CS 166: Lab 4 Assignment

The Relational Algebra & SQL

Table Definitions:

* BOOKS(DocId, Title, Publisher, Year)
* STUDENTS(StId, StName, Major, Age)
* AUTHORS(AName, Address)
* borrows(DocId, StId, Date)
* has-written(DocId, AName)
* describes(DocId, Keyword)

ER Diagram:

Diagram

Description automatically generated

1. List the year and title of each book

* Relational algebra
* SQL

2. List all information about students whose major is CS

* Relational algebra

3. List all students with books they can borrow

* Relational algebra

4. List all books published by McGraw-Hill before 1990

* Relational algebra

5. List the name of those authors who are living in Davis

* Relational algebra

6. List the name of students who are older than 30 and who are not studying CS

* Relational algebra

7. Rename AName in the relation AUTHORS to Name

* Relational algebra

8. List the names of all students who have borrowed a book and who are CS majors.

* Relational algebra

9. List the title of books written by the author “Jones.”

* Relational algebra

10. As previous, but not books that have the keyword “database”

* Relational algebra

11. Find the name of the youngest student

* Relational algebra

12. Find the title of the oldest book

* Relational algebra