

# Lab Report: 02

**Title: SE and ISD Lab**

*Course title: Software Engineering and Information System Design Laboratory*

*Course code: CSE-404*

*4<sup>th</sup> Year 1<sup>st</sup> Semester Examination 2023*

**Date of Submission: 22/07/2025**



**Submitted to-**

**Md. Humayun Kabir**

*Professor*

*Department of Computer Science and Engineering*

*Jahangirnagar University*

*&*

**Dr. Md Musfique Anwar**

*Professor*

*Department of Computer Science and Engineering*

*Jahangirnagar University*

*Savar, Dhaka-1342*

Class Roll	Exam Roll	Name
383	210903	Abdullah Nazmus-Sakib

# **Project: ThesisHub – Automated Thesis Supervision Allocation & Management System**

---

## **Module 1: Authentication & User Management**

### **Submodule 1.1: Registration & Login**

#### **User Scenario:**

Students, teachers, and the chairman log in using their credentials. Teachers/students must register with ID and 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 preferences**.

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

I am the chairman,  
so that I want to log in securely,  
so that I **can manage group assignments and monitor progress**.

---

### **Submodule 1.2: Role-Based Access Control**

#### **User Scenario:**

Based on their role, users are given access to different features (students form groups, teachers assign tasks, etc.).

#### **User Story:**

I am a teacher,  
so that I want to **access only the groups assigned to me**,  
so that I **can manage them without confusion**.

I am a student,  
so that I want to **see only my own group information**,

so that **my experience is secure and focused.**

---

## **Module 2: Group Management**

### **Submodule 2.1: Group Formation**

#### **User Scenario:**

Students create or join groups with one partner, restricted to one group per person.

#### **User Story:**

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

I am a student,  
so that I want to **view and confirm my group partner,**  
so that **we are paired correctly for our thesis.**

---

### **Submodule 2.2: CGPA Management**

#### **User Scenario:**

The system uses the higher CGPA of the two members to sort the group for supervisor allocation.

#### **User Story:**

I am the chairman,  
so that I want to **see a sorted list of student groups by highest CGPA,**  
so that **I can assign supervisors fairly.**

---

## **Module 3: Teacher Preference Submission**

#### **User Scenario:**

Students submit a ranked list of teachers they'd like as their supervisor (e.g., top 3).

#### **User Story:**

I am a student,  
so that I want to **submit a list of preferred teachers,**

so that we have a better chance of being assigned a desired supervisor.

---

## Module 4: 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 get priority in allocation**.

---

### Submodule 4.2: Preference Matching & Assignment

#### **User Scenario:**

Each group is assigned 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 preference and 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 assigned no more than 2 groups**,  
so that **workload is evenly distributed**.

---

## 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 teacher,  
so that I want to **create thesis-related 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 a 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 completed which tasks**,  
so that **I can monitor their involvement and timeline**.

---

## Module 6: Evaluation & 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**.

---

## Module 7: Notification & 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 Panel)

### User Scenario:

The chairman can oversee all groups, view teacher workloads, override supervisor assignments if needed, and view analytics.

### User Story:

I am the chairman,  
so that I want to **view the overall progress and manage exceptions**,  
so that I **can ensure a smooth thesis experience for all stakeholders**.

---

## ◆ Optional Module 9: Reports & Analytics

### User Scenario:

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

### User Story:

I am the chairman,  
so that I want to **generate reports about thesis group assignments and marks**,  
so that I **can archive the data and improve future planning**.

---

✓ **Summary Table (Condensed View):**

Module	Submodule	Role	User Story Summary
<b>Authentication</b>	Reg/Login	Student/Teacher/Chairman	Access platform securely
<b>Group Management</b>	Formation	Student	Form a valid group
<b>Group Management</b>	CGPA	Chairman	Sort groups fairly
<b>Preference</b>	Submission	Student	Submit teacher preferences
<b>Allocation</b>	Sorting	Chairman	Auto-sort groups
<b>Allocation</b>	Assignment	Chairman	Assign teachers fairly
<b>Allocation</b>	Constraint	Chairman	Enforce max 2 groups/teacher
<b>Task Mgmt</b>	Assignment	Teacher	Assign structured tasks
<b>Task Mgmt</b>	Submission	Student	Upload and submit work
<b>Task Mgmt</b>	Tracking	All	Monitor task progress
<b>Evaluation</b>	Task Marking	Teacher	Score and comment
<b>Evaluation</b>	Final Mark	Teacher	Submit final grades
<b>Notification</b>	-	All	Stay informed on updates
<b>Admin</b>	Dashboard	Chairman	Monitor, override, control
<b>Reports</b>	Analytics	Chairman	Export reports, insights