

THSEPANG REGALITY MAJE

Human Computer Interaction NHCI631

INDIVISUAL ASSIGNMENT 09 APRIL 2025

Part A: Discovering Requirements

Managing time well is a key factor in student success. Time management enables students to plan their days, prioritize tasks, and stay on top of deadlines. Students who are skilled at managing their time typically experience higher levels of academic success, as they can allocate enough time for studying, completing assignments, and even relaxation.

However, when students struggle with time management, it can directly impact their ability to learn effectively. They may find themselves cramming for exams, rushing through assignments, or feeling constantly overwhelmed, which takes a toll on their academic outcomes.

Students can improve their time management by adopting several effective strategies.

One of the strategies being having a proper study timetable to effectively schedule their subjects and make more informed decisions when studying. Students should be able to tackle the highest priority subjects first and then scrap out the complete ones.

Interviewing students and asking questions

- How effective is your study schedule?
- Are you sticking to the schedule?
- What do you use to keep track of your plans and upcoming events?
- What challenges do you face when trying to follow your study schedule?
- How do you decide which subjects or tasks to prioritize when studying?

Summary of Student Interviews (User Needs)

- Difficulty keeping track of multiple deadlines across modules
- Struggling with balancing academic tasks and personal commitments (part-time job)
- Forgetting assignments or important dates due to unstructured systems
- Adjusting to university routines and managing class-related information

Personas and scenarios:

Persona 1: Ikaneng Midweek Struggles: Staying on Track as a First-Year Student

- Age: 19
- Year: 1st Year
- Course: BSc in Computer Science

Midway through the week, a student realizes he is falling behind on his math revision. When he checks his schedule, he notices he has underestimated the time needed for the subject.

Without a smart planning system, making midweek changes is tricky. Rescheduling often means sacrificing time from other important subjects, causing stress and imbalance.

With the app, however, he can easily adjust his timetable, and the system helps him rebalance priorities without losing sight of overall goals, keeping his progress steady and manageable.

Persona 2: Omolemo: Managing Assessments with Manual Scheduling

- Age: 18
- Year: 1st Year
- Course: BA-General

On Sunday evening, a student begins planning her week and realizes her previous study schedule wasn't as efficient as she thought.

She had been relying on a paper planner and sticky notes, which often led to overlapping tasks, missed deadlines, and underestimating how much time each subject needed.

This manual approach caused stress and last-minute cramming. Without a smarter system, it's easy to fall behind.

Part B: Designing a conceptual Model

Core Functionality of the System:

1. User Authentication

- Students log into the system using their credentials.

2. Study Timetable Creation

- Students can create a personalized study timetable by entering subjects, preferred study times, and target completion dates.

3. Schedule Management

- Users can view, update, and delete individual timetable entries.

4. Progress Tracking with Visual Indicators

- Students can set a target completion date per subject.
- If the subject is past due and not marked as completed, the system highlights it in red, signaling urgency.

5. Priority Management

- Students can mark certain subjects as high priority to study them earlier.
- Completed subjects are grayed out to reduce confusion.

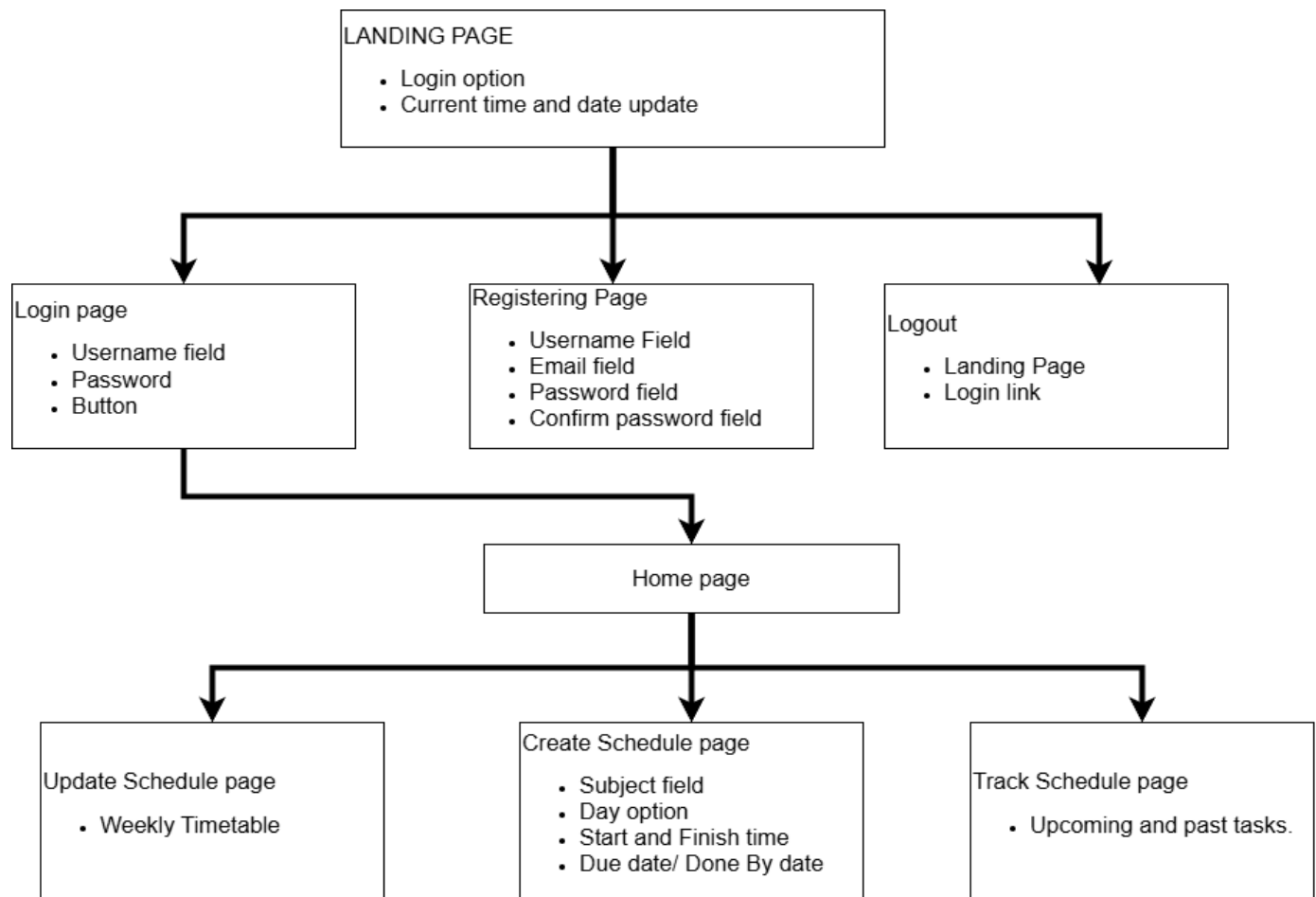
6. Calendar integration

- The system provides real time dates and time for the best tracking and
- Real time scheduling and updates.

conceptual model labeled diagram

The **Study Timetable Platform** is designed to help students plan, manage, and track their academic schedules efficiently. It allows students to:

- Register an account and log into their account
- Create a study schedule (subject, day, start/end time, and due date)
- View their upcoming study sessions
- The system automatically highlights missed and pending tasks based on the due date
- The diagram shows the different attributes each page has in the platform.



Part C: Interface Sketching and Django Wireframe

Relevant Interaction Types

- **Instructing via Buttons:**
Users interact with the system primarily by clicking buttons to create, update, delete, and view their study schedules. This provides a straightforward and efficient way for students to manage their time.

Fitting Interface Metaphor

- **Planner Metaphor:**
The interface is designed to mimic a digital planner or diary, where users can add, organize, and check off tasks and study sessions. This metaphor is familiar to students and supports time-based organization.

Annotated interaction elements

- Home Button
- Track Schedule Link
- Submit Button
- Username Input Field
- Login Button

Visibility:

- Labels “Username” and “Password” are clear and placed above input fields.
- Important functions like "Home", "Track Schedule", and "Submit" are visible and recognizable

Constraints:

- The day dropdown, time pickers, and date input restrict user input to valid, expected values and reducing errors.
- Username and password fields only accept text formats
- The login form rejects incomplete fields or invalid entries on submission

Affordance:

- The shapes (text boxes, buttons, calendar and clock icons) intuitively suggest how they can be interacted with.

Feedback:

- Clicking "Login" likely provides feedback (wrong password, success messages).
- Empty required fields trigger messages and form validation.

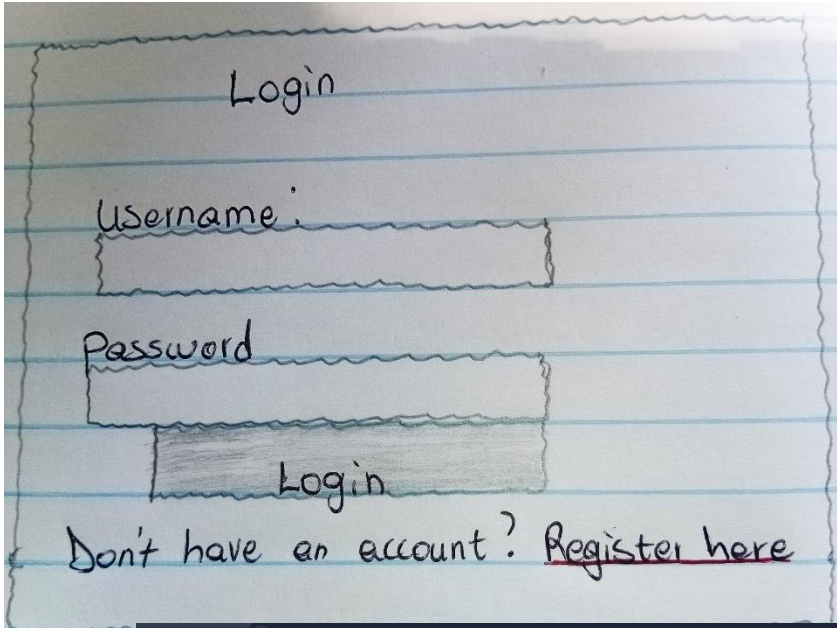
Usability Goals

Efficiency

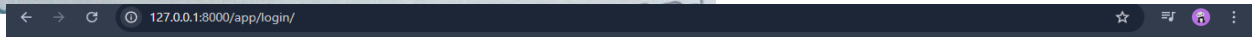
- Students should be able to create, update and view their study schedules quickly and with minimal effort.
- A student should be able to log in and create a complete timetable entry (subject, day, time, due date) in under 2 minutes.

Learnability

- The platform should be easy to learn, so that first-time users can understand and navigate it without needing detailed instruction
- New users should be able to create their first schedule entry without external help after logging in for the first time.



- A sketch of the login page after a student has registered an account, they are able to use their username and password to access more functions in the platform.
- The system allows authentication.



Login

Username:

Password:

Login

Don't have an account? [Register here](#)

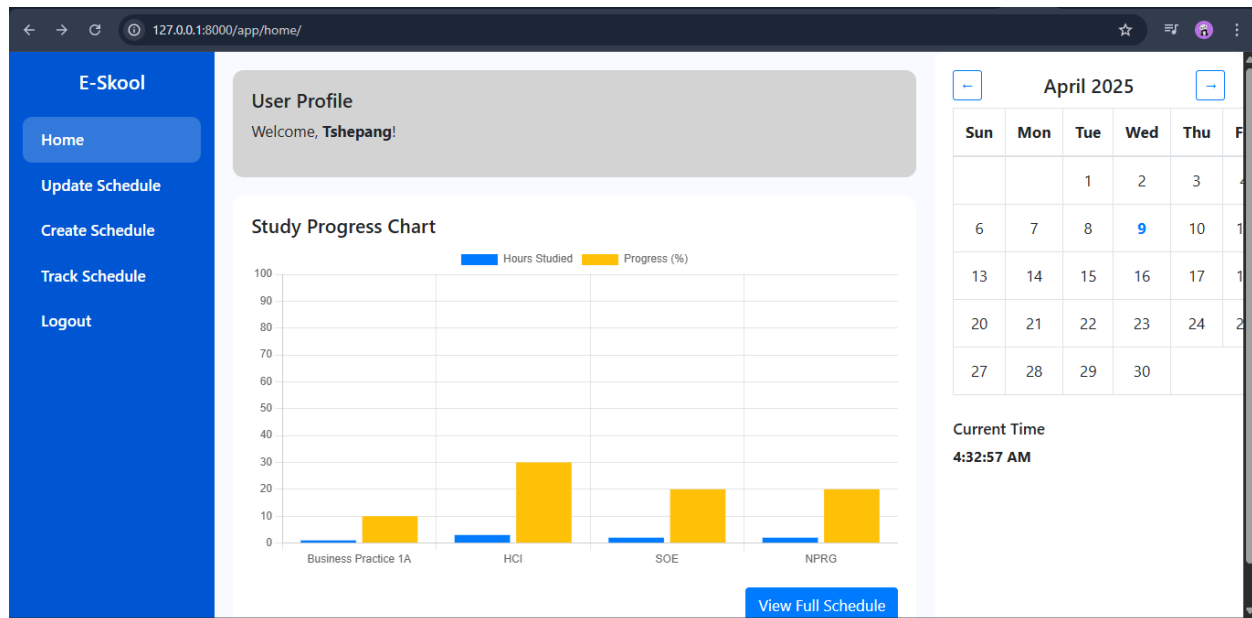
This is the login screen for the application. Users must enter their username and password to access their personal dashboard. A link to register a new account is also provided.

A hand-drawn prototype of a timetable creation form on lined paper. The form has a header with two tabs: "Home" and "Track Schedule". Below the header, there are five input fields labeled "Subject:", "Day:", "Start time:", "End time:", and "Due Date:". At the bottom of the form is a "Submit" button. The drawing is done in blue ink.

With this page the students get to schedule a period for a specific subject they will be studying and the day they would like to finish with that subject.

A digital screenshot of the timetable creation form. The browser address bar shows "127.0.0.1:8000/app/create_timetable/". The form has a header with two tabs: "Home" (active) and "Track Schedule". Below the header, there are five input fields: "Subject:" (text input), "Day:" (dropdown menu showing "Monday"), "Start Time:" (time input with a clock icon), "End Time:" (time input with a clock icon), and "Due Date:" (date input with a calendar icon). At the bottom is a "Submit" button.

This is the Create Schedule interface where students can plan their study week. The user selects a subject, day, start time, end time, and an optional due date. Upon submission, the entry is added to their personalized timetable. This feature helps learners distribute study tasks efficiently and stay on top of upcoming deadlines.



After logging in, the student is greeted with a personalized dashboard showing a weekly study progress chart, a user greeting, and a calendar to help manage tasks. The dashboard also provides quick navigation options for schedule creation and updates.

Part D: Evaluation Planning

1. Usability Goals and UX Goal

- Usability Goal: Efficiency
Users should be able to complete common tasks (checking schedules) quickly and without confusion.
- Usability Goal :Learnability
New users should understand how to navigate and use the platform with minimal guidance.

- UX Goal: User satisfaction

The platform should make students feel in control, supported, and motivated in managing their study time and academic responsibilities.

2. User Testing Questions

- What were your first impressions when using the platform?
- Were you able to complete your intended task without assistance?
- What features did you find most useful or unnecessary?
- Is there anything you expected to find but didn't?

3. Evaluation Method: Summative Evaluation

- Summative evaluation is conducted after the program's completion or at the end of a program cycle. It generates data about how well the project delivered benefits to the target population. It is useful for program administrators to justify the project, show what they have achieved, and lobby for project continuation or expansion.

When: At the end of a program

- At the end of a program cycle

What: How effectively the program made the desired change happen

- How the program changed the lives of program participants

Why: Provides data to justify continuing the program

- Generates insights into the effectiveness and efficiency of the program

How: Conduct a review of internal reports and a survey for program managers and target populations. The aim should be to measure the change that the project has brought about and compare the change to the costs.

Questions to ask:

- Should the program continue to be funded?
- Should the program be expanded? If so, where? What factors worked in its favor and what worked against it?

Part E: Reflection

Throughout this project, I developed a better understanding of user-centered design (UCD) and its importance in creating digital solutions that satisfy users' demands. I discovered that UCD is more than just designing visually appealing interfaces; it is about considering users at every level, from knowing their context and issues to assessing how effectively the solution supports their goals. This perspective influenced my approach to development, as I became more concerned with empathy, feedback, and iteration. One of the main conclusions was that effective solutions aren't always the most feature-rich, but rather those that solve the correct problems in a clear and accessible manner.

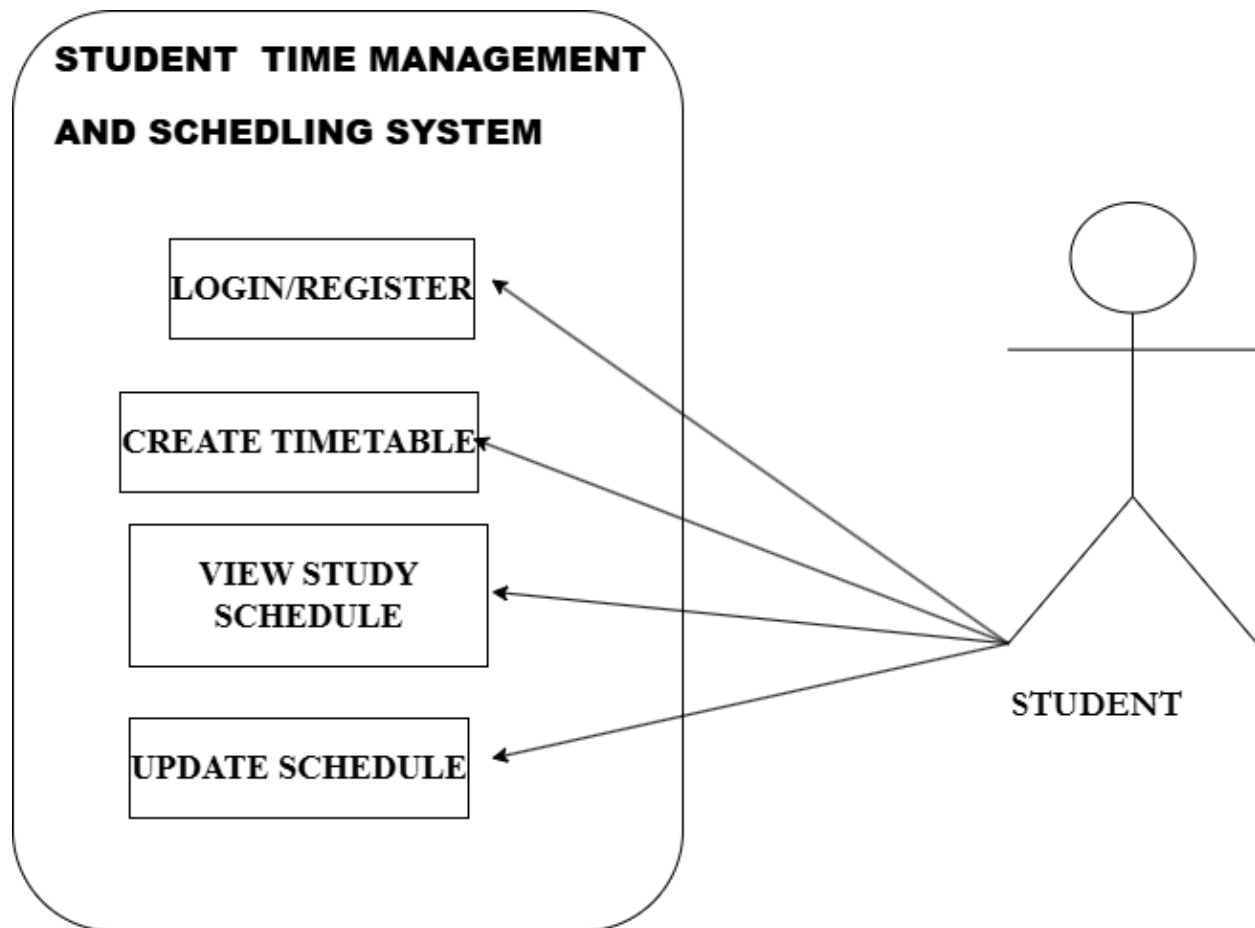
It was both interesting and difficult to apply conceptual modeling. Converting user requirements and abstract concepts into understandable, rational models that could direct development was the most challenging task. I had to carefully consider how various system elements like users, tasks, relate to one another, how to convey these relationships both textually and visually. I was tempted to start developing the application right away which I did and did not go very well. I had to start from scratch by understanding user needs and requirements with the help of conceptual modeling. It helped me gather all the steps that the user will take when interacting with the system and what the user is expecting from the system. It helped me to take my time and make the right plans. This made sure the platform was constructed on a strong basis and helped avoid confusion. It took some practice, though, to figure out how much information to incorporate in the model without making things too complicated.

Django wireframe development was a train smash, going back and forth with how to design the interface with the guideline of user experience goals, usability goals as well as the design principles. On the other hand, when I thought things were going according to my plan and time, the URLs are not working every time I run the wireframe, if it's not the URLs then the browser cannot find templates for some of the html files. Then I remembered the saying that "*errors are developer's daily bread*" because it is possible to go the whole day debugging that one error and even forgetting to eat because of the program not working.

Overall, it was such a wonderful experience, going up and down with errors and fixing them, eating errors for lunch and supper. But in the end, I learned and delivered what the user has ordered and satisfies their needs.

Django project GitHub repo link : <https://github.com/Maje107/HCI-assignment>

<https://github.com/Maje107/HCI-assignment/blob/bbaf94bc43601ac0d772f64219b2db3c8b127fe0/myassignment.zip>



With the proposed scheduling platform, the student can register an account as the Administrator. Then the student can create a study timetable based on their modules and priorities. They can set due dates when they want to get done with that specific subject.

The administrator tracks the amount of time students spend studying per subject then gives them recommendations on how they can improve to get better higher grades, creating enough time to rest, study and catch up on daily life.

References

- [How to Write User Testing Questions That Convert + Examples](#)
- [70+ Great User Testing Questions To Ask Before, During, & After User Tests](#)
- [The 7 Types of Evaluation You Need to Know](#)
- [The Effects of Poor Time Management on Student Performance and Learning Outcomes](#)
- [Planning Time Management in School Activities and Relation to Procrastination: A Study for Educational Sustainability](#)