

**Database Management Systems (DBMS) - SQL using MySQL Server**

The following statements describe the functionalities of a book publishing company. Consider this case study and practice the given activities in the assignment.

- A book publishing company produces books on various subjects. The book can be uniquely identified by a particular number and same book may be published several times with different edition numbers and the year published. (book identifier is same for different editions of a same book)
- One book is written by a single author who specializes in one particular subject.
- A publication covers essentially one of the specialist subjects and is normally written by a single author.
- To improve their competitiveness, the company tries to employ a variety of authors, more than one author being a specialist in a particular subject.

1. Identify the entities in the above case study.
2. Figure out the above identified entities with possible attributes and primary keys.
3. Draw an Entity-Relationship Diagram to depict above company.
4. Let's decide attributes to implement together, after that map finalized ER to Relational.

**Implement and practice the above case study with the MySQL server using SQL statements as follows.**

5. Log on to the MySQL server using **root** account.
6. Create a database called **book** to store the information of publications.
7. Using your ER diagram, Create suitable table structures for the identified entities with possible attributes and primary keys.
8. Insert meaningful data sets into your tables with a view to produce the results for following questions.  
(**Note:** You are allowed to do the necessary changes to the table structures and data insertions to those tables while answering for the following questions)
  - a. Find the subject names published by the book publishing company.
  - b. Find the names of authors who have written books for the company.
  - c. Retrieve the books published by company
  - d. Display the available books with the published year according to the ascending order of the book name. (Same books with different editions should be ordered according to the descending order of the edition number)
  - e. Retrieve all the book names which are relevant to "Computer Science" subject.

- f. What are the subject areas which have been published by the company in year 2005?
- g. Find the details of books written by the author “Jakman T.”.
- h. How many different editions have been published for the book named on “Introduction to C”?
- i. What is the maximum edition number available for the book on “Introduction to C”?
- j. Display the records of authors who have specialized in the “Computer Science” subject.
- k. For each author, display the author name vs. number of books published by that author.
- l. Find the codes of all books which have more than one edition.
- m. Find the name of authors who have written more than one book.

's01'	'Mathematics'
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's02'	'Computer Science'
's03'	'Physics'

'a01'	'Jakmon T.'	's02'
'a02'	'Adam J.'	's03'

'b01'	's02'	'a01'	'Introduction to c'	2000
'b02'	's03'	'a02'	'Special Relativity'	2004
'b01'	's02'	'a01'	'Introduction to c'	2008
'b03'	's02'	'a01'	'Data Structures in c'	2005

'b01'	1
'b01'	2
'b02'	1
'b03'	3