SouthWest University

Lab report

Couse name Fundamentals of Database Systems

Semester 2023 - 2024 - 2

Grade 2022 Class CS4

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| Lab 1 | |  | | | |
| Experimental types | | ☑validation experiment  □comprehensive experiment  □design experiment | | | |
| * Goal: * Practice starting the MySQL service; connecting to MySQL; creating a database; creating tables; updating tables and deleting tables. * Practicing Select and Creating view * Practicing insert, update, delete and constraints | | | | | |
| * Experimental contents and process. You should list the source code and screen shots showing the output results of your code.   First of all, I created a database schema. | | | | | |
| Then I created four tables with their own attributes.      After that, I added foreign keys to link tables together.        That’s all for task 1.  Then I imported some data from a data analysis competition.  Before doing import, I created a schema and table with columns.    Then I used codes to import the data:    Use SELECT term to inspect data:    Selecting attribute:    Then I did some random operation using Inner join and On.    Practicing using group by:    Using Union:    Adding aut0\_increment:  Creating view:      Then I inserted 2 tuples into table “Booktype”:    Then, I used insert command to insert a tuple in table “books”, with regard to foreign key:    By using create view, I created a view selecting two attributes from the table books:    By using update keyword, I updated an attribute.    Adding index to table ‘books’:    Adding a new trigger to table books:    Dropping a trigger: | | | | | |
| * Experimental summary and analysis.   In these weeks, I’ve learnt many operations about databases. Now I know how to create schemas and tables, adding restraints, adding triggers and associating tables by using foreign keys. I’ve also run into troubles like failing to import data from csv files, but at last I finally managed to deal with them. For example, sql denied the import operation because the security of the file cannot be verified. So I used codes like this:  To find the secure file directory and added my path into the configuration file.  Besides, I also met other issues like failing to update values because of the security settings. It turns out that turning this setting off may help, otherwise you must name the primary key of a tuple before updating or deleting it. | | | | | |
|  | Criteria | | | | scale |
| Goal | | | | A B C D E |
| Process | | | |
| Design | | | |
| Algorithm | | | |
| Code | | | |
| Data/Results | | | |
| Summary | | | |
| Written | | | |
| Score | |  | Tutor Signature：Quan Zou | |
| * Lab Evaluation Criteria   A: This lab is exceptional, working and meeting all of the specifications.The code is exceptionally well organized and very easy to follow.The code could be reused as a whole or each routine could be reused.The documentation is well written and clearly explains what the code is accomplishing and how.The program was delivered on time.The code is extremely efficient without sacrificing readability and understanding.  B: This lab is very good--works and produces the correct results and displays them correctly. It also meets most of the other specifications. The code is fairly easy to read. Most of the code could be reused in other programs. The documentation consists of embedded comment and some simple header documentation that is somewhat useful in understanding the code. The program was delivered within a week of the due date. The code is fairly efficient without sacrificing readability and understanding.  C: This lab is adequate, with only minor deficiencies. The program produces correct results but does not display them correctly. The code is readable only by someone who knows what it is supposed to be doing. Some parts of the code could be reused in other programs. The documentation is simply comments embedded in the code with some simple header comments separating routines. The code was within 2 weeks of the due date. The code is brute force and unnecessarily long..  D: This lab shows some effort but has at least one major deficiency.The program is producing incorrect results. The code is poorly organized and very difficult to read. The code is not organized for reusability. The documentation is simply comments embedded in the code and does not help the reader understand the code. The code was more than 2 weeks overdue. The code is huge and appears to be patched together.  E: This lab is poorly written and shows very little effort or understanding. | | | | | |