TASKSYNC:

DIGITAL PLATFORM FOR STUDENT ASSIGNMENT AND
PROJECT MANAGEMENT

Design Thinking Project Report

Group 3

Section 07

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1.0 Introduction

In today's academic environment, students are often required to manage demanding coursework alongside extracurricular commitments such as student councils, clubs, and group projects. These responsibilities make it difficult to track tasks, meet deadlines, and coordinate activities. This report introduces TaskSync, a digital platform designed to simplify the management of assignments and projects by providing features such as early submission support, progress tracking, and automated reminders. The report discusses the main features of TaskSync, explores its impact on individual and team productivity, and evaluates its potential to help students remain organized and efficient. The scope of this study focuses on the platform's functionality and usability for academic task management in an offline environment, where all data is stored locally on the user's device.

2.0 Project Overview

2.1 Problem Statement

Current e-learning platforms are not as effective in helping students manage their assignments, as they often rely heavily on frequent manual updates. With increasing workloads and busy schedules, students often miss deadlines and struggle to track progress, especially in multiple courses or group projects. Missed deadlines can significantly affect students' performance and stress levels. Therefore, a more structured and integrated solution is needed to support efficient academic task management.

2.2 Proposed Solution: TaskSync

TaskSync is a digital task management platform designed to help students organize and manage their assignments. This offline-first platform allows tasks to be managed even when internet access is limited. Smart reminders and countdown timers help students avoid missing deadlines, while group assignment management supports collaboration.

Key Features

- Smart Reminders
- Assignment Progress Tracking
- Group Assignment Management
- Priority Ranking System

Target Users

- Undergraduate and diploma students
- Students with busy schedules

2.3 Team Collaboration

The project was implemented in a collaborative way, with tasks being divided according to the strengths of each team member, such as system design, documentation, and testing. Decisions were taken through group discussions, which ensured clear communication, accountability, and an organized workflow throughout the development of TaskSync.

3.0 Design Thinking Phases

3.1 Empathize Phase

During the empathize phase, an interview was conducted with Nur Amarah Auni, a 20-year-old Universiti Teknologi Malaysia student and ping pong athlete. She explained that balancing multiple deadlines is particularly difficult, especially when group projects overlap with individual tasks. Her busy training schedule often leads to missed deadlines and limited progress tracking, while poor internet connectivity further complicates her ability to stay on track. She noted that although she relies on calendars and messaging apps, these tools lack effective collaboration and clear visibility of deadlines. Her experiences reflect common student struggles and form the basis for defining the problem in this study.

3.2 Define Phase

Based on these insights, the problem was reframed from a clear statement that students need a simple yet collaborative tool to manage assignments effectively. This phase synthesized data from the empathize phase and identification of issues which included poor visibility and organization of deadlines. The defined need emphasized the importance of a system that provides clarification, structure, and collaboration to support students stay on track and manage their academic responsibilities efficiently.

3.3 Ideate Phase

Several possible solutions to the identified problem have been examined during the ideate phase, ranging from simpler reminder applications to more collaborative task management platforms. After considering feasibility and potential impact, the TaskSync concept was chosen as the most appropriate. The proposed system includes features such as assignment progress monitoring with urgency levels, group collaboration tools with integrated chat, smart reminders and notifications, and countdown timers that show how much time remaining before the submission, all of which are designed to help students remain organized, reduce stress. and complete their tasks on time.

3.4 Prototype Phase

The prototype phase involved the conversion of ideas into tangible designs. Low-fidelity wireframes were created to visualize the user interface, followed by a functional prototype that allowed basic task tracking and collaboration. This prototype demonstrates how TaskSync might operate in the field. The evidence consisted of screenshots of wireframes, mockups, and the initial working prototype, which provided a foundation for further development.

3.5 Test Phase

Finally, the test phase was carried out with a group of students interacting with the prototype. Their feedback highlighted strengths such as ease of use and clarity of deadlines but also highlighted areas for improvement such as the way the notifications are set and the design of the interfaces. The evidence collected included user test results, survey responses, and direct feedback that have guided the further refinement of TaskSync to meet student needs.

4.0 Design Thinking Assessment Points

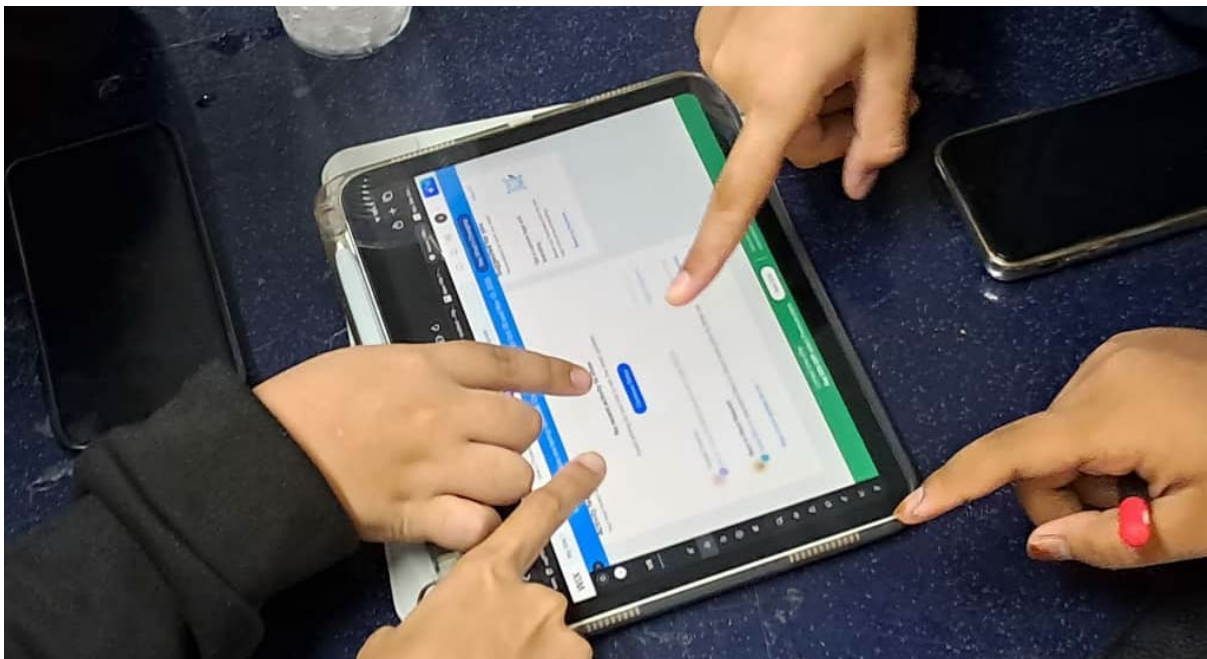### 4.1 Assessment during Phase Transitions

Assessment was carried out at the end of each design thinking phase through brief team reflection sessions. During these sessions, the team reviewed progress against the objectives of the phase and discussed any challenges encountered. Based on the feedback, adjustments were made before moving to the next phase, such as refining the problem statement and narrowing the proposed features to those that could function without continuous internet access. This ensured that the development of TaskSync remained aligned with user needs and the original problem statement.

4.2 Assessment during Final Demonstration

The final prototype was evaluated against the initial problem statement to determine its effectiveness in addressing key challenges faced by students, including deadline tracking and task progress monitoring. This evaluation involved a rubric-based assessment and peer feedback collected during the final demonstration, while suggestions were made to improve interface clarity and feature usability. These findings confirmed the relevance of TaskSync as a practical assignment management tool and identified areas for improvement in future iterations.

5.0 Design Thinking Evidence Summary

5.1 Sample Student Work

Meeting for topic discussion

How often do you check the e-learning calendar for assignments?

25 responses

Copy chart

- Very often
- Sometimes
- Rarely
- Never

68%
20%
12%

Have you ever missed or almost missed an assignment deadline?

25 responses

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- Yes
- No

52%
48%

What are the main difficulties you face when using e-learning to manage assignments?

25 responses

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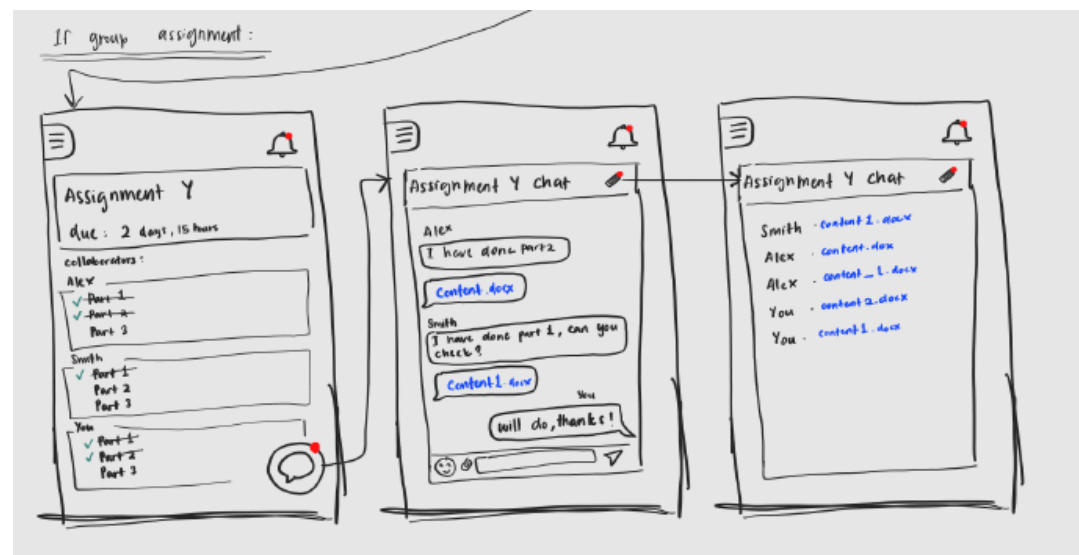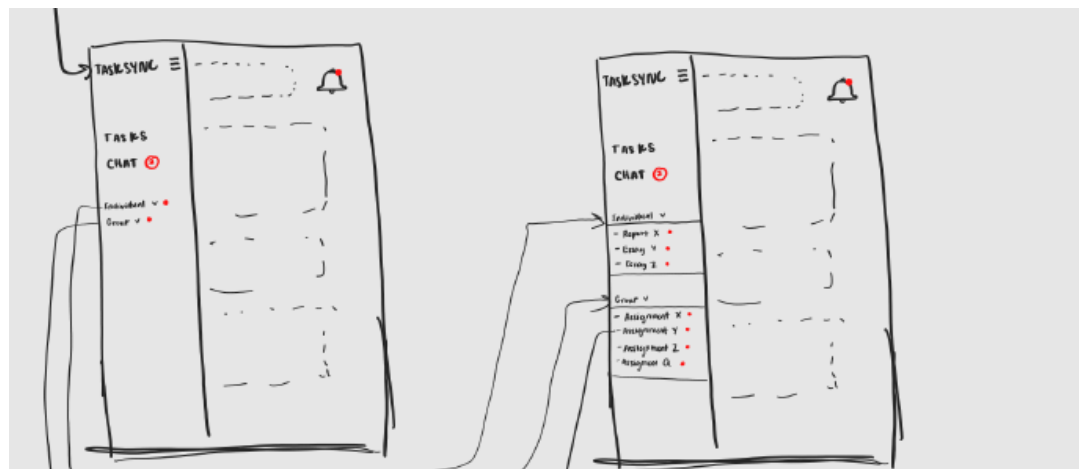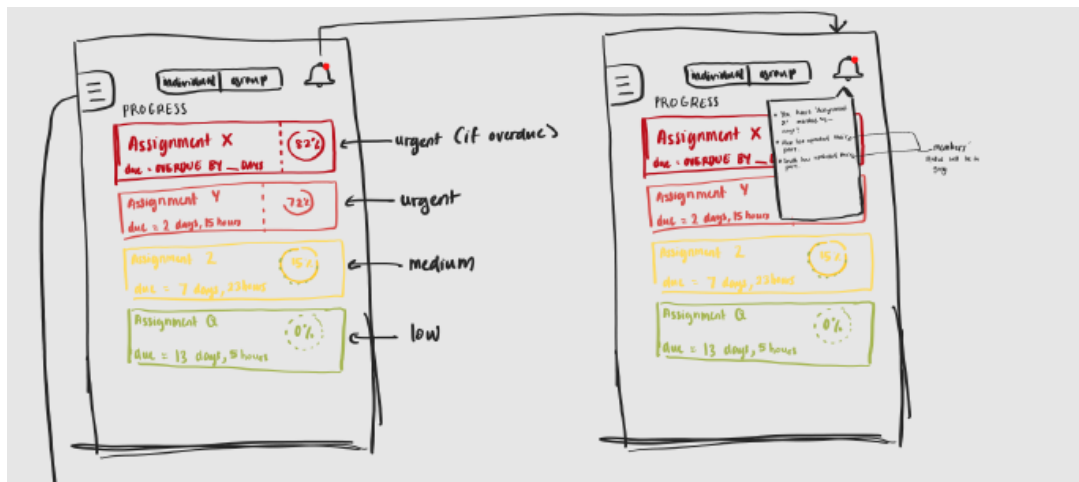| Difficulty	Responses
Need to constantly open…	15 (60%)
Too many assignments ca…	16 (64%)
No clear way to track assignme…	15 (60%)
Internet connection is re…	14 (56%)
Busy schedule makes it hard to…	17 (68%)
tiada	1 (4%)

Do you think e-learning is effective for tracking assignment progress?

25 responses

Copy chart

- 1: 2 (8%)
- 2: 3 (12%)
- 3: 11 (44%)
- 4: 7 (28%)
- 5: 2 (8%)

How useful would smart reminders be for you?
Example: "Assignment X is due in 7 days. Have you finished your research?"

25 responses

Copy chart

- 1: 1 (4%)
- 2: 1 (4%)
- 3: 4 (16%)
- 4: 6 (24%)
- 5: 13 (52%)

Would you like to track assignment progress (*e.g. In progress %, Almost done, Submitted*)?

25 responses

Copy chart

- Yes
- No
- Maybe

92%
8%

How helpful would a priority ranking system be?
Example: (Urgent / Medium / Low)

25 responses

Copy chart

- 1: 0 (0%)
- 2: 1 (4%)
- 3: 8 (32%)
- 4: 3 (12%)
- 5: 13 (52%)

For group assignments, which features would you find useful?

25 responses

Copy chart

Feature	Responses
Assign tasks to group members	22 (88%)
View each member's progr…	20 (80%)
Group chat for the assignment	17 (68%)
Monitor overall group productivity	15 (60%)
Not needed	1 (4%)

How important is offline mode for you?
(*View & update progress without internet*)

25 responses

Copy chart

- 1: 0 (0%)
- 2: 1 (4%)
- 3: 3 (12%)
- 4: 5 (20%)
- 5: 16 (64%)

Would you use an assignment tracker app with the features mentioned?

25 responses

Copy chart

- Definitely
- Probably
- Not sure
- Probably not

48%
48%
4%

Which feature is **MOST** important to you?

25 responses

Copy chart

- Smart reminders
- Progress tracking
- Group assignment management
- Priority ranking
- Offline mode

44%
24%
20%
12%

Survey Responses

7

Rough draft of TaskSync prototype

5.2 Phase-Based Record

Phase	Evidence
Empathize	Collect data from students through a survey; documented challenges in assignment tracking and group work; created user persona with age, background, and responsibilities.
Define	Wrote problem statements about missed deadlines and difficulty tracking progress; noted unmet student needs; recorded team discussions.
Ideate	Brainstormed possible solutions like Smart Reminder, Progress Tracking, Group Management, Priority Ranking, and Offline Mode; made simple sketches of ideas.
Prototype	The prototype was developed starting by sketching the low-fidelity wireframes to outline the interface and basic features. A functional prototype was created to allow simple task tracking and collaboration, demonstrating the main idea of TaskSync.
Test	Tested prototype with sample users; collected feedback on usability and features observed performance and made improvement.

6.0 Task Distribution

- Documentation and Final Report
  - Sofea binti Mohammad Hisyamuddin
  - Nurin Batrisyia Husna binti Mohd Hazry

- Survey
  - Siti Nur Alysha binti Suhaimi

- Presentation Video
  - Nur Dania Halisa binti Mohd Hazri
  - Siti Nur Alysha binti Suhaimi

- Prototype Draft
  - Nurul Najiheen binti Hazril

7.0 Reflection

NUR DANIA HALISA BINTI MOHD HAZRI, A25CS306
My dream is to become a professional in designing, managing, developing and improving systems. This project taught me of how to analyse real-world problems, finding creative solutions and testing ideas before implementation. Lastly, to improve my potential in the industry, I plan to continuously develop both my technical skills and soft skills.

NURUL NAJIHEEN BINTI HAZRIL, A25CS0337
In the future, I would like to take part in projects that require designing and developing a system while being in an IT career. From this design thinking project, I am exposed to the brief process of developing a system whether from front-end or back-end systems, thus I have taken note of the complex challenges that I will face in the future. Hence, the vital steps that I should implement to increment my potential in the industry are to continue gaining more knowledge and experience in programming, technical, system designing and graphic designing skills.

NURIN BATRISYIA HUSNA BINTI MOHD HAZRY, A25CS0328
My goal is to strengthen my skills in developing practical digital solutions. The TaskSync project has helped me understand the importance of user-centered design thinking in solving problem. I learned that successful solutions must go beyond technical features to be usable and relevant to students. To improve my industry potential, I plan to gain exposure through internships and continue refining my technical and project management skills.

SITI NUR ALYSHA BINTI SUHAIMI, A25CS0354
My goal is to become a Game Developer who creates apps and games that are both fun and useful. Developing TaskSync showed me how design thinking can be applied to my field. It taught me to focus on the user's needs like simplifying a busy student's schedule rather than just the technical graphics.I I plan to focus on UI/UX design and better coding skills. I also need to practice making games, learn game engines like Unity and build a strong game portfolio. I also need to improve my creativity and problem-solving skills to succeed in the game industry.

SOFEA BINTI MOHAMMAD HISYAMUDDIN, A25CS356
My dream is to be part of a graphic design team where I can create visuals that inspire and communicate ideas effectively. This design thinking project gave me a hands-on experience of taking a project from concept to completion, teaching me how to organise tasks and work closely with a team. To grow in the industry, I plan to practice applying design thinking in real projects, experiment with different design approaches, and actively seek feedback to make my work stronger and more impactful.