DBMS LAB

ASSIGNMENT ON Developing Database Oriented Application

CO4: Develop GUI based database oriented application

1. Consider list of departments (dept code and name), list of students (roll, dept code, name, address and phone) preloaded in array. Now develop an application **(use suitable front end tool and database at backend)** for the following.
User may add/search/edit/delete/display all student record. While adding, ensure roll must be unique, a list of dept name to be shown from which user selects one and corresponding dept code to be stored. On collecting the data user may choose CANCEL/SAVE button to decide course of action. For searching user provides roll. If it exists details are shown else suitable message to be displayed. To delete user provides roll. If it does not exist then suitable message is to be displayed. To edit also user provides roll. If it exists user may be allowed to edit any field except roll. User may select CANCEL/SAVE to decide course of action. To display all records, at a time five records are to be shown. IT will also have PREV/NEXT button to display previous set and next set respectively. When first set is displayed PREV button must be disabled and at last set NEXT button must be disabled.

2. Consider the database you have designed earlier (Assignment 3) for the following system.
In a library, for each book book-id, serial number (denotes copy number of a book), title, author, publisher and price are stored. Book-id and serial number together will be unique identifier for a book. Members are either student or faculty. Each member has unique member-id. Name, e-mail, address are also to be stored. Maximum number of books that a member can retain depends on member type. There may be other such parameters that depend on member type. Design should be flexible. For any transaction (book issue or return), members are supposed to place transactions slip. Each Transaction will have a unique id. User will submit member-id, book-id, and serial number (only for book return). Design and create the tables to store the book, member and transaction information. When a book is issued to a member a field like, To_Be_Returned_By has to be set as DT_Issue + 7 days. At the time of book return, DT_Return will store the actual return date. While new book arrives, serial number will be last serial number for the Book-id +1. System should also keep track of the status of each physical book -- whether issued or available.
Develop an application **(use suitable front end tool and database at backend)** to allow book, member and transaction management.