DATABASE MANAGEMENT SYSTEMS
ASSIGNMENT 3
COURSE MANAGEMENT SYSTEM

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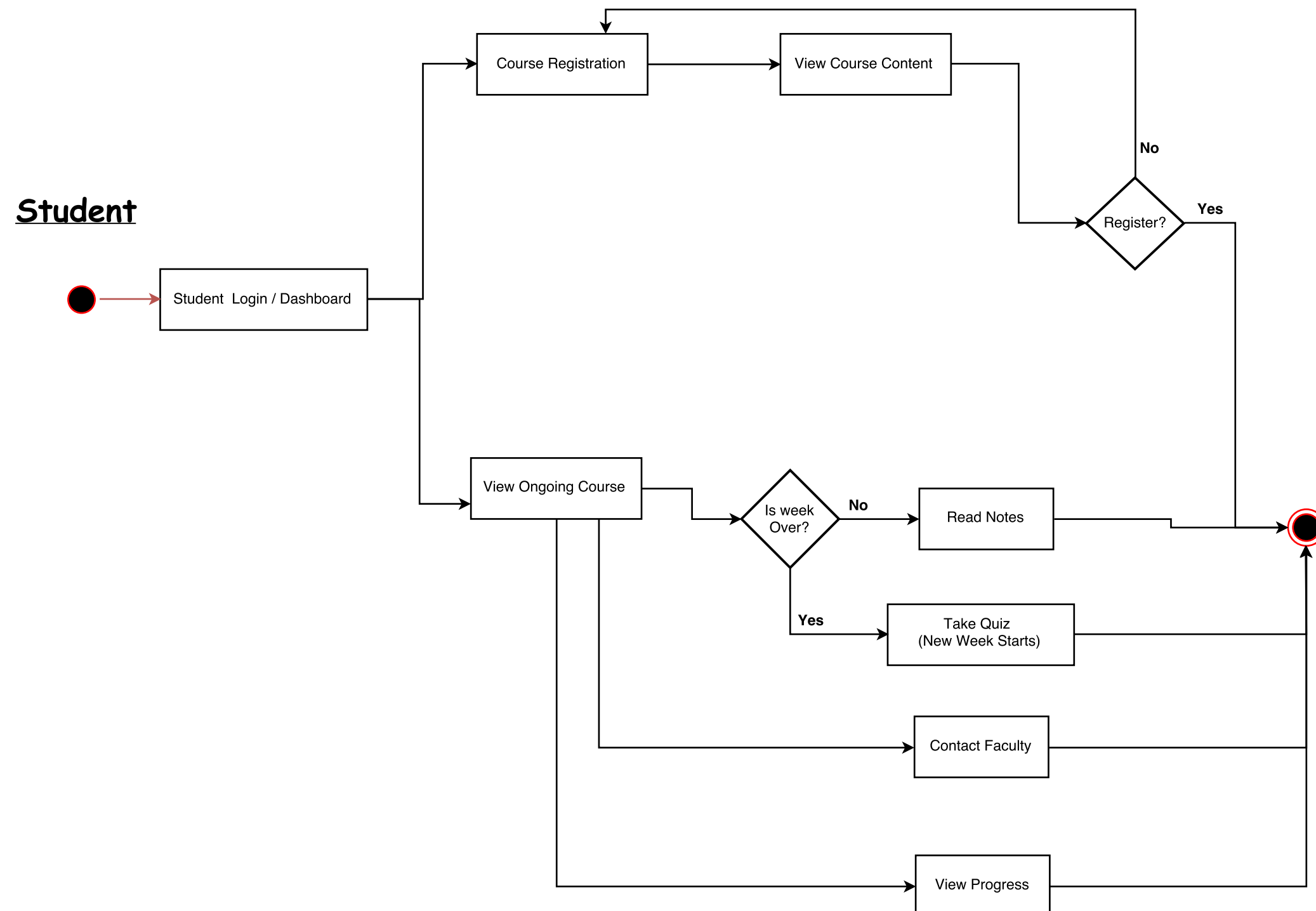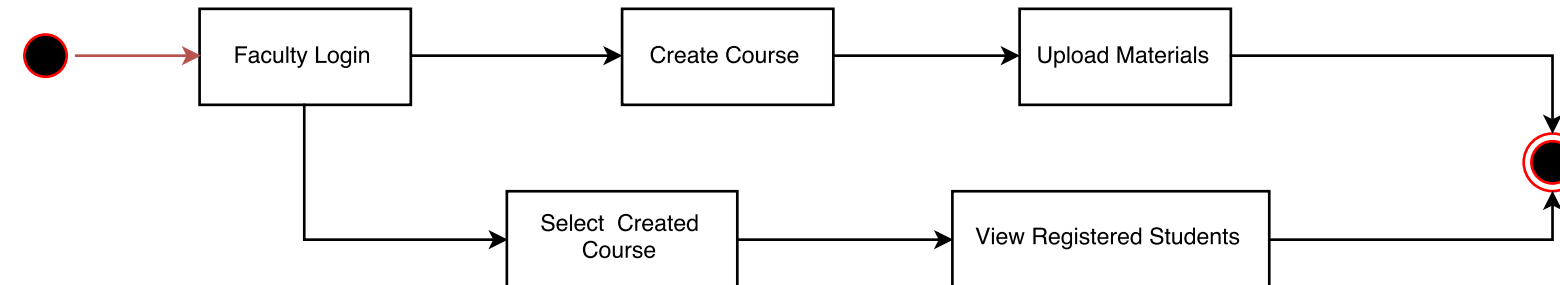
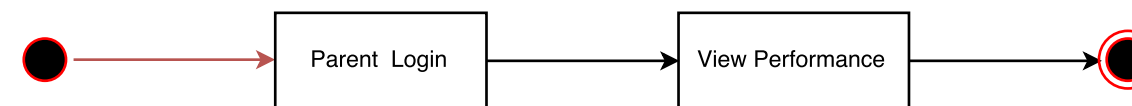Vishwas Jain   13CS10053   Sayan Mukhopadhyay   13CS30028
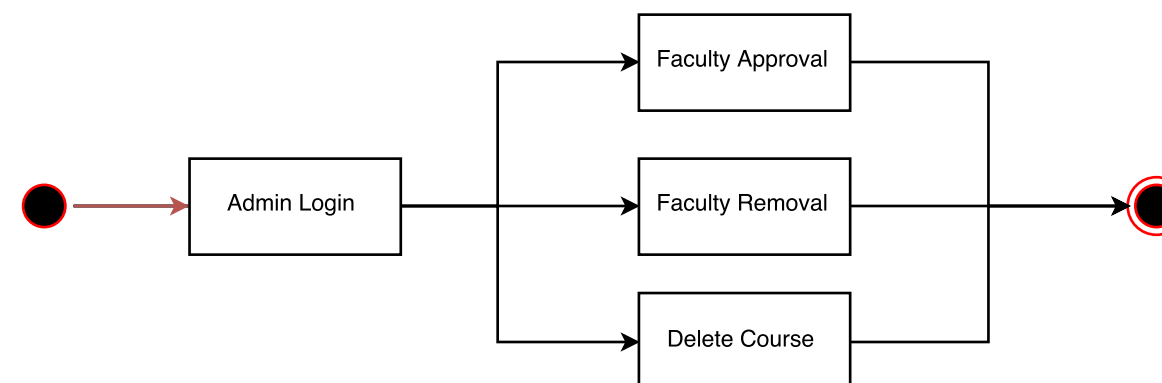
WORKFLOW DIAGRAM

Faculty

```
●──→ [Faculty Login] ──→ [Create Course] ──→ [Upload Materials] ──→ ◉
         │                                                          ↑
         └──→ [Select  Created Course] ──→ [View Registered Students] ──┘
```

Parent

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●──→ [Parent  Login] ──→ [View Performance] ──→ ◉
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Admin

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                    ┌──→ [Faculty Approval] ───┐
●──→ [Admin Login] ─┼──→ [Faculty Removal] ────┼──→ ◉
                    └──→ [Delete Course] ───────┘
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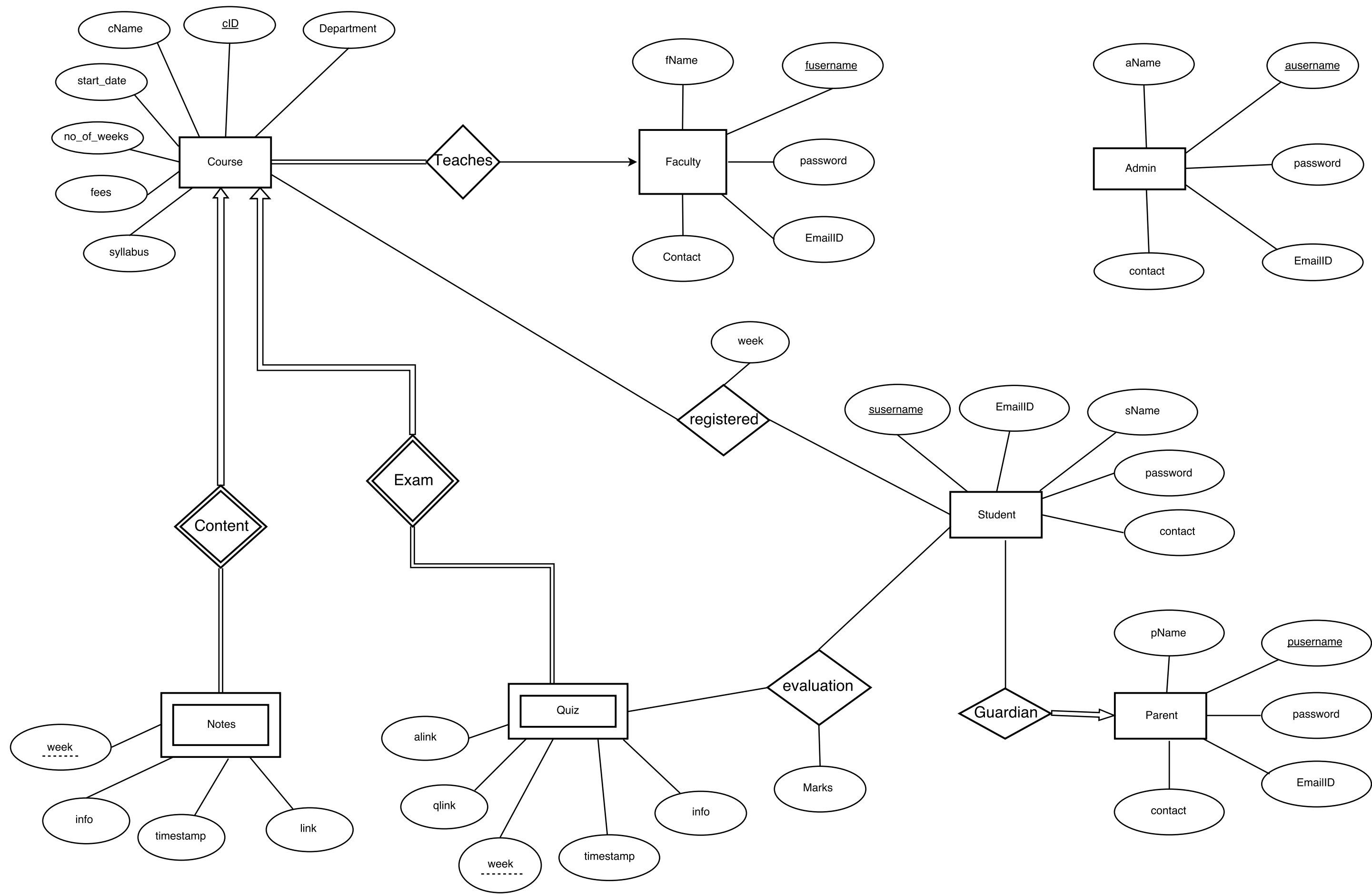
ER DIAGRAM

Description:
Moodle is a learning platform designed to provide teachers, administrators ,students and parents with a **single robust, secure and integrated system** to create personalised learning environments and achieve online education from anywhere in the world.

Tools/Libraries/Languages/Scripts Used:
1. LAMP stack(Apache2,Mysql,PHP
2. HTML, CSS, Bootstrap
3. JavaScript/JQuery
4. Fullcalendar.io
5. Ajax live search

Software Requirements:
The Online Course Management System has the following software dependencies:
1) Operating system: Windows(after XP) or Linux based
2) Internet Connection Required

Features/Specifications:
1) The system has only one admin.
2) No two same users can have the same email id and same username.
3) Teacher signup needs to be verified by the admin.
4) Parent's role of becoming a guardian of a student needs to be verified by the admin.
5) Each child can have only one guardian.
6) Each course has only one teacher.
7) Student can take the quiz only sequentially and he/she can take previous quizzes many times but only first score will be considered.
8) The teacher can update the notes which were previously uploaded.
9) The students need to clear all the prerequisites before registering a particular course.
10) The student can only register in a particular course after the start date of that course.
11) The teacher can view the students registered in his course and also see their individual progress.
12) The parent of the student can view the progress of his/her children.
13) Students can interact with the concerned teacher through the in-built message system.
14) Course Calendar helps students to keep track of all the course activities.
15) Students can also see the course notices in the news board provided in the course page.
16) Client and Server clock is shown in the student home page.

Test Plan:
1) **Login:**
    Users Involved: Student, Teacher, Parent and Admin
    Description: The user enters the appropriate credentials as specified in the login form.
    The system then validates the entered credentials and allows the user to access the respective account dashboard.
    Input: Username + Password + Role (Student, Teacher, Parent and Admin)
    Output: a) Correct Credentials: The system allows the user to access the respective account dashboard.
    b) Incorrect Credentials: Appropriate errors are shown on the webpage regarding the incorrect information specified in the login form. Error occurring can be wrong username, wrong password.

2) **Signup:**
    Users Involved: Student, Teacher, Parent
    Description: The user enters the appropriate credentials as specified in the signup form. The system then validates the entered credentials and allows the user to access the respective account dashboard.
    In case of Teacher, he/she is added first to the Faculty Request list to get approved by the admin.
    Input: Name + Username + Email ID + Password + Contact No + Role (Student, Teacher, Parent)
    Output: a) Correct Credentials: The system allows the user to access the respective account dashboard.
    b) Incorrect Credentials: Appropriate errors are shown on the webpage regarding the incorrect information specified in the login form. Error occurring can be username already taken, emailed already taken and incorrect email id format and incorrect contact no format.

3) **Create Course:**
    Users Involved: Teacher
    Description: The user enters the appropriate credentials as specified in the create course form.
    The system then validates the entered credentials and allows the user to create the course.
    Input: Course Name + Start date + number of weeks + fees + prerequisites + department + syllabus file.
    Output: The respective course gets created and the information is inserted into the respective database.

4) **Edit Profile :**
    Users Involved: Student, Teacher, Parent and Admin
    Description: The user enters the appropriate credentials as specified in the edit profile form. The system then validates the entered credentials and allows the user to edit the information about the respective account.
    Input: Name + Email ID + Contact No + Password
    Output: a) Correct Credentials: The system allows the user to edit the information of his/her respective account.
    b) Incorrect Credentials: Appropriate errors are shown on the webpage regarding the incorrect information specified in the edit profile form. Error occurring can be username already taken, email id already taken and incorrect email id format and incorrect contact no format.

5)   **Approve Requests:**
    Users Involved: Admin
    Description: Admin approves two types of requests in the request table namely, faculty request and parent request. Faculty request is required to verify the faculty and Parent Request is needed to verify the parent.
    Input: Requests from the faculty and parent to be added to the database.
    Output: The system adds the respective requests and their information in the database after getting approved from the admin.

6) Add Child:

  Users Involved: Parent
  Description: This feature adds the parent username to the list of Parent Request to be approved by the admin.
  Input: Username of the child
  Output: The parent is added to the Parent request list which is approved by the admin.

7) Register Course:

  Users Involved: Student
  Description: The student can register in the selected course if he clears/studies all the prerequisites which are mentioned. Student can only register after the start date of the selected course.
  Input: Information of the course and student.
  Output: The student gets registered in the selected course and can now access the material of the course.

8) Upload Course Material:

  Users Involved: Teacher
  Description: Teacher can upload course material like notes and assignments.
  Input: (Notes/Assignments) + Info + File of Notes/Assignments
  Output: The material gets uploaded to the database from where the registered students can access them.

9) Multiple Choice Quiz:

  Users Involved: Student
  Description: The student can take the quiz of the particular registered course.
  Input: Answer the quiz by selecting the options of the questions.
  Output: The score of the student in the quiz is displayed. The correct answers of the wrongly attempted questions are also shown.