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OpenCourseWare

## **Database**

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### **Exercise 4 solution (Topic Relational Model (2.1))**



- EDITORIAL

It is desired to design a database to store information on editorial. An editorial dedicated to the publication of journals has decided to manage its publications.

Each of the journals is uniquely identified with a code. In addition, the title, the number of publications per year and the language are stored.

Each journal periodically publishes issues. In each issue, a series of authors collaborate with their articles. An author has an ID card, name, surname, address, and telephone. An issue is identified by the journal code along with a number. An article is identified with a code, also has a title and summary. Each author can write one or several articles, and an article can be written by different authors. An article can only be published in a single issue of a single journal.

The universities are subscribed to the journals. The following information is stored for each university: a unique code, name of the university, address, CIF of the university, contact person, contact email and optionally a telephone. A university can subscribe to one or more journals, with an initial date, and end date, and a specified price. Each journal can have several subscribing universities. The universities can unsubscribe from the subscription, and at another time re-register in the subscription. This historic information must be stored in the database.

The editorial has two types of collaborators. The authors already described above, and the editors. The ID card, name, surname, address and telephone number must be stored from the editors as in the authors. In addition, for the authors, a contact email will be stored, and for the editors, a fax will be stored. Each journal can have several editors.

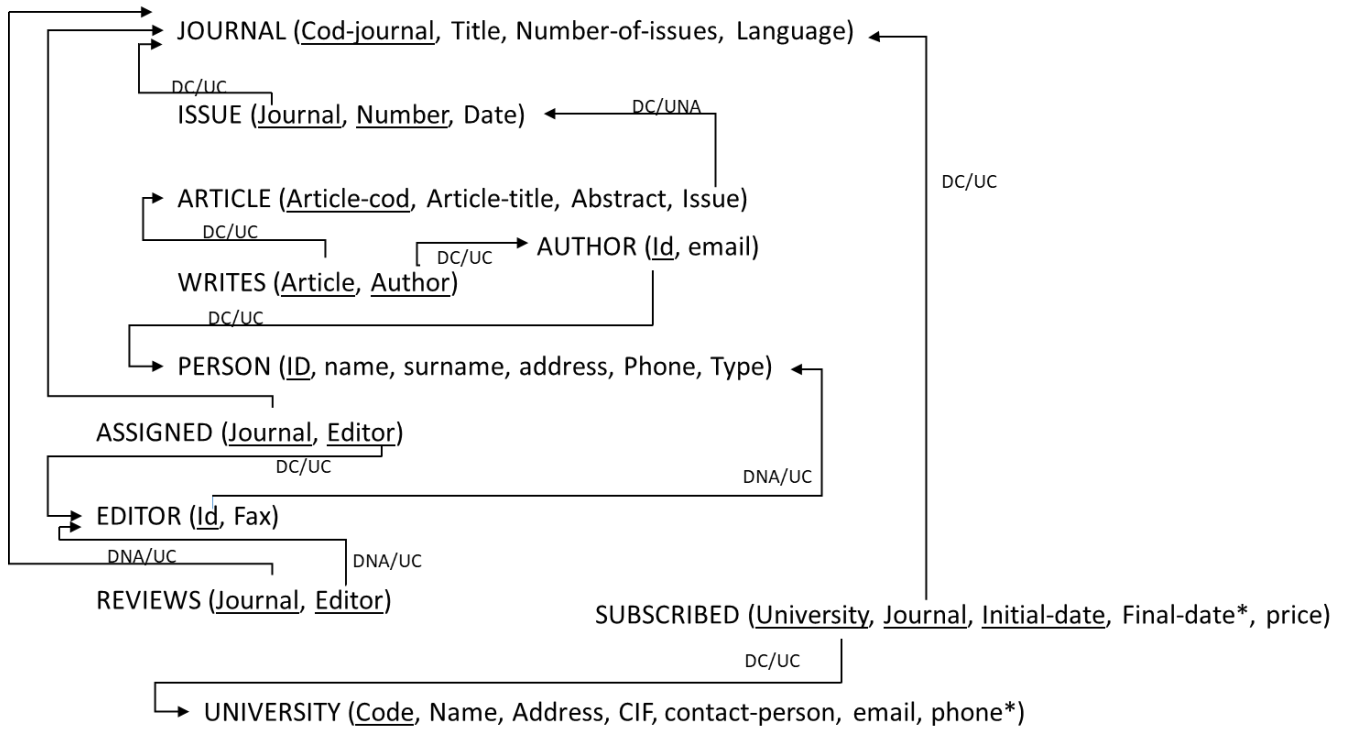
You must:

- Obtain the relational schema/diagram according to requirements with the primary and alternative keys. Indicate the foreign keys with their delete and update options.
- Write additional semantic assumptions to the statement, if needed
- Write additional semantic assumptions to the scheme, if needed

### SOLUTION

Partial solution, some semantic assumptions are missing.

A possible solution is:



Additional semantic assumptions to the scheme

PERSON.Type={author, editor}