. Research is performed to solve a problem and to develop knowledge. One of the most important stages in a study is the dissemination of the results of the research. One of the media to disseminate the results of the research is through conferences or seminars. Conference organization is managed by a committee. The committee is responsible for organizing the conference, including managing all research papers that will be presented at the conference.

The paper management in a conference can vary from conference to conference. In general, the paper management process follows the following paths, i.e., call for paper, paper submission, paper review, author notification, ready-to-use version submissions, and proceedings. Judging from the paper management process in a conference, this process is quite long and complicated because it involves many parties (committee, author, reviewer). In addition, in a conference there are also many papers sent by the authors. Therefore, a good management is needed so that the paper management process can run smoothly. Furthermore, in a conference, the author or conference participant can come from various places, not only from around the venue of the conference, so that the system built must be able to facilitate them. Therefore, the system to be built must be web-based.

Based on the background that has been explained, a web-based system is necessary to facilitate the management of the papers during the conference. This study aims to build a web-based conference management system that can be used by conference organizers for paper management by providing full features for paper management. With the construction of this application, it can facilitate all users including committees, authors, and reviewers.

II. RELATED WORKS

One study related to the conference management system was compiled by Reymon Rotikan in 2016 in a study entitled "OPSS: Online Paper Submission System for Scientific Conference Activities" [4]. This study aims to create a paper management system for scientific conference activities that are easy to use, with few configurations, a simple interface, and features that are tailored to the needs.

Furthermore, conference management systems have also been developed including EasyChair [1], EDAS [2], and OpenConf [3]. These three systems provide several features for paper management at a conference including calls for paper, paper submission, paper review, author notification, ready version submission, registration, multiple file upload, multi-track, and multi-role. In addition, these three systems are multi-conference systems.

III. SYSTEM DESCRIPTION

A. General Description

MYCONFREE is a system built for paper management at a conference. The data entered in the system is the conference data, data announcements for calls for paper, papers data, camera-ready papers data, authors data, and reviewers data. This system has three categories of users, namely committee, author, and reviewer. The committee can login, manage conference data, announce the call for paper data, reviewer data, determine the paper received, and determine the reviewer for the paper. Author can register, login, manage their paper data, and manage their camera-ready paper data. Reviewers can login, and manage data from the review. The system can provide information about conference data, announcements of calls

for papers, reviewers data, papers data, authors data, camera-ready paper data, and review data. A general description of the MYCONFREE system is presented in Fig. 1.

B. Class Diagram

The class diagram presented in Fig. 2 is designed to describe the structure and relationships between classes. With this class diagram the relationship between the model, view and controller in the application can be described. In addition, methods or functions in the class diagram will also be implemented in each class, including the model class, view, and controller in the application.

C. Database Design

In the ER diagram presented in Fig. 3, there are four entities, namely *user*, *paper*, *conference*, and *announcement*, and there are three relations, namely *correspondent author*, *write*, and *review*.

IV. IMPLEMENTATION

A. Database Implementation

The results of the implementation of the database in this study consists of 6 tables, namely *conference* table, *announcement* table, *user* table, *review* table, *paper* table, and *write* table.

- 1) The *conference* table, consists of three attributes with *conference_id* as primary key
- 2) The *announcement* table, consists of four attributes with *id* as primary key
- 3) The *user* table, consists of 14 attributes with *user_id* as primary key
- 4) The *paper* table, consists of six attributes with *paper_title* as primary key
- 5) The *review* table, consists of six attributes with *user_id* and *paper_title* as foreign key
- 6) The *write* table, consists of three attributes with *user_id* and *paper_title* as foreign key

B. Model-View-Controller (MVC) Implementation

MVC implementation in the MyConfree application was performed using the Codeigniter framework. The framework generated three folders namely the *Model*, *View*, and *Controller* folders according to the components in the MVC model.

- 1) *Model*: The *model* is the data representation of the application. Models can relate directly to the database. The *model* folder contains classes and functions to manipulate data (insert, update, delete, search) and connect to the controller section.
- 2) *View*: The *view* is a display or user interface for each function of the application. *View* is used to receive and display data to the user.
- 3) *Controller*: The *controller* is all the functions in the application. The *controller* connects the *view* and *model*. Inside the *controller* contains classes and functions to process requests from a *view* into functions in the *model*.

C. Interface Implementation

Several interfaces of the MyConfree application are presented in Fig. 4 and Fig. 5.

The *submit a paper* interface presented in Fig. 4 can only be accessed by the author. The author fills the paper data and uploads the paper file. Author can also add another author of the paper but only if the additional author also has an account.

The *review a paper* interface is presented in Fig. 5. This interface is used to submit a review of a paper. The *review a paper* interface can only be accessed by reviewers. Reviewers add their review of a paper that has been submitted by the author. In addition, a reviewer can also provide recommendations about the paper.

V. TESTING

A. Testing Procedure

Testing is performed to test each function and process to uncover the possibility of errors occurring in each function. The description of the testing procedure are as follows:

- 1) Login as committee
 - a) Add and modify call for paper notification
 - b) Add, modify, and view conference data
 - c) View author
 - d) Determine the accepted papers
 - e) Add, modify, and view reviewer data
 - f) View papers and camera-ready papers
 - g) View reviews of papers
- 2) Login as author
 - a) Register to a conference
 - b) View conference data
 - c) Add and modify their papers
 - d) Add their camera-ready papers
 - e) View reviews of their papers
- 3) Login as reviewer
 - a) View conference data
 - b) Add, modify, and delete their reviews
 - c) View their review

B. Testing Results

The testing procedure was performed successfully. Each function generated the designated results.

VI. CONCLUSIONS

To be able to run smoothly, a conference requires a management system to manage the papers submitted by the authors. MyConfree application, a web-based conference management system, was implemented using PHP programming language, CodeIgniter framework, and MySQL database. MyConfree application can facilitate users in managing the paper in a conference, both paper management that has been sent by the author, management of the results of user reviews and data management so that it can help users manage a conference. Furthermore, from the tests that have been performed for each function, the results obtained are in accordance with the expected results.

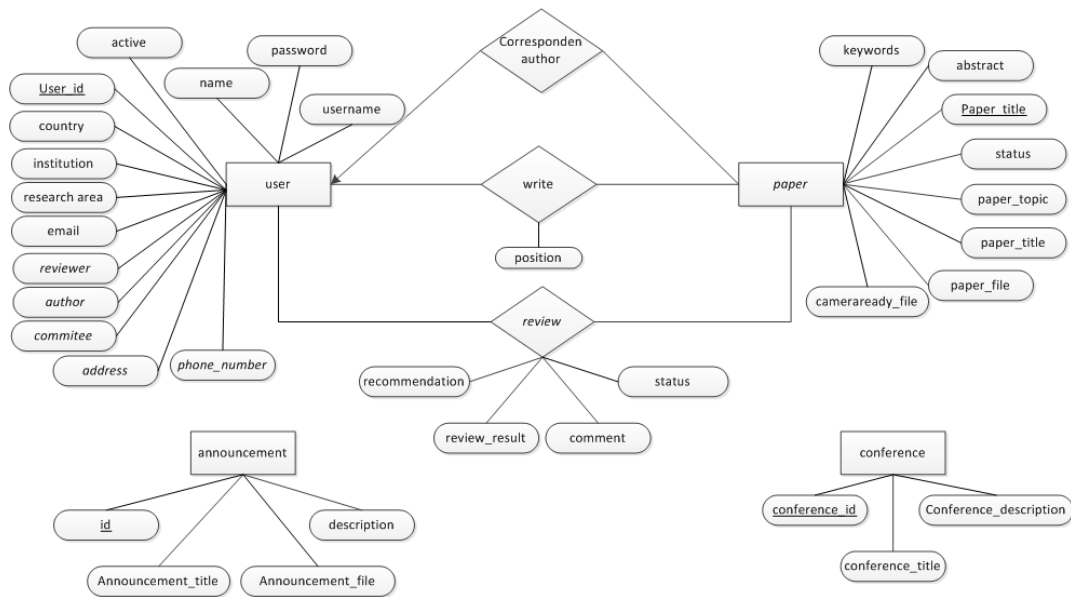


Fig. 3. MyConfree database design

Fig. 4. *Submit a paper* interface

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Fig. 5. *Review a paper* interface