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| **实验报告** | | | | | | 次数 |  |
| 实验项目名称 | **数据库完整性应用** | | 姓名 | KAFLE SAMRAT | 日期 | 2021-06-04 | |
| 教师评语 |  | | | | | | |
| 实验成绩： | | 指导教师（签字）： 年 月 日 | | | | | |
| 1. 实验目的与要求   理解和掌握数据库完整性的含义、作用和实现方法等。   1. 实验内容   使用T-SQL语句，对向实验一中建立的数据库YGGL的三个表Employees、Department和Salary三个表进行UNIQUE约束、CHECK约束等的创建和应用。  （1）使用CREATE TABLE语句为创建一新表Department2，包含DepartmentName和Manager两个属性，并为Manager列定义unique约束。  （2）创建新表SC，包含“学号”、“课程号”和“性别”三列，（“学号”、“课程号”）定义为主键，作为表的约束，并为其命名；性别只能包含男或女。  （3）向SC表插入数据，“性别”列插入“男”和“女”以外的字符，查看会发生什么情况。  （4）创建新表Salary2，结构与Salary相同，但Salary2表不允许OutCome列大于InCome列。  （5）向Salary2表中插入数据，查看OutCome值比InCome值大会发生什么情况。  （6）创建一个新表Employees2，只考虑“员工编号”和“出生日期”两列，出生日期必须晚于1980年1月1日。  （7）使用ALTER TABLE语句向Salary表中的EmployeeID列上添加一个外键，要求当Employees表中要删除或修改与EmployeeID值有关的行时，检查Salary表中有没有与该EmployeeID值相关的记录，如果存在则拒绝更新Employees表。   1. 实验内容和结果   Create a new TABLE Department2 with attributes DepartmentName and Manager, and define UNIQUE constraint for the Manager column.      (2) create a new table SC, containing "student number", "course number" and "gender" three columns, (" student number ", "course number") define the primary key, as a constraint on the table, and name it; Gender can only include male or female.  use YGGL;  go  create table SC (sno int not null,  cno int not null ,  gender char(10) not null,  constraint S\_C primary key (sno,cno),  check (gender in ('Male','Female')));      (3) Insert data into the SC table, and insert characters other than male and female in the "gender" column to see what happens.  It shows following error:      4. Create table Salary2 with the same structure as Salary, but do not allow the value of OutCome column is to be larger than the the value of InCome column.      (5) Insert data into the Salary2 table to see what happens when the OutCome value compares with the InCome value.  It shows following error:      (6) create a new table Employees2, only consider "employee number" and "date of birth" columns, the date of birth must be later than January 1, 1980.    (7) using the ALTER TABLE statement to the Salary the EmployeeID column in the TABLE to add a foreign key, requirements in the Employees TABLE to delete or modify the row is related to the EmployeeID value, check the Salary have the EmployeeID value related records in the TABLE, Refuse to update the Employees table if it exists.  use YGGL;  go  ALTER TABLE SALARY  ADD FOREIGN KEY (EMPLOYEEID)  REFERENCES Employees(EMPLOYEEID)  ON DELETE RESTRICT  ON UPDATE RESTRICT; | | | | | | | |
| 实验总结及体会：  Through this experiment, I learned the basic database SQL commands, When adding a primary key, the primary key index is automatically created. Ordinary indexes need to be added and specified manually. The most efficient index in the table is the primary key index. | | | | | | | |