Publications Portal for IIT (BHU) Varanasi

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REQUIREMENTS SPECIFICATION

Objective

The purpose of the project is to create a **Web based portal** for managing, aggregating, displaying and searching through **institute publications** including but not limited to, journal publications, conference publications, book publications etc. by the faculty, students or staff of IIT (BHU) Varanasi.

Formal Requirements

The following requirements lay down the specifications for the portal.

- **Publications:** The portal should keep records of all publications by faculty or students if the institute, along with the necessary information regarding the publication such as
    1. Name of the publication
    2. Authors of the publication
    3. A description (Eg. abstract in case of a research paper, brief preface in case of a book)
    4. It's type (Journal, conference, book, other etc.)
    5. Area of publication (Eg.Computer science, etc.)
    6. It's date of publication
    7. Where it was published (i.e which conference, journal or name of publisher)
    8. Domain (public or private)
    9. Other details (URL of publication if public, ISSN code etc.)
- This information regarding the publications should be publicly available with all the aforementioned details clearly visible along with appropriate links like links to go to the page of a particular author, link to go to a particular journal, link to see journals of a particular field etc.
- This information should be entered by the users while creating or adding a new publication to the record.
- **Authors:** The portal should keep the record of all those members of the institute (faculty or students) that have publications along with all the required info like
    1. Name of the author
    2. Institute (if other than IIT (BHU) Varanasi)
    3. Department or specialisation
    4. Contact details (Phone no., home page, etc.)
    5. All publications of this author

- This information regarding the author should be publicly available with all the aforementioned details clearly visible along with appropriate links like link to a particular publication's page among the many by the author, link to a particular department or area, etc.
- The information of author must be added while adding the very first publication by the author. The portal should ensure that for every author that has even one publication in the record, the details of that author exist.
- **Authentication:** The portal should be able to authenticate students and faculty members of the institute through their Email ID (@itbhu.ac.in), providing them with a dashboard to manage their publications including performing the following actions
    1. Add, remove or edit the details of publication(s) authored by them to the global record.
    2. Performs functions according to their authorisation (Eg. Managing the portal, proving edit requests, etc.)
- **Authorisation:** The portal should provide a hierarchical order of authorisation for managing the records according to the following description
    1. The database manager will have **complete and total** authorisation to add, remove or change any detail go the database.
    2. The faculty members will have the authorisation to create, remove or edit publications authored by them **only**.
    3. The students can add, remove or edit details publications authored by them **only provisionally.** All their requests will have to be accepted by the concerned faculty or the database manager to be accepted properly into global records and be publicly visible.
- **Searching**: The portal should be able to search the global records for publications efficiently and accurately by using keywords and filtering it through the following criteria
    1. Name of the publication
    2. Keywords in the description
    3. Place of publication (Name of journal, conference or publisher, etc.)
    4. Author's name
    5. Range of date of publication
    6. Publication area (Eg. Computer science, etc.)
- In addition to searching, the user must be able to generate a list of publications according to the aforementioned criteria. Eg. the user must be able to list all publications by an author, or all publications in a particular field, or in a particular journal.
- The portal should be able to programatically generate an XML dump of the the search result generated by the specified criteria on demand. The XML dump must contain the list of publications in a structured manner for easy parsing by automatic XML parsers for use in future applications or for reference.

Informal Requirements

Moreover, the portal should perform it's tasks in the most efficient manner and do it's functions sufficiently fast so that it is as highly usable as possible. It should also provide a simple, good looking and intuitive interface to it's users to help them use it in the easiest way.