Ahsanullah University of Science & Technology
Department of Computer Science & Engineering
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CSE 4126
Distributed Database Systems Lab

Project Name: Student Internship Management System

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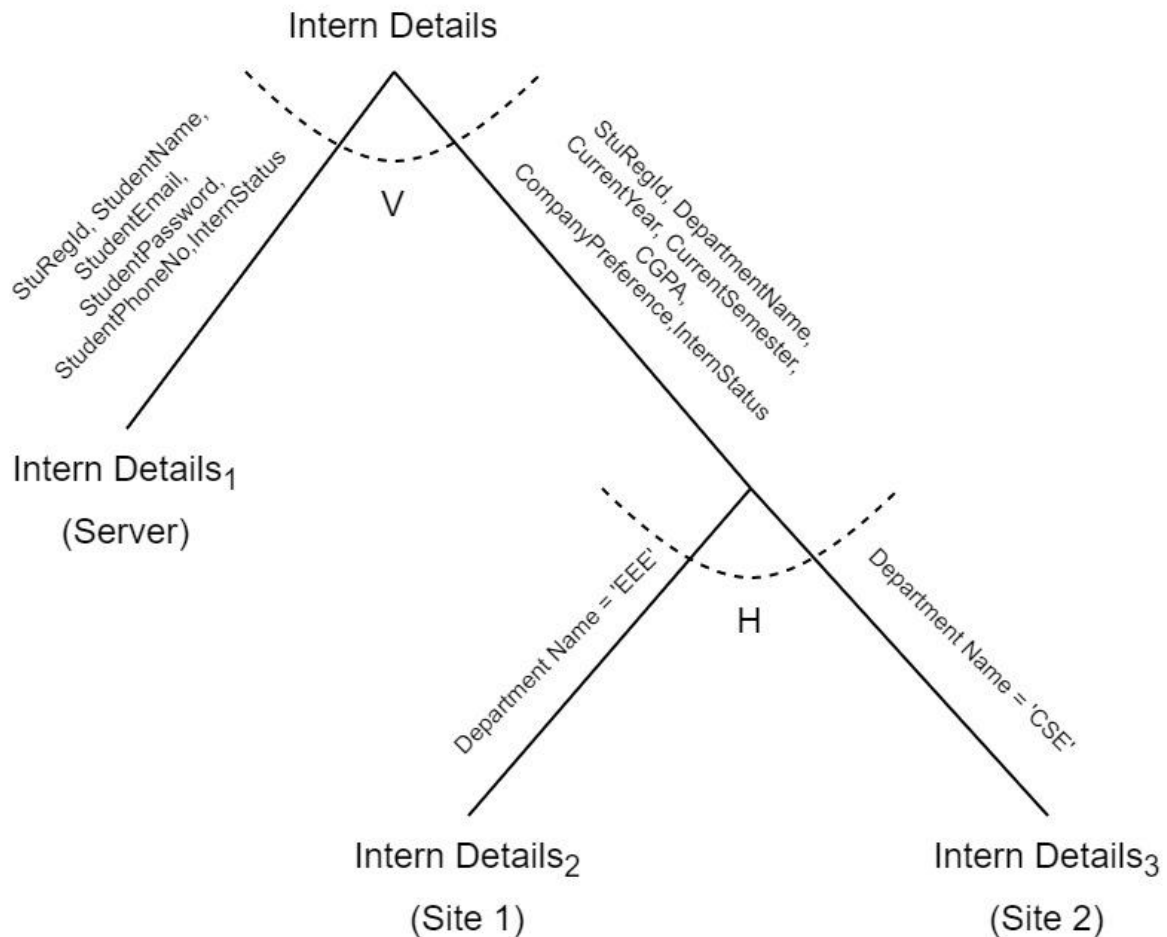
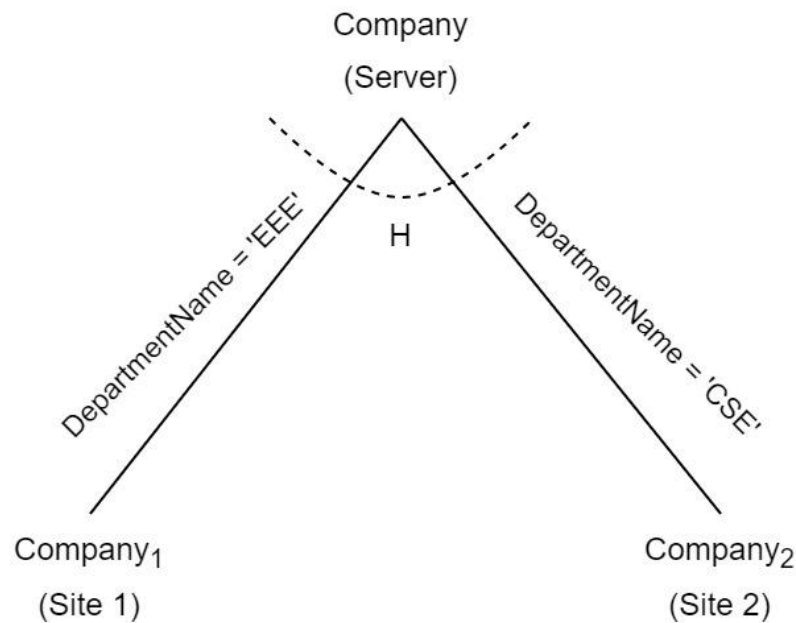Teammates ID:
1.18.02.04.046
2.18.02.04.068

About Project:

Our project is about an internship management system. Here the students apply for internship from CSE and EEE departments. Our management system provides internships for students. Admin at each site provides internships for the students.
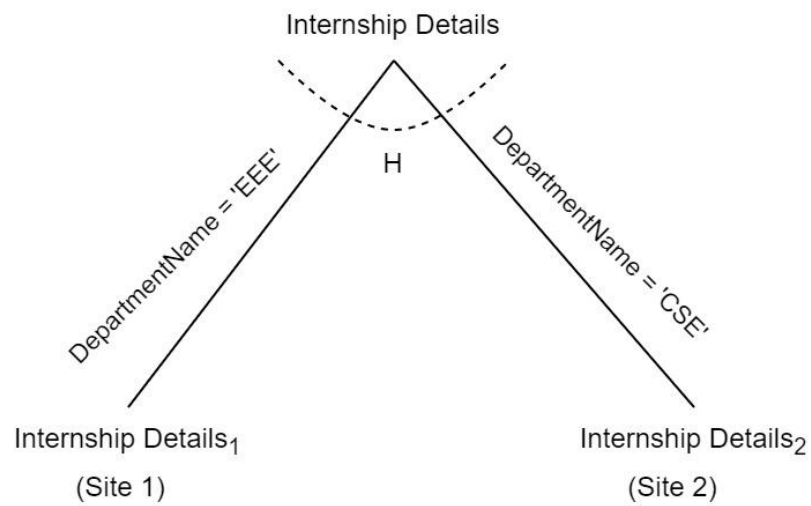
Project Description:

From server, a student of CSE or EEE will have to first fill up a form where he/she will provide necessary details about his internship. The provided data will be saved in both server and site. There are two sites here based on departments, EEE and CSE. Some of the data provided by the students will be saved on site based on their departments.

Intern Details

StuRegId, StudentName, StudentEmail, StudentPassword, StudentPhoneNo,InternStatus

StuRegId, DepartmentName, CurrentYear, CurrentSemester, CGPA, CompanyPreference,InternStatus

V

Intern Details₁
(Server)

H

Department Name = 'EEE'

Department Name = 'CSE'

Intern Details₂
(Site 1)

Intern Details₃
(Site 2)

The students will also be able to see the companies which are providing internships. The data of companies are both saved on server and based on departments, saved on sites. Whenever an admin at site, inserts a new company it will also be inserted in the server company database.

Company
(Server)

H

$DepartmentName = 'EEE'$

$DepartmentName = 'CSE'$

Company$_1$
(Site 1)

Company$_2$
(Site 2)

Admin at sites can approve the students who have applied for internships. After approving the students admin at each site provide the internship details for the student.

Internship Details

H

$DepartmentName = 'EEE'$

$DepartmentName = 'CSE'$

Internship Details$_1$
(Site 1)

Internship Details$_2$
(Site 2)

Global Schema:

INTERN_DETAILS (StuRegId, StudentName, StudentEmail, StudentPassword, StudentPhoneNo, StudentAddress, DepartmentName, CurrentYear, CurrentSemester, CGPA, CompanyPreference, InternStatus).

COMPANY(CompanyType, CompanyName, NUmnerOfAllowableInterns, CurrentInterns, CompanyLocation)

INTERNSHIP_DETAILS(StudentRegisterId, InternshipTitle, InternshipEmployer, InternshipDescription, Internshipstartdate, Internshipduration, Stipend)

Fragmentation Schema:

$INTERN\_DETAILS_1 = PJ_{StuRegId, StudentName, StudentEmail, StudentPassword, StudentPhoneNo, StudentAddress, InternStatus}$ INTERN_DETAILS

$INTERN\_DETAILS_2 = SL_{DepartmentName='EEE'} \, PJ_{StuRegId, DepartmentName, CurrentYear, CurrentSemester, CGPA, CompanyPreference, InternStatus}$ INTERN_DETAILS

$INTERN\_DETAILS_3 = SL_{DepartmentName='CSE'} \, PJ_{StuRegId, DepartmentName, CurrentYear, CurrentSemester, CGPA, CompanyPreference, InternStatus}$ INTERN_DETAILS

$COMPANY_1 = SL_{CompanyType='EEE'}$ COMPANY

$COMPANY_2 = SL_{CompanyType='CSE'}$ COMPANY

$INTERNSHIP\_DETAILS_1 = SL_{DepartmentName='EEE'}$ INTERNSHIP_DETAILS

$INTERNSHIP\_DETAILS_2 = SL_{DepartmentName='CSE'}$ INTERNSHIP_DETAILS

Site:

Here are two sites based on department names. The sites have admin who monitor the applied students. They insert new companies in the database. The admin will provide all the necessary information about student internships.

Server (My side):

The server accesses as a portal for the students. The new students will provide all the information for internships. The information will be saved both site and server from here.
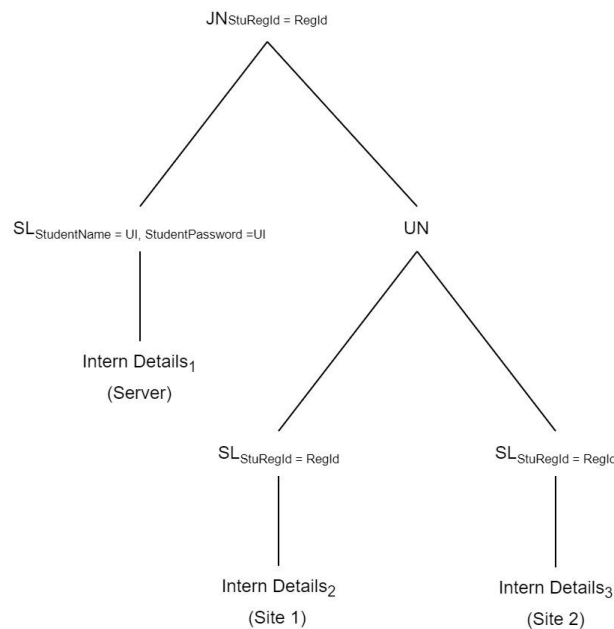
INSERT INTO INTERN_DETAILS VALUES (Reg Id, Name, Email, Password, Phone, Address, Status);
INSERT INTO INTERN_DETAILS@site VALUES(Reg Id, Department, Year, Semester, CGPA, Company, Status);
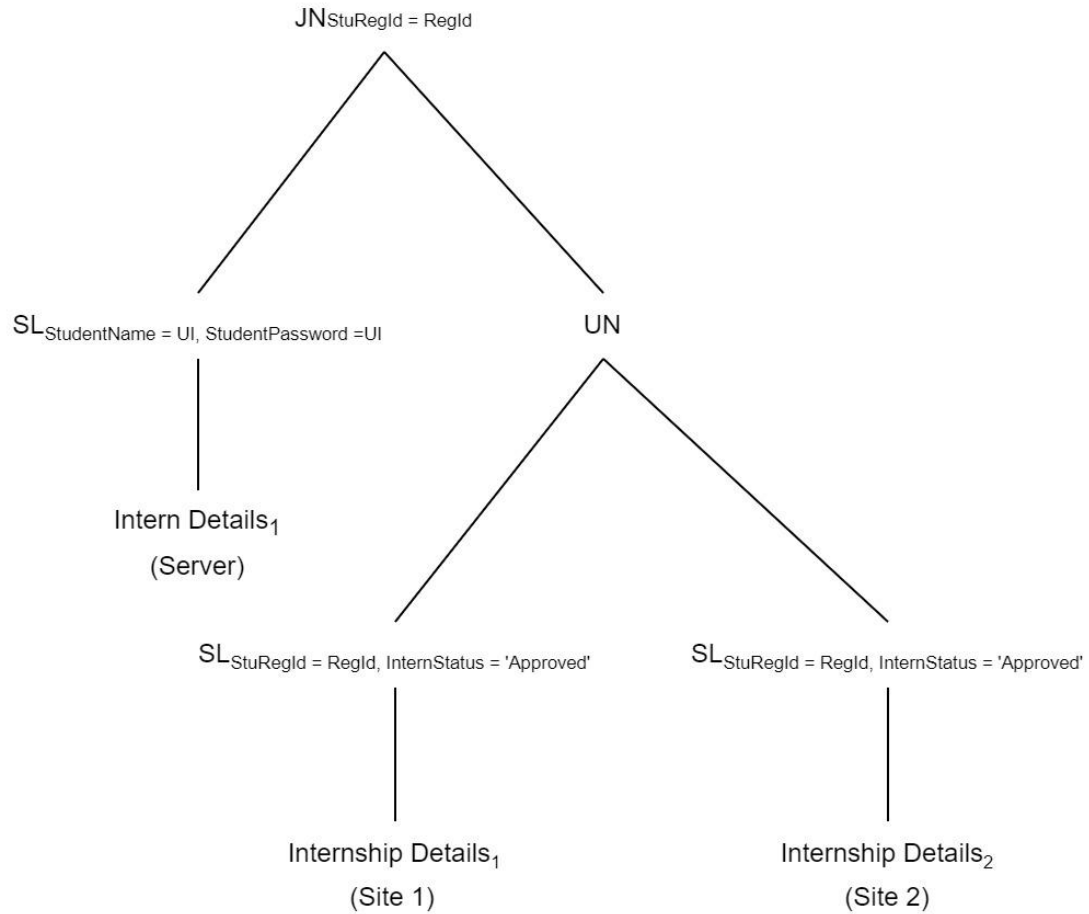
The "Status" will be initially 'Not Approved' which will be later updated by the admin. While inserting there is a function to check if the username already exists in which case it provide a message to user about similar username existing.
After filling up the form, the students can log in based on previous credentials.
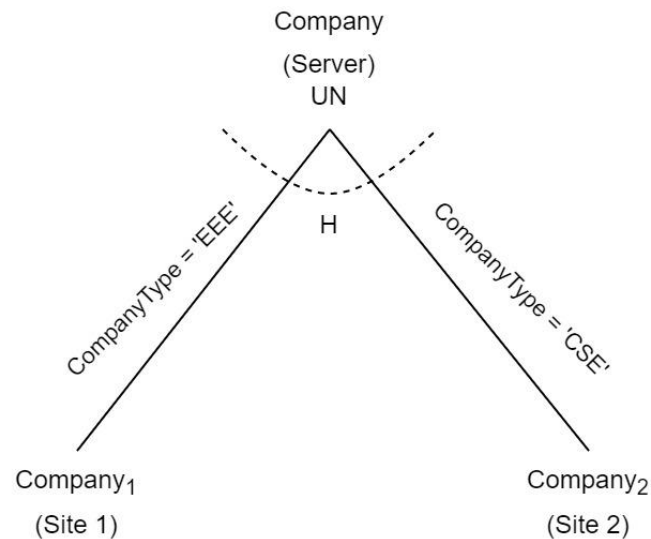After logging in they can see the information they provided. The data will be fetched from both server and site.

The student can also see if the application they provided is approved or not based on status. If the status is approved, they will be further able to see the internship details provided by the admin.

$JN_{StuRegId = RegId}$

$SL_{StudentName = UI, StudentPassword = UI}$

UN

Intern Details$_1$

(Server)

$SL_{StuRegId = RegId, InternStatus = 'Approved'}$

$SL_{StuRegId = RegId, InternStatus = 'Approved'}$

Internship Details$_1$

(Site 1)

Internship Details$_2$

(Site 2)

The server will have the company table from which the students will be able to see which companies are providing internships according to the departments. The company table will be updated if any admin of the sites insert new company.

Company

(Server)

UN

H

CompanyType = 'EEE'

CompanyType = 'CSE'

Company$_1$

(Site 1)

Company$_2$

(Site 2)

The student can also delete his/her account from server. The delete operation will remove data from both server and corresponding site.

DELETE FROM INTERN_DETAILS WHERE sturegId = ID;
DELETE FROM INTERN_DETAILS@site WHERE sturegId = ID;

From the server generally all students and their info can be seen using Union operation between sites and Natural Joining with the server.

Packages and Functions:

1. Package loginPack – Consists of function loginCheck and procedure showDetails.
2. Package deletePack – Consists of function loginCheck and procedure deleteID.
3. Function loginCheck – Checks if student id exists and returns id.
4. Proccedure showDetails – Shows info of logged in student.
5. Procedure deleteID – Deletes Student Id from server and site.
6. Procedure showStudents – Show info of all applied interns.

Triggers:

1. loginTrig - Trigger for student insert.
2. deleteTrig - Trigger for account delete.

Contribution:

- Insertion of new students,
- Student Login.
- Student account delete.
- Student Internship data fetch based on status.
- All Intern Info show.
- Trigger for inserts and delete.
- All company info show.