CS 353 - Database Systems

Project Title: Scientific Papers Data Management System

Project Proposal

Group No: 2

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1 Introduction

This document provides a proposal of Scientific Papers Data Management System project. This project will be explained in different sections as written below. The main purpose of this project is the usage of database. The most important part of this proposal is the E/R model of the database that will be used to implement the project.

2 Project Description

Scientific Papers Data Management System is a database and management system for reading, publishing and reviewing scientific papers. Authors will be able to submit their papers to publications which will then be reviewed and decided to be published by reviewers and editors. Users can also subscribe to various publications and read papers. Users can search for papers via paper title or related keywords. System will use a login system that users can register using their email addresses and login using the aforementioned address with their passwords. Publications will have distinct ID's (Presumably ISSN ID). Papers submitted to conferences will be classified as proceedings and have chairs designated to them. Institution will be also linked to the papers they publish. Both institutions and authors will have citation and publication counts regarding their cited and published papers. Also users will be able to see all publications of a publisher.

2.1 Database Usage

To implement this project a well designed database is required. Since there are a lot of participants in the design such as the authors, editors, reviewers, subscribers etc. an automated database will be built to manage all the components. The database will support most of the operations which will be applied in the entities, extended and not limited to the basics of (CRUD), create, read, update and delete. This database will handle all the query operations and data entries.

3 Requirements

The requirements of this project will be divided into two groups explained below.

3.1 Functional Requirements

- The users of this application will be identified as author, reviewer, editor, chair of conference or subscribers.

- Each of the different types of the users will have different privileges, but all the users can comment on different papers.
- Users will login using their distinct e-mail addresses and passwords.
- Users will have access to any relevant information of different scientific papers.
- Users can obtain relevant information about specific authors, reviewers, editors and chairs of conferences.
- Users can download a paper.
- No private information regarding users will be shared.
- Users will be able to subscribe to different journals or/and magazines.
- All users will be notified about conferences and will be able to attend them.

3.1.1 Author

- Authors will be able to add their papers to the database.
- Authors will have access to the reviews of their papers.
- Authors should provide information about their current institution.

3.1.2 Reviewer

- Reviewers will be able to write reviews about papers.
- Reviewers together with the editors will decide on whether a submitted paper will be published or not.

3.1.3 Editor

- Editors will be able to edit papers in order for the papers to be published.
- Editors together with the reviewers will decide on whether a submitted paper will be published or not.

3.1.4 Subscriber

- Subscribers will be able to access all the papers published in the journals, magazines or conferences they have been subscribed to.
- Subscribers can comment to the papers and also read the reviews about a specific paper.

3.1.5 Chair of Conference

- Chair of conference will review the papers submitted to a specific conference (which are called proceedings) and will decide whether the papers will be published in the conference or not.

3.1.6 Publisher

- Publishers can sponsor conferences.

- Publishers can publish papers in publications (journals or magazines).

3.2 Non-Functional Requirements

- User interface will be simple and clear.
- Database will be able to handle multiple accesses and demands.
- While dependent on the quality of the user's connection, the response time of the system should be less than 100 milliseconds.
- The system should provide service continuously except predetermined maintenance hours.
- A crashed component should not affect other components.
- Data on the site will be ensured to stay up-to-date.
- The web application will be free to use.
- The web application will work on both desktop and mobile systems.

4 Constraints and Limitations

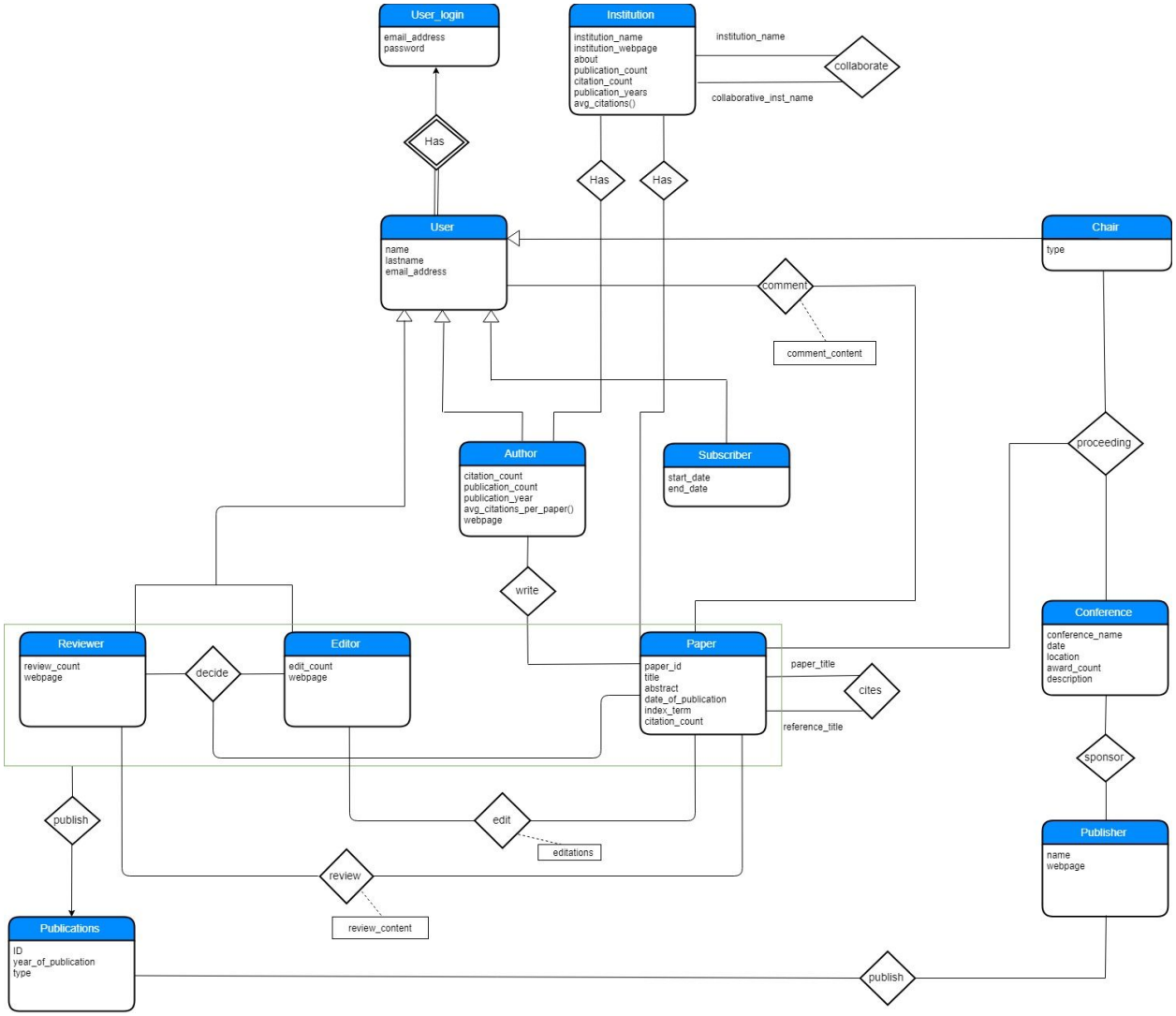
4.1 Constraints

- MySQL will be used to implement the database.
- PHP will be used to implement the functions of the application.
- HTML, CSS and JavaScript will be used for front-end design of the web application.

4.2 Limitations

- Only the users that have been registered and signed in can use the application
- An author must have at least one paper published
- An editor must have edited at least one paper
- A reviewer must have reviewed at least one paper

5 Conceptual Design



(We will print this separately in color so everything can be better read. You can see the XML file for now and make changes there)

6 Conclusion

Scientific Papers Data Management System is a web applications which helps people who are interested in reading scientific papers keep track of the latest published papers in conferences, journals or magazines. It also provides authors with a medium where they can share their papers with interested fellow authors and subscribers. The authors also can receive feedback from reviewers and editors. The users of this application will be able to find relevant information about specific papers, authors, institutions, etc.

This report was mainly concerned with explaining how will the database system be used in order for the application to be implemented. Furthermore the functional and non-functional requirements together with the constraints and limitations of the system were discussed and explained in detail.

7 Project Webpage

https://github.com/gerardhysa/CS353-project