Lab Report: 02

Title: SE and ISD Lab

Course title: Software Engineering and Information System Design Laboratory
Course code: CSE-404
4th Year 1st Semester Examination 2023

Date of Submission: 22/07/2025

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Module 1: Authentication & user Management

submodule I.1 Registration & login

user scenario : students, teachers. and the chairman log in using their credentials. Teacher/student must register with Id an role

User story

I am a student so that I want to register and log in with my ID, so that I can access the platform to form groups and submit preference.

I am a teacher, so that I want to Sign up and await admin approval so that I can supervises thesis groups once approved.

I am the chairman, so that I want to log in securely, so that I can monitor everything.

Submodule 1.2 : Role-Based Access control

User scenrio : Based on their role user are given access different feature

User Story :

I am a teacher, so that I want to access only the groups assigned to me, so that I can manage them.

I am a student, so that I want to see only my own group of information. So that my student experiance is secure and focused.

Module-2 : Group management

Submodule 2.1 : Group Formation

User scenrio: students create on join group with one portner, restricted one group per person.

User story

I am a student so that I want to group by inviting my peer, so that we can apply together for thesis supervision.

I am a student, so that I won to view and confirm my group partner.

Submodule 2.2 : CGPA Management

User scenrio: The system uses higher CGPA of two members to sort the group for supervison & allocation,

User story:

I am the Chairman, so that I want to see a sorted list of student group by highest CGPA, so that I can assign supervisons fairly.

Module 3 : Teacher preference submission

User scenrio : Student submit ranked
list of teachers they'd like as
their supervisor

User story :

I am a student, so that I want to
submit a list of preferred teachers,
so that we have better chance
of being assigned to desired
supervisor.

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Module: - 4

Name: Supervisor Allocation System (Admin only)

Submodule 4.1 : Group Sorting

User Scenario:

Groups are sorted by CGPA automatically for fair assignment

User story:

I am the Chairman so that I want to automatically sort groups based on CGPA, so that top performing students gets priority in allocation.

Submodule 4.2 : Performance Matching & Assignment

User Seenario:

Each group is assigned supervisors a teacher from their preference list, subject to teacher capacity (max 2 groups)

User story:

I am the chairman,

so that I want to assign supervisors to groups

based on perference and abili availability,
so that the process is efficient and fair
for all.

Submodule 4·3: Constraint Handling (2 groups Max per Teacher)

User Scenario:

A Teacher can supervise a maximum of 2
groups. If their quota is filled, the system
checks the next preference.

User story:

I am the chairman,
so that I want to ensure each teacher is assign
no more than 2 groups,
so that workload is evenly distributed

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Module 5: Thesis Task management

Submodule 5.1 : Task Assignment (Teacher)

User Scenario:

Teachers assign Tasks with instructions and deadlines to their groups.

User story :

I am a ~~student~~ Teacher,
so that I want to create thesis-based tasks with deadlines.
so that my students can work step by step on their research.

Submodule 5.2 : Task Submission (student)

User Scenario:

Students submit responses/files for the assigned tasks within the deadline.

User story :

I am a student
so that I want to submit completed thesis tasks online;
so that my supervisor can evaluate my progress.

Submodule 5.3 : Progress Tracking

User Scenario:

Students and Teachers can track task progress, see pending work, and receive status updates.

User Story:

I am student,
so that I want to track the progress of my tasks
so that I can meet deadlines effectively.

I am a teacher,
So that I want to see which groups have complet[e]
which tasks,
so that I can monitor their involvement and
timeline.

Module 6 : Evalution & Marks Management

Submodule 6.1 : Task Evaluation (Teacher)

User Scenario:

Teachers provide marks and feedback for
each submitted task.

User story:

I am a teacher,
so that I want to evaluate submitted tasks
and give scores.
so that students get timely feedback.

Submodule 6.2: Final Mark Entry

User Scenario:

At the end of the thesis cycle, the teacher
enters the final mark for the group (out of 100)

User story:

I am a teacher,
so that I want to submit the final thesis
mark for my groups.
so that it can be used for academic
evaluation

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Module 7: Notification and Communication System

User Scenario: Notify students and teachers about task updates, deadlines, assignment confirmations, and evaluations.

User Story:-

I am a student,
So. that, I want to get notified when my group is assigned to a teacher,
So that, I can start my thesis work immediately

I am a teacher,
So that, I want to be notified of new task submissions,
So that, I can review them on time-

Module-8: Chairman Dashboard (Admin pannel)

User Scenario:- The chairman can oversee all groups, view teacher workloads.

User Story:

I am the chairman,

So that I want to view overall progress and manage exceptions,

So that I can ensure a smooth thesis experience for all stakeholders.

Module-9: Report and Analytics

User Story Scenario:-

Generates reports showing marks, task completion, teacher workload, and group performance.

Users Story:-

I am the chairman,

So that I want to generate reports about thesis group assignments and marks.

So that I can archiev the data and improve future planning.