Exercise 1

Exercise

SqlServer 2020

Aitrich Technologies Pvt. Ltd.

Exercise 1

Introduction

This document is a specification for the exercise problems for the topic, SQL SERVER 2008. It tests the student's level of knowledge and understanding of the topic.

This document consists of a set of problems that the student needs to solve and submit to the trainer, in the format specified in the Deliverable section of this document.

This exercise is to be performed only after the theory and workshop sessions of the topic; hence the student would have enough knowledge and confidence on the topic. Ideally, the student should be able to solve the problems himself; however, he can seek the assistance of the trainer or lab assistant in case he is stuck with a specific problem.

Objectives

The objectives of this exercise are to test the student's understanding and knowledge on the topic, and to allow him to re-iterate his understanding by applying that knowledge in a software problem, so that he can use it in the future endeavors.

Problem: University System

Consider the tables listed below of University System.

Table - University	
UID (primary key)	int
Name	varchar (20)
Chancellor	varchar (20)

Table - College	
CID (primary key)	int
University (foreign key references UID in University table)	int
Dean (foreign key references DeanID from Dean table)	int
Name	varchar (20)

Table - Dean	
DeanID (primary key)	int
Name	varchar (20)
DateOfBirth	DateTime

Table - Department	
DID (primary key)	int
College (foreign key references CID in College table)	int
Name	varchar (20)

Table - Professor	
PID (primary key)	int
Department (foreign key references DID in Department table)	int
Name	varchar (20)

Table - Course	
CourseID (primary key)	int
Department (foreign key references DID in Department table)	int
Name	varchar (20)

Table - Subject	
SubjectID (primary key)	int
Course (foreign key references CourseID in Course table)	int
Professor (foreign key references PID in professor table)	int
Name	varchar(20)

Table - Student	
StudentID (primary key)	int
Department (foreign key references DID in Department table)	int
Name	varchar (20)
DateofEnrollment	smalldatetime
TelephoneNumber	varchar(20)

Table - Student_Registration	
Student (foreign key references StudentID in Student table)	int
Subject (foreign key references SubjectID in Subject table)	int

Questions:

1. Create a user
2. Create a database named university_information
3. Create the tables (given above) with appropriate fields and constraints.
4. Add records to every table.
5. Create a view for listing the students and their courses.
6. Update the name of the Dean ‘Renuka Sharma’ to Renuka Mukerjee’.

7. Update the phone number of student ‘Kumar Varma’ to ‘8105874639’
8. Write the query
    1. To list all students, colleges, courses and professors
    2. To list all professors of MCA department.
    3. To list all courses taught by Professor ‘George Peter’.
    4. To list all students group by department
    5. To list all colleges in descending order of their names
    6. To list all Subjects under course “B.Tech Computer Science”
    7. To count the number of courses has computer subject.
    8. To list all teachers group by subjects.

Deliverable

The queries and answers for the questions are to be done in sqlserver 2008.

Demo

The student should demonstrate the diagram to the instructor on a PC, by explaining each feature one by one.

Conclusion

The completion of this exercise should re-iterate the student's confidence on database design along with the queries related to SQL SERVER 2020. Please make sure you have gained enough confidence to move on.