CS3563: Assignment 1 (ER Diagrams)
Due Date: 20-February-2022 at 23:59 pm

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1 Requirements for Scientific Research Papers

Design an **ER diagram** for a scientific research paper inquiry website with the 'referential integrity' being maintained. In the next assignment, we will convert the ER diagram to a relational database and populate it with details pertaining to research papers.

- A *research paper* or article consists of a paper title, a list of authors, a publication venue, a date of publication, and an abstract.
- A single author can be co-author several research papers. A paper must have at least a single author and is allowed to have multiple co-authors.
- None of the fields related to a paper can be left blank.
- A single paper can be *cited by* (i.e., referenced by) several papers. A paper does not necessarily need to cite other papers, but it can also cite several papers.
- A publication venue like a conference or journal can be valid for a number of years.
- A conference or journal has to have at least one paper published in it. Otherwise, a conference/journal has several papers published in it every year.
- A paper submitted and published in a conference/journal cannot be published again under the same title in another venue.
- At a given venue / location, there can be several conferences conducted.
- The list of authors per paper has to be unique without author names being repeated.
- A paper is not allowed to cite itself in its list of references.

- The database must be able to support multilingual text, especially when dealing with author names. For example, special characters like ö and ő should be handled.
- The combination of paper title, list of authors, publication venue and date of publication should be unique.
- Each paper must keep track of the *corresponding author* (i.e., main author to whom all communications are to be addressed). Additionally, the order[1] in which authors appear on a paper is important and must be maintained.
- The author names have to be disambiguated in the database. This means that entries for author names like "John Mackey", "J. Mackey", and "Mackey, J." have to be converted to a canonical form and stored in the database, so we know that they mean the same person.

Note:

You need not restrict to the entities and attributes described here alone. You are encouraged to have an exhaustive ER diagram. Ensure you have designed your ER diagram maintaining all the required constraints and inheritance properties.

Submission:

You can use the website `https://erdplus.com/` to generate the ER Diagram. The functioning is pretty straight-forward and self explanatory.You might have to create an account in order to save your progress. *Only submit the final diagram in PDF format.* You are free to use some other tool, but no hand drawn diagrams will be accepted.

[1]The first author is the author who has had the maximum contribution, while the last author has the minimum contribution.