Database Title: Database for keeping Academic Records at DAIICT

Scope of Database:

It involves keeping records of all academic details of students: courses take, grades earned, spi of every semester, and cpi at the end of every semester. Details of courses offered in each semester, instructor associated with a courses offering.

Description:

[Note: Objective of description is to identify various *data items* that need to recorded as part of the database]

DAIICT offers a number of ug and pg programs. Students are admitted under various programs. One student can study in one program only at a time. An Academic year typically begins in the month of last week of July and ends around middle of july next year. For this yeaq academic years are represented by start-year and end-year; for example this is Academic year 2011-12. For database purposes we can use only start year to represent an academic year; that is academic year 2011 (represents 2011-12).

An academic year consists of three semesters named as Autumn, Winter, Summer. In every semester a number of courses are offered. Each offering gets an instructor assigned. A number of students register in a course-offering. At the end of semester grades are awarded to every registered student in all offered courses in a semester. Based on grade student earn and credit of the courses, SPI of student is computed for that semester, and also resultant CPI updated.

[Note: you do not have to know the formula for computing SPI and CPI, here, and that is not really database but a process that manipulates database, while designing the database we are not concerned about processes, we are only concerned about the fact that needs to be recorded in the database]

For students, typically we record attributes: Student ID, Student Name, Batch (i.e., year of registration), and CPI. For each course we need to record CourseNo, Course Title, and Credit. Programs at DAIICT have codes like '01' for B.Tech.(ICT), '11' for MTech, '12' for MScIT, or so

Following are sample queries, the system is expected to answer-

[Note: Listing down queries like this further helps in identifying data items for the proposed database]

1. Retrieve all students of B.Tech.(CS) batch 2007 hyaving CPI >= 7.0
2. Retrieve all students of B.Tech.(CS) batch 2007 not having any F grade.
3. Retrieve all students of B.Tech.(CS) batch 2007 having SPI >= 6 in all semesters.

4. Retrieve all students (StudentID, Name, TotalCreditTaken) for B.Tech.(CS) batch 2007 who have taken less than 10 or more than 20 Credits in current semester

5. Retrieve all students (StudentID, Name, TotalCreditTaken) for given Batch, Academic Year, Semester (Autumn|Winter|Summer), and ProgID

6. Retrieve all students (Id and name) who got more than three F grades.

7. List all the courses taught by Prof 'AB Joshi' in year 2006 and 2007

8. For each course taught by Prof 'AB Joshi', retrieve the course number, semester, year, and number of students took the course.

9. Retrieve Name of faculty who took more than one course in a semester, along with the information of courses and semester.