



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**SCHOOL OF COMPUTING  
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SECV2113 - HUMAN COMPUTER INTERACTION  
SECTION 01**

**PROJECT PART 2:**

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## Task Analysis

### Introduction

We will be testing our application on our stakeholders, who are students, lecturers using e-learning UTM. Three tasks that we will be utilising in this testing are staying updated on deadlines and class schedules, accessing course content, and customizing the learning environment for better focus.

Persona 1:



Mathan

### Background

Mathan is a 20-year-old undergraduate student majoring in Computer Science. He attends university full-time and also works part-time at a café. He uses the university's eLearning platform to attend hybrid classes, submit assignments, check grades, and participate in class forums. He usually accesses the platform from her phone during commutes or between shifts, and from her laptop at home

### Motivation

Mathan wants to stay organized, manage his time effectively, and excel in his studies despite a busy schedule. He values tools that make his work easier, help him feel in control of his academic progress, and reduce stress. He's especially motivated by platforms that give her feedback, structure, and flexibility.

### Concerns

- 1."What if I miss a deadline because I didn't see it?"
- 2."Why does it take so many clicks just to upload a simple assignment?"
- 3."I don't know if I'm on the right track with this course.where's my feedback?"

### Challenges

- 1.Confusing navigation and inconsistent UI across different courses
- 2.Lack of clear notifications and progress tracking
- 3.Limited mobile usability and slow platform performance
- 4.Few opportunities for peer collaboration or live support

### Goals

- 1.Submit all assignments on time with fewer technical hurdles
- 2.Stay informed and updated about tasks and grades
- 3.Feel supported and connected through collaboration tools
- 4.Use her limited time more effectively with built-in organization tools

### Scenario

Scenario 1:Mathan has a deadline for his Requirements SAD tonight. He logs into UTM eLearning on his phone to download the lecture slides and instructions. However, once he

enters the course page, he's overwhelmed by a long, unstructured scroll of content. There are no sections, no tabs, and no visual grouping—just a continuous list of links and announcements all styled the same.

He has to scroll up and down several times to find the correct submission link and confirm the deadline. In the process, he accidentally clicks on the wrong Webex session link and gets even more confused.

Scenario 2: Accessing Course Content  
Mathan has 30 minutes before his part-time shift. He opens the eLearning app on his phone to review lecture slides for tomorrow's class. She navigates to the course, but the lecture files are buried under multiple files. He clicks back and forth, wasting 5 minutes before finally finding the right file. Mathan feels frustrated and wishes the most recent or relevant materials were pinned or searchable.

Scenario 3:

Mathan is taking five courses this semester and has multiple overlapping deadlines. He wants to stay organized by focusing on what matters most—like urgent assignments, upcoming Webex sessions, and announcements from specific lecturers. However, the UTM eLearning platform does not allow him to pin tasks, reorder course cards, or customize his view. Every time he logs in, he sees the same cluttered layout filled with old announcements and less relevant materials. The lack of visual themes also strains his eyes when using the platform at night.

Persona 2:



Adam

Archetype

The Frustrated Multitasker

### Background

Adam is a 22-year-old final-year Psychology student at a public university. He lives in a shared apartment near campus and is actively involved in student organizations and mental health advocacy groups. Adam primarily uses a tablet for academic tasks, and she frequently studies in public libraries and quiet cafés. He's tech-savvy but prefers tools that are visually clean, emotionally calming, and easy to navigate.

### Motivation

Adam wants to reduce cognitive overload and study more efficiently. With a packed class schedule and extracurricular commitments, he needs a system that helps him stay ahead of deadlines, find materials quickly, and personalize her workspace for mental clarity. He's motivated by calm interfaces, automated reminders, and the ability to tailor his learning space to fit his study habits.

### Concerns

- 1."I don't want to feel overwhelmed every time I open the learning platform."
- 2."Why can't I highlight or organize materials the way I want?"
- 3."I'm scared I'll forget something important with all this clutter."

### Challenges

- 1.Overwhelming course layouts that lack visual hierarchy
- 2.No ability to customize course pages or highlight important items

- 3.Too many irrelevant notifications and no way to prioritize them
- 4.Difficulty switching between courses quickly without losing focus

### Goals

- 1.Organize her dashboard to prioritize deadlines and urgent tasks
- 2.Access key lecture materials instantly, without searching
- 3.Customize her digital learning space to feel calm and distraction-free
- 4.Reduce decision fatigue by filtering and focusing only on what matters today

### Scenario

#### Scenario 1:

Adam has three overlapping assignment deadlines and an online quiz this week. He logs into the learning platform hoping to get a quick overview, but the homepage shows all his courses in no particular order. There's no way to highlight what's due soon. He uses a notebook to manually write down what's important, but it feels like a waste of time when the platform should just show that info clearly.

#### Scenario 2:

Adam wants to quickly review his lecture slides on anxiety disorders before his 8 AM class. He opens the course but is met with a long list of uploads with no dates or descriptions. He clicks five different files before finding the right one. Frustrated, he mutters, “Why isn't there a preview or filter option?”

#### Scenario 3:

Adam studies late at night and prefers a dark theme to reduce eye strain. However, the learning platform doesn't offer any customization. Every page looks the same—bright,

cluttered, and poorly grouped. He wishes he could pin the weekly module, hide old announcements, and color-code materials based on urgency or difficulty.

Persona 3:



Dr Aiman

Archetype

The Organized Educator

### Background

Dr. Aiman is a 34-year-old lecturer in the School of Computing, specializing in Software Engineering. He teaches several undergraduate courses, including Programming Technique II and System Analysis and Design. In addition to delivering lectures and grading assignments, he also advises final-year project students. He uses UTM's eLearning platform daily to upload lecture materials, create quizzes, post announcements, and manage student submissions. He typically accesses the platform from his office computer but occasionally checks it from his tablet while on the move..

### Motivation

Dr. Aiman wants to provide his students with a smooth, structured, and engaging learning experience. He values tools that reduce redundancy, make content delivery more intuitive,

and help him monitor student performance more effectively. He appreciates platforms that save time, support personalization, and help him stay organized during busy academic weeks.

### Concerns

- 1.“Students keep missing materials or claiming they can’t find them.”
- 2.“Why does it take so many steps just to update a single announcement?”
- 3.“I can’t tell who’s engaging with the content and who’s falling behind.”

### Challenges

- 1.Inefficient content organization tools that make managing multiple courses a chore
- 2.Lack of detailed analytics or real-time tracking of student engagement
- 3.Inability to customize course layouts to match his teaching structure
- 4.Inconsistent interface design that varies across course pages

### Goals

- 1.Upload, organize, and update content with minimal effort
- 2.Ensure students can easily find and engage with course materials
- 3.Track assignment submissions and student progress from a centralized view
- 4.Customize the learning environment to match his teaching workflow and priorities

### Scenario

#### Scenario 1: Managing Deadlines and Schedules

With a packed day of lectures and meetings, Dr. Aiman logs into the eLearning platform to check deadlines and update lab schedules. However, the calendar tool is disconnected

and poorly integrated, forcing him to manually check each course for updates—something that should be centralized and streamlined.

#### Scenario 2: Uploading and Organizing Course Content

Dr. Aiman uploads updated Week 9 slides but struggles with the flat, unstructured folder system. There's no way to highlight or pin key materials, leading to confusion for students. He ends up sending extra emails just to direct them to the correct files.

#### Scenario 3: Customizing for Focus and Usability

Dr. Aiman wants to focus on current courses and use a dark mode for late work sessions. However, the platform doesn't allow course reordering, grouping, or theme changes, leaving his dashboard cluttered and visually straining. He resorts to external tools to stay organized.

## **HTA Derivation**

### **Task 1 -Stay Updated on Deadlines and Class Schedules.**

The purpose of Task 1 is to obtain an overview of what is due and upcoming for all courses without experiencing mental overload and stress.

#### **1. Student 1**

1. Manage academic schedules and announcements

    1.1 Open eLearning platform

    1.2 Go to dashboard or calendar

    1.3 Check course announcements

    1.4 View assignment deadlines

        1.4.1 Check upcoming tasks

        1.4.2 Open assignment info

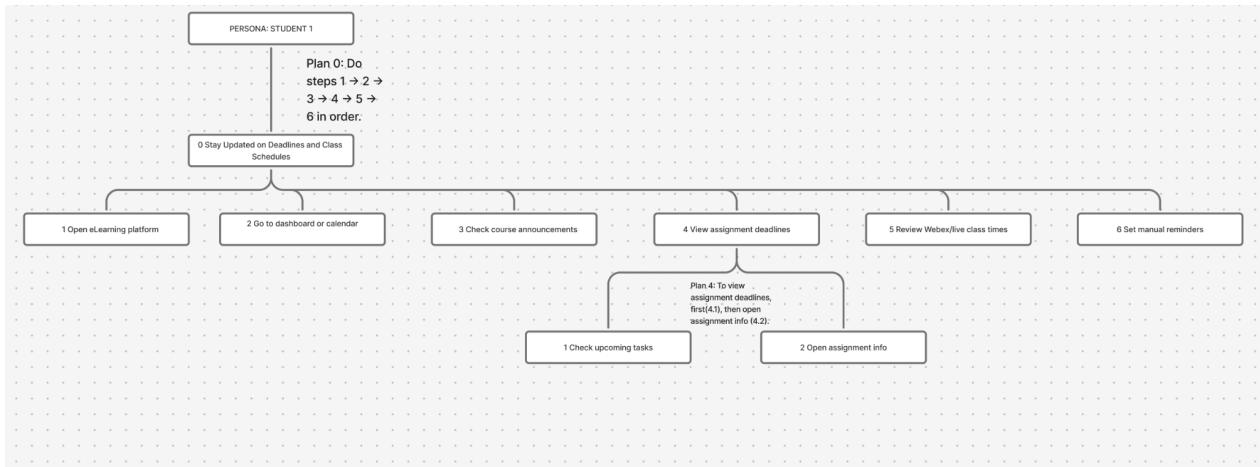
    1.5 Review Webex/live class times

    1.6 Set manual reminders

        1.6.1 Use notes or calendar apps

        1.6.2 Highlight key dates

GRAPHICAL HTA:



## 2. Student 2

TEXTUAL HTA:

### 1. View deadlines and schedule

1.1 Open the eLearning platform dashboard

1.2 Enable ‘Prioritized View’ or ‘Today’s Tasks’ mode

1.3 Filter tasks by:

1.3.1 Due Today

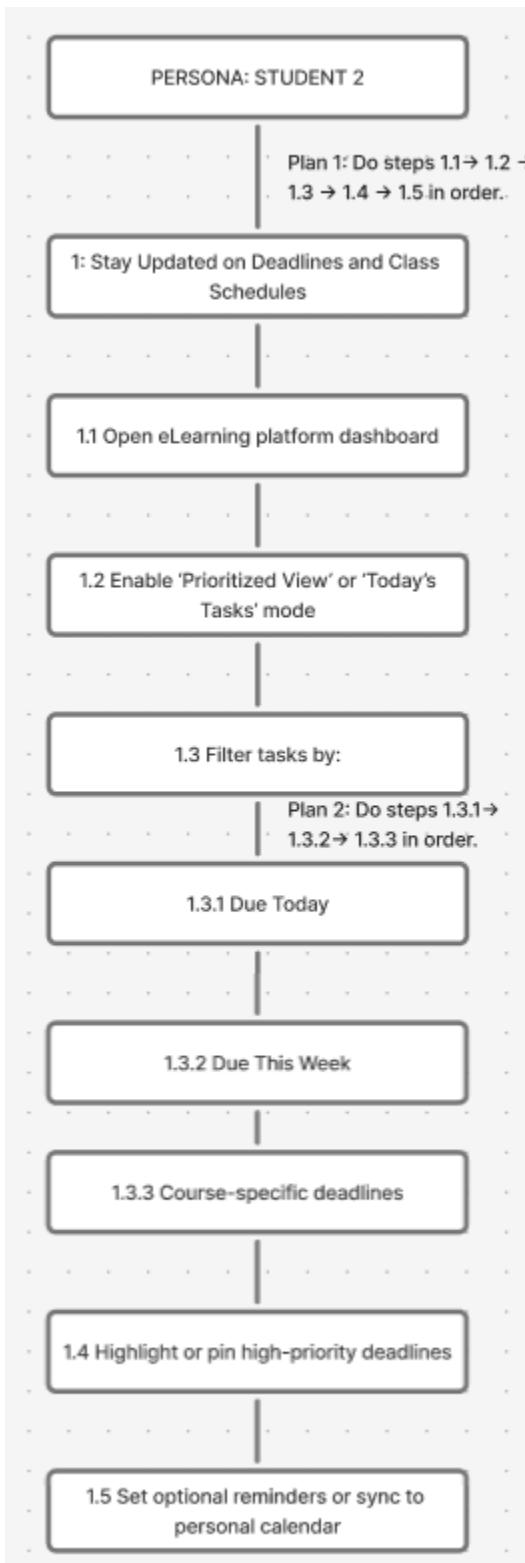
1.3.2 Due This Week

1.3.3 Course-specific deadlines

1.4 Highlight or pin high-priority deadlines

1.5 Set optional reminders or sync to personal calendar

GRAPHICAL HTA:



## **Findings from the HTAs for Task 1**

From the HTAs, both users lack a focused view of urgent tasks. A dynamic dashboard showing due today and this week with visual priority would greatly reduce stress and increase efficiency.

Mathan wants to be reminded, and Adam wants to filter tasks. The platform needs customizable notifications with filters by course, type, and urgency. Both would benefit from the ability to pin tasks, color-code deadlines, or star priority items directly on the home screen. Mathan's on-the-go usage demands a compact, mobile-first design; Adam needs a clean, calm visual layout with less cognitive clutter. This calls for a context-aware UI that adapts to device and user preferences.

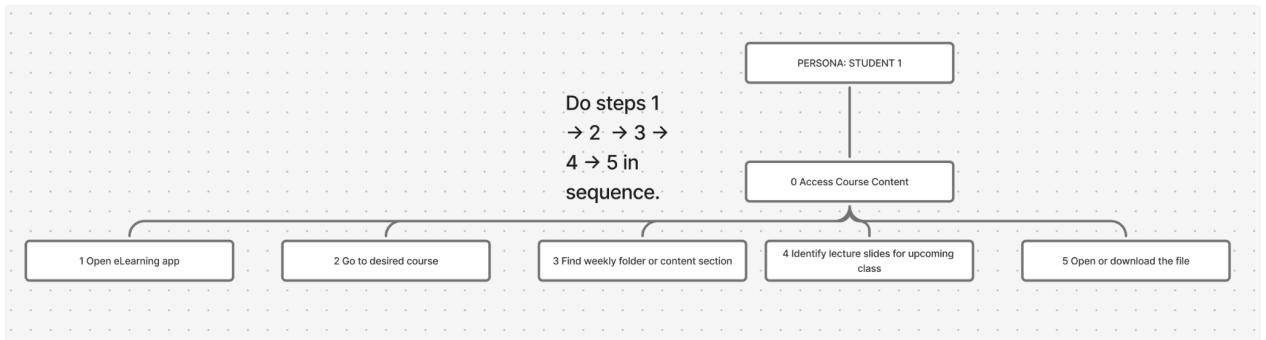
## **Task 2 - Accessing course content.**

### **1. Student 1**

TEXTUAL HTA:

2. Access lecture materials
  - 2.1 Open eLearning app
  - 2.2 Go to desired course
  - 2.3 Find weekly folder or content section
  - 2.4 Identify lecture slides for upcoming class
  - 2.5 Open or download the file

GRAPHICAL HTA:



## 2. Student 2

TEXTUAL HTA:

2. Access lecture materials efficiently

2.1 Navigate to specific course page

2.2 Use search/filter bar to find file

2.2.1 Search by title, topic, or date

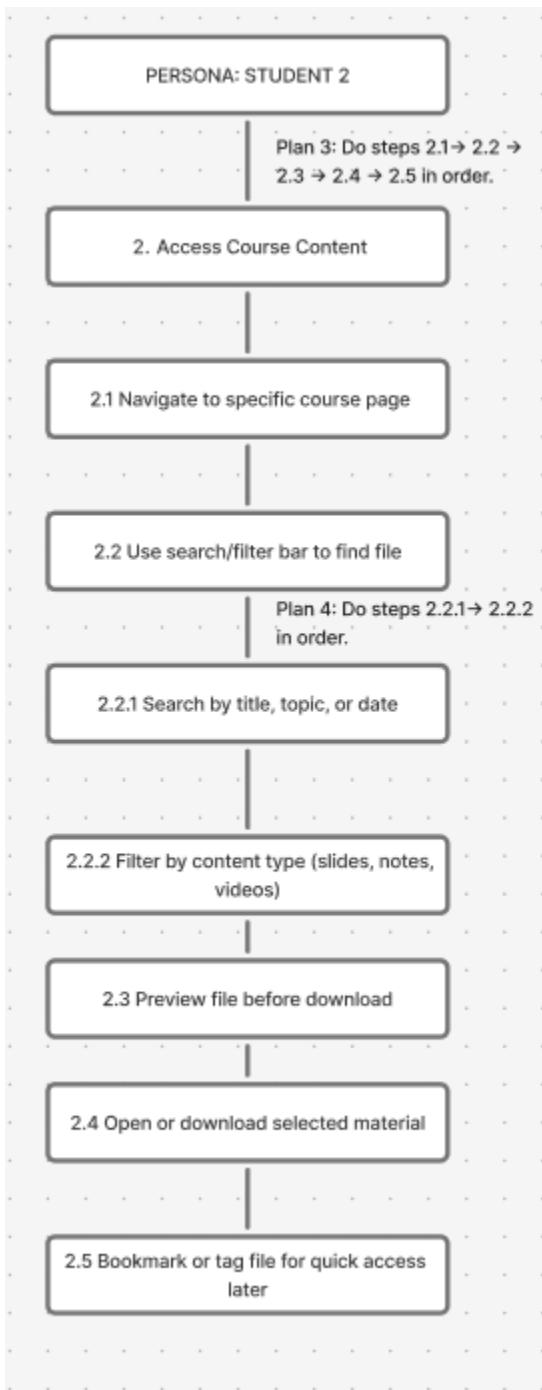
2.2.2 Filter by content type (slides, notes, videos)

2.3 Preview file before download

2.4 Open or download selected material

2.5 Bookmark or tag file for quick access later

GRAPHICAL HTA:

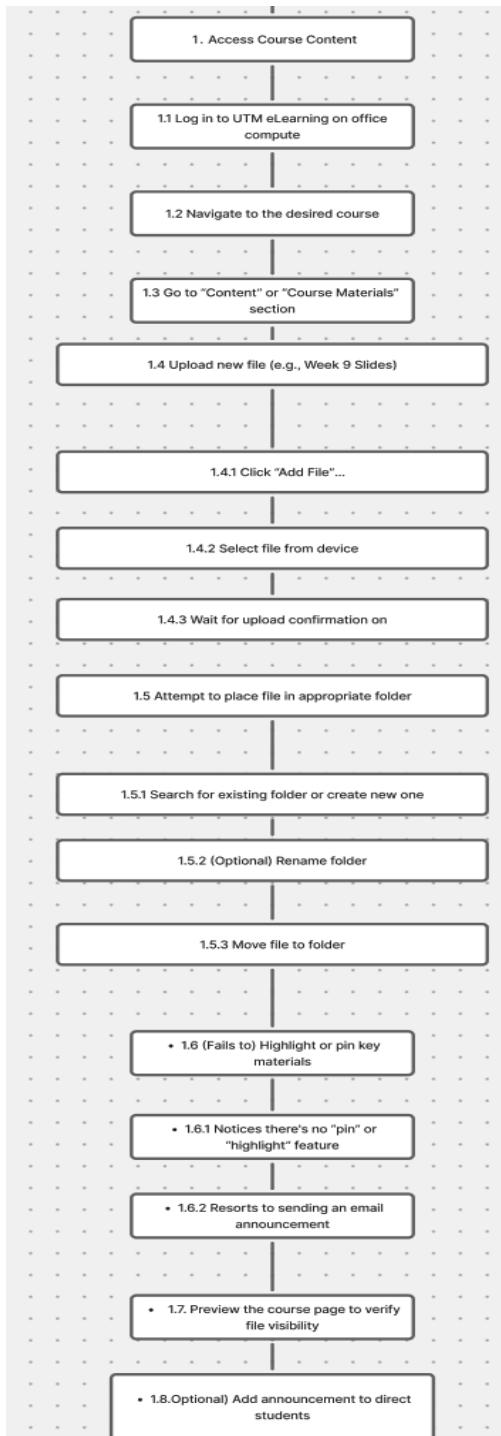


### **3. Lecturer**

TEXTUAL HTA:

1. Log in to UTM eLearning on office computer
2. Navigate to the desired course
  3. Go to “Content” or “Course Materials” section
4. Upload new file (e.g., Week 9 Slides)
  - 4.1 Click “Add File” or “Upload”
  - 4.2 Select file from device
  - 4.3 Wait for upload confirmation
5. Attempt to place file in appropriate folder
  - 5.1 Search for existing folder or create new one
  - 5.2 (Optional) Rename folder
  - 5.3 Move file to folder
6. (Fails to) Highlight or pin key materials
  - 6.1 Notices there's no “pin” or “highlight” feature
  - 6.2 Resorts to sending an email announcement
7. Preview the course page to verify file visibility
8. (Optional) Add announcement to direct students

## GRAPHICAL HTA :



## **Findings from the HTAs for Task 2**

From the HTAs of task 2, issues highlighted are content are poorly structured and presented in long, unorganized lists. Lack of metadata makes it hard to identify relevant files. Pinning or highlighting important content is not supported. Time is wasted searching for materials, especially on mobile or during short study sessions. Website should include structured folders or tabs to logically group course materials and ability to pin, tag, or highlight important or recently added content. File previews, search, and filters (by date, topic, or type). Mobile-optimized access to reduce scrolling and simplify navigation.

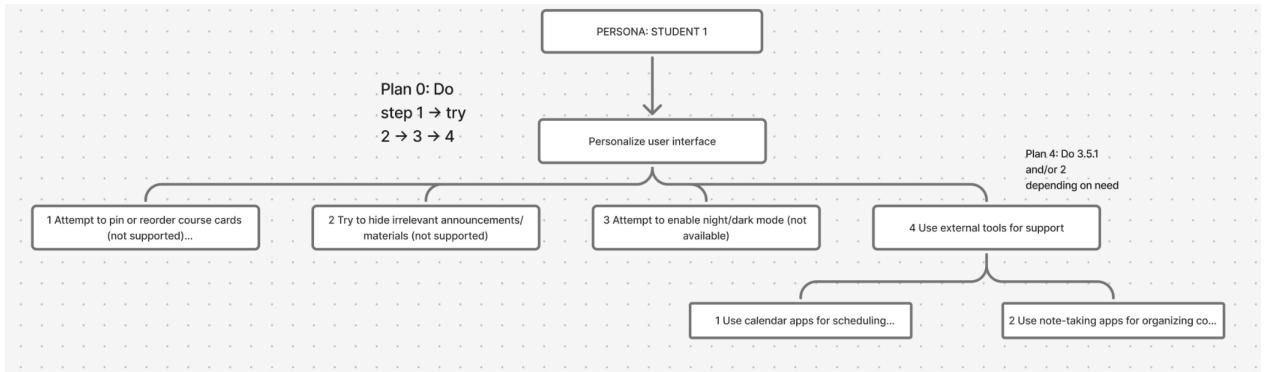
## **Task 3 -Customize the Learning Environment for Better Focus.**

### **1. Student 1**

TEXTUAL HTA:

3. Personalize user interface (limited options)
  - 3.1 Log in to the platform
  - 3.2 Attempt to pin or reorder course cards (*not supported*)
  - 3.3 Try to hide irrelevant announcements/materials (*not supported*)
  - 3.4 Attempt to enable night/dark mode (*not available*)
  - 3.5 Use external tools for support
    - 3.5.1 Use calendar apps for scheduling
    - 3.5.2 Use note-taking apps for organizing content

## GRAPHICAL HTA:



## 2. Student 2

### TEXTUAL HTA:

#### 3. Customize platform interface for clarity

3.1 Switch to 'Dark Mode' or preferred theme

3.2 Reorder course cards on dashboard

3.2.1 Drag and drop by priority

3.3 Pin weekly modules or key content on course pages

3.4 Hide/archive irrelevant announcements or old materials

3.5 Color-code items based on:

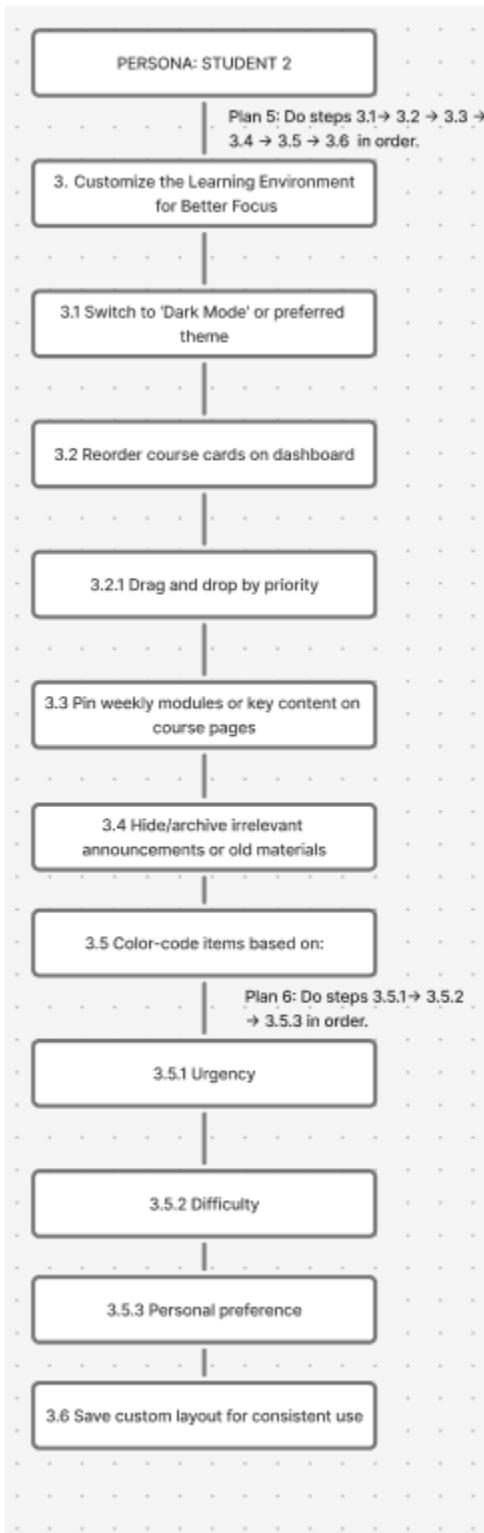
3.5.1 Urgency

3.5.2 Difficulty

3.5.3 Personal preference

3.6 Save custom layout for consistent use

## GRAPHICAL HTA:

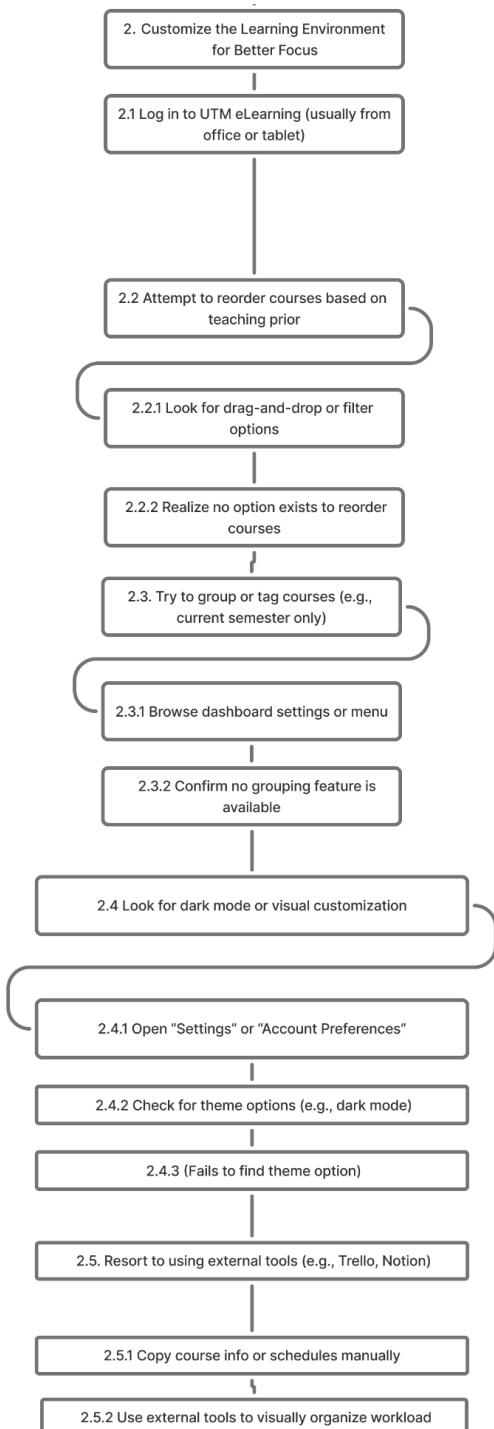


### **3. Lecturer**

TEXTUAL HTA :

1. Log in to UTM eLearning (usually from office or tablet)
2. Attempt to reorder courses based on teaching priority
  - 2.1 Look for drag-and-drop or filter options
  - 2.2 Realize no option exists to reorder courses
3. Try to group or tag courses (e.g., current semester only)
  - 3.1 Browse dashboard settings or menu
  - 3.2 Confirm no grouping feature is available
4. Look for dark mode or visual customization
  - 4.1 Open “Settings” or “Account Preferences”
  - 4.2 Check for theme options (e.g., dark mode)
  - 4.3 (Fails to find theme option)
5. Resort to using external tools (e.g., Trello, Notion)
  - 5.1 Copy course info or schedules manually
  - 5.2 Use external tools to visually organize workload

## GRAPHICAL HTA :



## **Findings from the HTAs for Task 3**

From HTAs, Users can't personalize their dashboard for example reordering, hiding and grouping. Visual fatigue due to lack of dark mode or theme customization. No ability to filter content by priority, date, or urgency. Cluttered interface leads to cognitive overload and distraction. Website should have dashboard customization. For example, user can reorder courses, group by semester or priority and hide old content. Dark mode and visual theme options for better usability, especially during late-night work. Ability to filter dashboard views to show urgent tasks, today's schedule, or specific courses. Support for personal workflows through pinning, color-coding, or labeling.

## **Design requirements**

From the existing applications that we have done researched upon, below is a list of design requirements that we will be working on for our own version of system:

### **1. Personalized Dashboard with Prioritized Information**

Show upcoming deadlines, live classes, and recent announcements first. Highlight due dates using color-coded tags red = urgent, yellow = due soon.

### **2. Smart Notifications & Alerts**

Real-time push or email reminders for upcoming deadlines, class session changes, and newly posted grades or materials

### **3. Structured and Intuitive Content Organization**

Support pinning important files/materials at the top of each section.

#### **4. File Preview & Metadata**

Display file type, size, and upload date. Enable previewing slides/docs without full download.

#### **5. Dark Mode and Theme Options**

System-wide dark mode toggle. Optional font and background customization for better accessibility.

#### **6. Customizable Dashboard Layout**

Allow users to reorder or prioritize course cards, hide irrelevant courses or announcements and pin frequently visited modules or tools

#### **7. Personal Highlights and Notes**

Enable students to highlight important materials and add personal notes or tags on files or sections for later review.

#### **8. Simplified Interface with Visual Hierarchy**

Use consistent UI design with grouped content blocks, clear icons, and headings, and reduced cognitive load for easier scanning.

Through users' thought processes, we are able to clearly identify each step the users are taking to complete the designated task. From there, we can notice tiny pauses by the users when trying to do the task. This is where we can find issues of UI/UX design which are described above.