

# MSc IT+ Projects Tracker

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University  
of Glasgow

# Project Ideation

To be completed by **May 19<sup>th</sup> 2023**

# About You

This information will help your supervisor to understand your background, skillset and interests

Optional - Include a photo of yourself below



Question	Your Response
Is there a <b>name</b> other than your first name as noted with the University that you would prefer to be used by your supervisor in your contact with them?	No
Please state your <b>previous degree</b> topic and any other <b>relevant background information</b> you would like your supervisor to know.	Bachelor of Engineering in Materials Chemistry
Please state what <b>previous programming experience</b> (languages, frameworks etc) that you have beyond the current MSc IT+ degree, if any.	Self-taught in Spring, MyBatis, SpringMVC, SpringBoot
Please briefly note what <b>future career aspirations</b> you have (e.g. programmer, business analyst, consultant, ...), and what job role you are targeting (e.g. finance, government, technology, academia, ...) after this degree.	Programmer(Java developer) in technology company

# Project Topic Ideation

Based on John Hill's Project Ideation video, try to see if you can define a project topic.

Your supervisor will then provide feedback on your topic ideas, and prescribe a topic if necessary, by Week 1 of the IT+ projects.

Question	Your Response
For your individual development project, is there <b>any particular platform</b> you want to gain experience developing for (e.g. Web apps, Mobile apps, Desktops apps, Services and APIs, Cloud apps/infrastructure etc.)?	Web apps
Is there <b>any particular technology</b> or <b>application type</b> you want to focus on (e.g. games, responsive web apps, machine learning etc.)	responsive web apps
Is there a <b>particular subject area</b> that you want your project to work within e.g. business, ecology, sports, travel, entertainment etc.	Business, education
Do you have a <b>project idea</b> in mind that you'd want to pursue? If so, in a few sentences describe: <ul style="list-style-type: none"><li>• <b>what</b> the development project would aim to produce</li><li>• <b>why</b> you want to pursue this</li><li>• your initial thoughts on the <b>high level requirements</b> that your project could potentially address</li></ul>	Note-taking web app, it provide user account login and authentication capabilities, as well as the ability to back up notes to the cloud. Note-taking is a common and essential function in people's daily work and studies, helping users better organize and manage information. Cloud backup allows users to store and recover their notes, mitigating the risk of data loss. High-level requirements User authentication and account management, Note editing and processing, note management, cloud backup, user permissions and access control,
Would you be interested in working on a <b>development project with a pre-existing customer within the University</b> (e.g. a School needing a specific web app to be built)	No

# Project Topic Ideation

## Feedback from Supervisor

- **Feedback from your Supervisor will be written here prior to or on the Week 1 project start.**
- Your supervisor may propose alterations to your suggested project topic, or may prescribe a different topic.
- Your supervisor's feedback is important, so pay attention to it – they have the final say on what your project should constitute!
- Hello, I think this is good and you could design a note taking application but what I would say is that you should think of features that would make it more useful, for example, multiuser contexts where this might be useful – like in a meeting where notes are being taken and then the notes would be shared with all attendees of the meeting once approved. Let's work together to fine tune this idea.

# Project Proposal

To be updated as the topic and scope  
become clearer from Week 1 onwards

# Proposed Project

Based on the feedback you received from your supervisor, now refine your understanding of your project topic

This should be negotiated and agreed with your supervisor by the start of Week 2 (**June 19<sup>th</sup> 2023**) at the latest.

Question	Your Response
What <b>type of application</b> (e.g. Web app, Mobile app, Desktops app, Service/API, Cloud app etc.) are you going to develop?	Web app
What <b>technologies</b> are you going to develop using? (e.g. what framework, stack, programming languages etc).  If these are technologies other than what you have gained experience with through the MSc IT+ course, justify this.	Programming Languages: Java, HTML, CSS, JavaScript  Framework: SpringBoot, Vue  Database: MySQL, Redis
Describe your <b>project topic</b> and <b>aims</b> , considering:  <ul style="list-style-type: none"><li>• <b>what</b> the development project would aim to produce</li><li>• <b>why</b> you want to pursue this</li><li>• your initial thoughts on the <b>high level requirements</b> that your project could potentially address</li></ul>	This note-taking application, currently referred to as "Whiteboard" to help Users capture their inspirations, organize notes, and share ideas in the "presenter mode" or collaborate with others in the collaboration mode,  Enhancing users' creativity, productivity, and fostering teamwork and communication.  The high-level requirements that our project could potentially address are as follows: User authentication and permission control: Ensure that users have proper access to their authorized data. Note creation and editing: Provide text editing functionality by integrating suitable text editor components into the frontend application. Collaboration feature: Implement a multi-user editing feature.

# Changes to Proposed Project

As you progress through the 12 week project, keep a note of any changes to the proposed project topic, aims, technologies used etc. here.

This will help your supervisor to understand how the project has evolved and why.

How did the project topic / aims / objectives change?	When did this change occur? (week / date)	Why did you make this change?	Has this been discussed with Supervisor?

# URLs / Resources

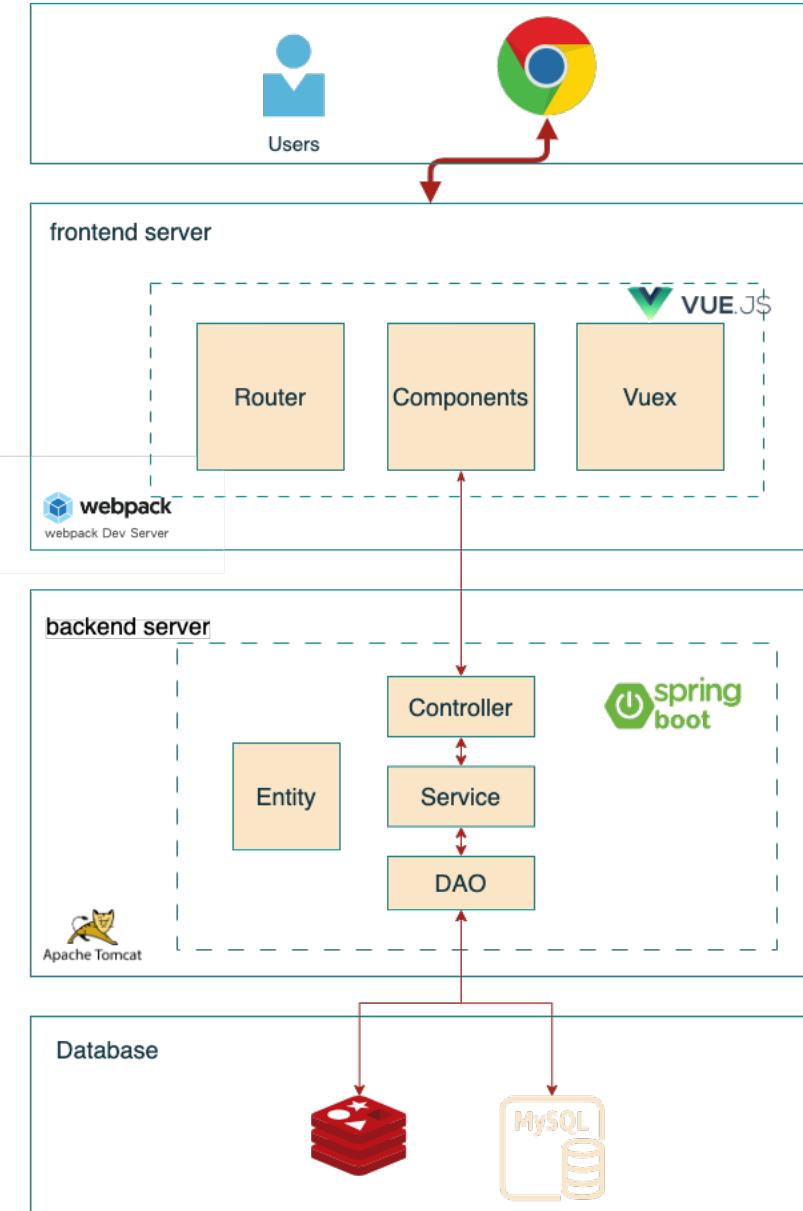
Link to any useful URLs and resources you want to share directly with your supervisor here. This should include a link to your Gitlab repository (once setup by end of Week 1) and the latest working copy of your dissertation (e.g. on Onedrive, Overleaf etc).

- **Gitlab repository:**  
<https://stgit.dcs.gla.ac.uk/msc-project-for-information-technology/2022/it-project-2653432g/it-project>
- **Dissertation:**  
[https://gla-my.sharepoint.com/:w/g/personal/2653432g\\_student\\_gla\\_ac\\_uk/Ef6VCR6DNSJMllaBr8UhaKoB6DaGYYQ1UwGQW\\_r7snlmGQ?e=aieRow](https://gla-my.sharepoint.com/:w/g/personal/2653432g_student_gla_ac_uk/Ef6VCR6DNSJMllaBr8UhaKoB6DaGYYQ1UwGQW_r7snlmGQ?e=aieRow)

Remember, both your Gitlab repository and Dissertation should evidence regular, continual progress throughout the 12 weeks (e.g. history of regular commits evidencing you developed your project independently and incrementally). **We may refuse to mark any projects that cannot evidence continual progress.**

# Project Architecture Diagram

Add and maintain an architecture diagram to help your supervisor understand your project design and approach



Example formats will be provided on the kickoff meeting in June

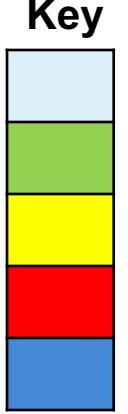
# Weekly Progress Tracker

To be filled out by the student every week, tracking progress, aims, issues, and planning your agenda for any meetings with your supervisor or GTAs.

# Purpose of the Progress Tracker

- The progress tracker is here to **help you manage your project** - to set targets, explore expectations and aims with your supervisor, and organise and document your thoughts and progress along the way
- Each week has an associated progress tracker slide that should be filled out week-by-week.
- There are also “**status update**” slides aligned with the mandatory supervisor meetings throughout the project. These should also be filled prior to meeting your supervisor to evidence your progress.
- You can modify this template! Adapt it to suit your project needs as you go!
- **Filling out the Weekly Progress Tracker and Status Update slides is mandatory** - If you don't fill this material out, this will count against your professional conduct grade, and if you can't evidence you've conducted the project independently, we may refuse to mark any submission.

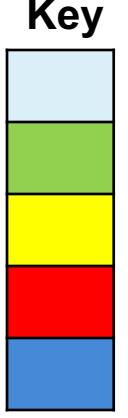
# Example

Key Milestones	Status	 <b>Key</b> <ul style="list-style-type: none"> <li>Not Started</li> <li>On track</li> <li>Issues</li> <li>Major issues</li> <li>Completed</li> </ul>	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope	Complete and written up		<ul style="list-style-type: none"> <li>• Key Points...</li> <li>• ...that you want to cover...</li> <li>• ...for this weeks meeting with your supervisor, or with a GTA in the lab.</li> </ul>
Requirements / Analysis	In progress but not written up		
Tools, Stack, Dev. Environment			
Prototype and Design			
Development			<p><b>Completed Activities This week</b></p> <ul style="list-style-type: none"> <li>➤ Completed Internet search of similar systems</li> <li>➤ Developed personas to drive requirements</li> </ul> <p><b>Upcoming Activities – Next week</b></p> <ul style="list-style-type: none"> <li>➤ User interface design</li> <li>➤ Database design</li> </ul>
System testing			
User Evaluations			
Dissertation & Video			<p><b>Issues, Risks and Concerns</b></p> <ul style="list-style-type: none"> <li>➤ Trying to decide between Django and Flask for the most appropriate Python framework</li> <li>➤ Trying to decide between MySQL and PostgreSQL as the database</li> </ul>

# Week 1 - Initial Supervisor Meeting

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope	Completed but not written up	Not Started	Select a topic
Requirements / Analysis	Partially completed	On track	
Tools, Stack, Dev. Environment	Completed but not written up	Issues	
Prototype and Design		Major issues	
Development		Completed	
System testing			
User Evaluations			
Dissertation & Video			

# Week 2

Key Milestones	Status	 <b>Key</b> <ul style="list-style-type: none"> <li>Not Started</li> <li>On track</li> <li>Issues</li> <li>Major issues</li> <li>Completed</li> </ul>	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope	Completed		No meeting
Requirements / Analysis			
Tools, Stack, Dev. Environment			
Prototype and Design			
Development			<b>Completed Activities This week</b> <ul style="list-style-type: none"> <li>➤ High level scope</li> </ul> <b>Upcoming Activities – Next week</b> <ul style="list-style-type: none"> <li>➤ Gather data and review relevant literatures</li> </ul>
System testing			
User Evaluations			
Dissertation & Video			<b>Issues, Risks and Concerns</b>

# Week 3/4 Status Update

## Requirements, Design

**project topic :** a knowledge management Web Application: Enhancing Personal Learning and Community Interaction through Online Note-Taking, Content Sharing, and Collaborative Creation Features

I utilized Document Analysis, Surveys and Questionnaires, along with an examination of other applications in the same field, to conduct an in-depth analysis for capturing the requirements.

Through these methods, I have decomposed the users' requirements into a series of user stories. This step-by-step breakdown makes it easier to understand and address the specific needs and expectations of users

User story: [https://gla-my.sharepoint.com/:x/g/personal/2653432g\\_student\\_gla\\_ac\\_uk/EW-I\\_X75OYZAprVdnySHbUQBRxSG2mLEc4WO2R-C5G6W3g?e=G7DM8k](https://gla-my.sharepoint.com/:x/g/personal/2653432g_student_gla_ac_uk/EW-I_X75OYZAprVdnySHbUQBRxSG2mLEc4WO2R-C5G6W3g?e=G7DM8k)

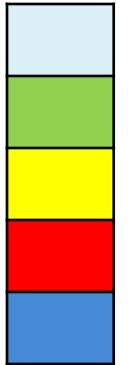
# Week 3

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)		
Project Topic & High Level scope		Not Started			
Requirements / Analysis		On track			
Tools, Stack, Dev. Environment	Completed and commit	Issues			
Prototype and Design		Major issues			
Development		Completed			
System testing					
User Evaluations					
Dissertation & Video					
Completed Activities This week		Upcoming Activities – Next week			
<ul style="list-style-type: none"> <li>➤ Created and distributed the survey questionnaire</li> <li>➤ Set up development environment</li> </ul>		<ul style="list-style-type: none"> <li>➤ Collect data and analysis</li> </ul>			
Issues, Risks and Concerns					

# Week 4

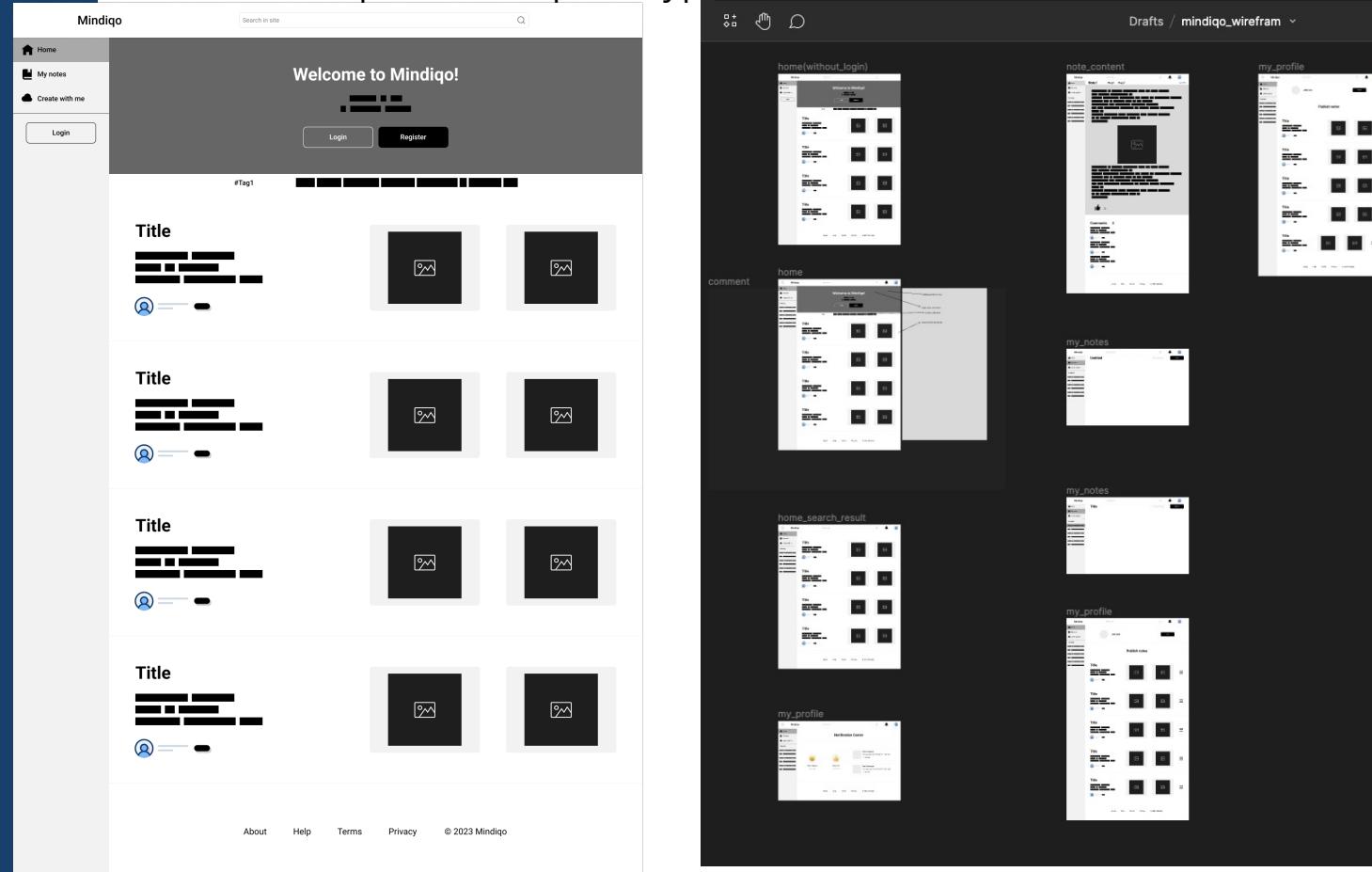
Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope		Not Started	
Requirements / Analysis	Completed and write as user stories	On track	
Tools, Stack, Dev. Environment		Issues	
Prototype and Design		Major issues	
Development		Completed	
System testing		<b>Completed Activities This week</b>	
User Evaluations		<b>Upcoming Activities – Next week</b>	
Dissertation & Video		<ul style="list-style-type: none"> <li>➤ Requirements analysis</li> <li>➤ User stories</li> </ul> <ul style="list-style-type: none"> <li>➤ Prototype and design</li> <li>➤ Front-end page develop</li> </ul>	
<b>Issues, Risks and Concerns</b>		<ul style="list-style-type: none"> <li>➤ cost of time to complete all user stories is too long and may need to be reduced appropriately</li> </ul>	

# Week 5

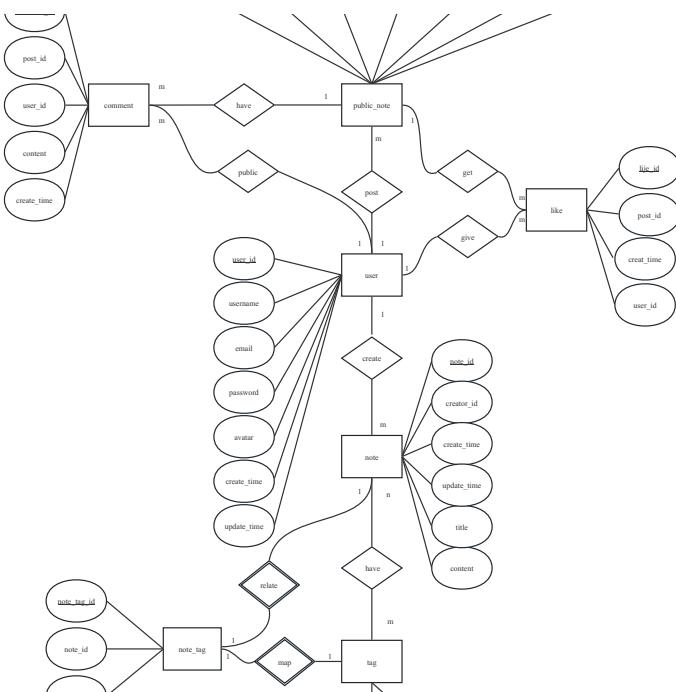
Key Milestones	Status	<b>Key</b>  Not Started On track Issues Major issues Completed	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope			
Requirements / Analysis			
Tools, Stack, Dev. Environment			
Prototype and Design	Prototype is completed E-R diagram is ongoing		<b>Completed Activities This week</b> <ul style="list-style-type: none"> <li>➤ Finish the Prototype of website</li> <li>➤ The user functionality of the website was developed</li> <li>➤ E-R diagram is</li> </ul> <b>Upcoming Activities – Next week</b> <ul style="list-style-type: none"> <li>➤ E—R diagram</li> <li>➤ Database table design</li> </ul>
Development			
System testing			
User Evaluations			
Dissertation & Video			<b>Issues, Risks and Concerns</b> <ul style="list-style-type: none"> <li>➤ The development process is not very standardised and there is a lot of duplication of processes</li> </ul>

# Week 6/7 Status Update

Completed the prototype design of the web page



prototype design

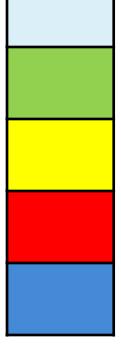


- E-R Diagram

# Week 6

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope		 Not Started On track Issues Major issues Completed	
Completed Activities This week	Upcoming Activities – Next week		
Requirements / Analysis	<ul style="list-style-type: none"> <li>➤ Finish E-R diagram</li> <li>➤ Database table design</li> </ul>		
Tools, Stack, Dev. Environment	<ul style="list-style-type: none"> <li>➤ Completion of the development of the "Must" part of the user story</li> </ul>		
Prototype and Design			
Development			
System testing			
User Evaluations			
Dissertation & Video			
Issues, Risks and Concerns			

# Week 7

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope		 Not Started On track Issues Major issues Completed	
Completed Activities This week	Upcoming Activities – Next week		
Development	<ul style="list-style-type: none"> <li>➤ The database has been established,</li> <li>➤ User login feature has been developed.</li> <li>➤ The note-taking function and note tag function are still under development.</li> </ul>		
System testing			
User Evaluations			
Dissertation & Video			
Issues, Risks and Concerns			
	<ul style="list-style-type: none"> <li>➤ Browser compatibility problems with the frontend pages and display problem in note_edit page.</li> </ul>		

# Week 8/9 Status Update

## Development Progress:

1	Note Creator	Viewing Notes I Created	Must	0.5
2	Note Creator	Creating a New Note	Must	1
3	Note Creator	Editor	Must	3
10	Note Creator	Save Note	Must	3
12	Note Creator	Deleting a Note	Must	0.5
15	Note Creator	Posting a Note	Must	3
17	Poster	Viewing Posted Notes	Must	1
18	Poster	Canceling Post	Must	0.5
21	Community Member	Browsing Note Summaries	Must	0.5
22	Community Member	Viewing Specific Note Contents	Must	0.5
35	User	User Registration	Must	1
36	User	User Login	Must	0.5
37	User	Password Reset	Must	0.5

All 'must' user stories have been fully developed and completed.

6	Note Creator	Editor: Markdown Support	Should	1.5
7	Note Creator	Editor: Insert Image	Should	0.5
9	Note Creator	Add Tags to Note	Should	0.5
11	Note Creator	Renaming a Note	Should	0.5
14	Note Creator	Searching for Notes	Should	1.5
28	Community Member	Searching for Information	Should	0.5
29	Community Member	Searching for Information	Should	0.5
33	Admin	Managing Users	Should	2
34	Admin	Moderating Community Posts	Should	0.5

5 out of 9 'should' USs have been developed and completed.

19	Community Member	Editing Profile	Could	0.5
20	Community Member	Viewing Profiles	Could	0.5
23	Community Member	Viewing Interactions on a Note	Could	1
24	Community Member	Commenting on a Note	Could	1
25	Community Member	Replying to a Comment	Could	0.5
26	Community Member	Like a Note	Could	0.5
27	Community Member	Message Notifications	Could	0.5

3 out of 7 'could' features have been developed and completed

# Week 8

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)		
Project Topic & High Level scope		Not Started			
Requirements / Analysis		On track			
Tools, Stack, Dev. Environment		Issues			
Prototype and Design		Major issues			
Development		Completed			
System testing					
User Evaluations					
Dissertation & Video					
Completed Activities This week		Upcoming Activities – Next week			
<ul style="list-style-type: none"> <li>➤ Completed the development and test of the "Note Creator" user story.</li> <li>➤ Completed the development of the "Poster" user story.</li> </ul>		<ul style="list-style-type: none"> <li>➤ Finish the test of "Poster" feature</li> <li>➤ Configure backend interceptors and frontend route guards.</li> <li>➤ Finish the feature of "Community member"</li> </ul>			
Issues, Risks and Concerns					
<ul style="list-style-type: none"> <li>➤ In the app, lack feedback when a user completes an event.</li> </ul>					

# Week 9

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope		<span data-bbox="924 332 1077 375">Not Started</span> <span data-bbox="924 375 1077 419">On track</span> <span data-bbox="924 419 1077 462">Issues</span> <span data-bbox="924 462 1077 505">Major issues</span> <span data-bbox="924 505 1077 685">Completed</span>	
Completed Activities This week	Upcoming Activities – Next week		
<ul style="list-style-type: none"> <li>➤ Completed the "Poster" section.</li> <li>➤ Completed the "Community Member" except for the user profile section.</li> <li>➤ The frontend has added a unified message feedback.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Review code quality</li> <li>➤ Finish the Community Member</li> <li>➤ Dissertation</li> </ul>		
Issues, Risks and Concerns			
<ul style="list-style-type: none"> <li>➤ There is a lot of excessive coupling in the backend service layer.</li> </ul>			

# Week 10/11 Status Update

Currently, the development and testing of the entire project have been completed.

Dissertation: only the final part of the testing and the conclusion chapter remain.

The backend's Controller and Service were tested with a pass rate of 100%. (Details can be seen in the figure below)

Tested 28 API endpoints with 28 correct response cases. The average response time is 7ms with a pass rate of 100%. (Details can be seen in the figure below)

# Week 10/11 Status Update

Presentation title

BackendApplicationTests	569 ms
NotificationControllerTest	1.70 s
CommentControllerTest	99 ms
AuthControllerTest	130 ms
PostServiceTest	33 ms
AuthServiceTest	14 ms
UserControllerTest	92 ms
LikeServiceTest	18 ms
CommentServiceTest	13 ms
PostControllerTest	922 ms
NoteServiceTest	30 ms
NoteControllerTest	85 ms
TagServiceTest	7 ms
LikeControllerTest	70 ms
NotificationServiceTest	29 ms

# Backend Unit testing

# Week 10/11 Status Update

Presentation title

Mindigo - Run results

Run Again Automate Run + New Run Export Results

Ran today at 05:42:56 · View all runs

Source	Environment	Iterations	Duration	All tests	Avg. Resp. Time
Runner	New Environment	1	964ms	28	7 ms
All Tests	Passed (28)	Failed (0)	Skipped (0)		
Iteration 1					
<b>POST</b> http://localhost:8080/api/register					
http://localhost:8080/api/register					
PASS Successful					
200 OK 10 ms 202 B					
<b>POST</b> http://localhost:8080/api/login					
http://localhost:8080/api/login					
PASS Login Successful					
200 OK 5 ms 383 B					
<b>GET</b> http://localhost:8080/api/notes					
http://localhost:8080/api/notes					
PASS Successful					
200 OK 18 ms 3.682 KB					
<b>POST</b> http://localhost:8080/api/notes/2/ rename					
http://localhost:8080/api/notes/2/ rename					
PASS Successful					
200 OK 9 ms 202 B					
API Testing					
<b>POST</b> http://localhost:8080/api/notes/2/edit_abs					
http://localhost:8080/api/notes/2/edit_abs					
PASS Successful					
200 OK 7 ms 202 B					
<b>POST</b> http://localhost:8080/api/notes/2/change_img					
http://localhost:8080/api/notes/2/change_img					
PASS Successful					
200 OK 6 ms 202 B					

# Week 10

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope		 Not Started On track Issues Major issues Completed	
Completed Activities This week	Upcoming Activities – Next week		
Requirements / Analysis	<ul style="list-style-type: none"> <li>➤ Completed the expected user stories, except the "Would" and "admin" role prat.</li> <li>➤ Adjusted the project structure and refactored the code.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Review and repeatedly tested all unit tests.</li> <li>➤ Conduct API endpoint testing.</li> </ul>	
Tools, Stack, Dev. Environment			
Prototype and Design			
Development			
System testing			
User Evaluations			
Dissertation & Video			
Issues, Risks and Concerns			

# Week 11

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)
Project Topic & High Level scope		<span data-bbox="949 313 1077 342">Not Started</span> <span data-bbox="949 375 1077 404">On track</span> <span data-bbox="949 452 1077 480">Issues</span> <span data-bbox="949 528 1077 557">Major issues</span> <span data-bbox="949 604 1077 633">Completed</span>	
Completed Activities This week	Upcoming Activities – Next week		
Requirements / Analysis	<ul data-bbox="1000 793 1615 894" style="list-style-type: none"> <li>➤ User Evaluation Testing</li> <li>➤ Dissertation writing completed</li> </ul>		
Tools, Stack, Dev. Environment	<ul data-bbox="1751 793 2211 894" style="list-style-type: none"> <li>➤ Record a video</li> <li>➤ Revision of dissertation</li> </ul>		
Development			
System testing			
User Evaluations			
Issues, Risks and Concerns			

# Week 12 - Final Week

Key Milestones	Status	Key	Meeting Agenda (if scheduled for this week)			
Project Topic & High Level scope		Not Started				
Requirements / Analysis		On track				
Tools, Stack, Dev. Environment		Issues				
Prototype and Design		Major issues				
Development		Completed				
System testing						
User Evaluations						
Dissertation & Video						
		Completed Activities This week		Upcoming Activities Remaining		
				Issues, Risks and Concerns		