

Assignment

I. Given the tables below, draw the ERD.

Faculty (FacultyID, FacultyName, DeanName, OfficeNo)

Department (DeptID, DeptName, HeadName, OfficeNo, FacultyID)

Student (StudentID, StudentName, Gender, DOB, PhoneNo, Address, Year, Generation, Degree)

StudentDetail (StudentID, DeptID, EnrolledDate)

Teacher (TeacherID, TeacherName, Gender, DOB, PhoneNo, Address)

TeacherDetail (TeacherID, DeptID)

StudentTeacher (StudentID, TeacherID)

Course (CourseID, CourseName, Credit, Type, DeptID)

CourseDetail(CourseID, StudentID, Score, Grade)

Account (AccountID, Username, Password, PhoneNo, Role, UserID (TeacherID/StudentID))

TeacherCourse(TeacherID, CourseID)

Use the following relationships:

Faculty and Department	1 – has – M
Department and Student	M – has – M
Department and Teacher	M – has – M
Department and Course	1 – has – M
Student and Teacher	M – studies with – M
Student and Course	M – studies – M
Student and Account	1 – has - 1
Teacher and Account	1 – has – 1
Teacher and Course	M – teaches – M

II. Write the following programs. Note that you MUST use files to store the data.

1. Manage Faculties
 - CRUD (Create, Read, Update, and Delete) operations.

Menu:

- a. Add a new faculty
- b. Search a faculty by id
- c. Update a faculty
- d. Delete a faculty by id

2. Manage Departments
 - CRUD operations
 - Display all departments belong to a faculty. (Input a faculty's id)

Menu:

- a. Add a new department
- b. Search a department by id
- c. Update a department
- d. Delete a department by id
- e. Display all departments belong to a faculty

3. Manage Students
 - CRUD operations
4. Enroll Students into Departments
 - Enroll a student into a department.
 - Remove a student Display all students studying from a department.
 - at a department.
5. Manage Courses
 - CRUD operations
6. Manage Teachers
 - CRUD operations
 - Display all courses taught by a teacher.
7. Assign Courses to Teachers
 - Assign a course to a teacher
 - Remove a course from a teacher
 - Display all courses taught by a teacher.
8. Create Teacher and Student Account
 - Create a teacher account
 - Create a student account
9. Login

If login is successful, display Hi [Teacher / Student]: [Name].

Deadline: 28.02.23, 11:59PM. Please turn in your solution via MS Teams.