Course Oracle-SQL

Level Oracle L2

Topic Oracle Database normalization and Schema management.

There is a small institute called Joker IT learning services, which wants to offer some courses online. But it is finding difficulty in creating database and manage the data accordingly.

They have three users as

Admin

Manager

Clerk

Admin will be able to access all the tables with complete access privileges.

Manager will have access to all the data except deleting any record. Delete access privilege is only with the admin.

Clerk can only select and insert the data in to all the tables

The table structure and other details as per Joker are as follows:

* We need to maintain all the student details like name, tellno of the course, he has joined and the fees.
* Make sure that the roll no is automated with the help of sequence.
* Design some insert statements and the update statements for the Clerk.
* All the design of the tables can be as per the below mentioned pointers and this is just a suggestion if required, you can further normalize them.
  + Each student can register for multiple courses
  + Each student must appear for the exam and the marks need to be recorded
  + Every student will only be allowed for exam only when they pays the fee

Table name: Student

Column details rollno number primary key

Name varchar2(10)

DateOfBirth date

Telno varchar2(10)

Table name: course\_details

Column details: course ID number primary key

Coursename varchar2(10)

Fees number(5,2) should not be less than 100

Table name : register\_course

Column details register\_id number primary key

Rollno number foreign key student table

Courseid number foreign key course

DateOfRegistration date by default system date

Table name Exam

Column details examid number

Rollno number

Dateofexam date

Score number

As Joker could not provide information about the foreign key and primary key information, you can add as per your design at physical level.

Manager wants to have some of the view as per his requirement

1. He wants to know what is the total fees collected in a month. (maybe you can use &variable to pass the month and year and get the total fees collected)
2. He wants to see the details of student like student name, course name registered and fees paid and marks

Clerk wants all the insert statements, provided to him so that he can execute the same and insert multiple values into all the tables

Clerk would be able to change the tellno of the student on request from student. So, provide him a command where he can update the tellno of the student.

Create synonyms and views as per the requirement for each user. As all the tables and data should not be accessed to all kinds of users so, you may need to create a master schema with all the tables and give access to the respective users.