Data Mgt & Database Design

INFO 6210 Fall 2019

Assignment : Lab 1

Question 1 :

图片包含 屏幕截图

描述已自动生成

Question1 ERD

图片包含 屏幕截图, 室内, 监视器, 墙壁

描述已自动生成

Question1 Screenshot

Question 2 :

With this design, we need to do few other things to ensure the data integrity and business rules can still be enforced. Firstly, we want to make the original key attributes mandatory to be more specific whenever a tuple is entered in patient, we want to ensure PatientID and TestID are entered;

Secondly, we want to set up the referential integrity for the original key attributes that means whenever the original key attribute is entered, we want to look up the value in the related parent entity to ensure it is a good value;

Finally, we want to make sure the combination of the original key attribute is unique, we can create a unique index on the combination of the original key attribute to enforce it.

Question 3 :

图片包含 屏幕截图

描述已自动生成

Question3 Database

图片包含 屏幕截图

描述已自动生成

Question3 Result 11005 & 11006

图片包含 屏幕截图

描述已自动生成

Question3 Result 11007 & 11008

With the code part is :

/\*\*

\* \_id - The id of the group.

\* field1 - The first field name.

\*/

{

\_id: "$CustomerID",

totalPurchaseValue: {

$sum: "$OrderValue"

},

totalPurchaseQuantity: {

$sum: "$TotalQuantityInOrder"

}

}

With the result is :

For customer 11005 value : 8973 / count : 6;

For customer 11006 value : 8971 / count : 5;

For customer 11007 value : 9073 / count : 8;

For customer 11008 value : 8957 / count : 7;