

### Record of Tasks

Task Number	Planned action	Planned outcome	Target date of completion	Time estimated	Criterion
1)	Initial conversation with client	Initial conversation with the client wherein a potential solution was proposed.	5/12/22	1 day	A
2)	Discussion with advisor	Details of the solution to be implemented is discussed with advisor and approval is gained regarding feasibility. Basic aspects of the solution that will be made are finalized.	10/12/22	1 day	A
3)	Interview with client	An in-depth interview is conducted to decide on exact features of the application that will be suitable for the client.	15/12/22	1 day	A
4)	Creating success criterion	Based on the interview, a list of success criterion to list functionality needed in the solution are made	24/12/22	2 days	A
5)	Researching technologies and overall data flow	Based on the requirements of the application, technologies that should be used for the application (libraries, frameworks, etc.) are researched and an abstract model for how application functions and data flows is decided based on these technologies.	2/1/23	3 days	A, B
6)	Deciding font and colour palette	A minimalist and simple font and colour palette are decided for the application.	7/1/23	1 day	B
7)	Designing prototypes for each screen on the web application	The screens that will be in the web application are decided. Design prototypes for how elements will be structured in each screen and dialogue box are made.	15/1/23	4 days	B
8)	Meeting client to get feedback on design prototypes and making changes	The design prototypes and font and color palette will be shown to the client and feedback will be incorporated into the design prototypes	22/1/23	2 days	B
9)	Planning the data and logic flow for the UI	Flowcharts showing the data and logic flow for the UI are made. A list of React components is decided.	30/1/23	6 days	B
10)	Planning the data flow for the backend	Flowcharts showing the data and logic flow for each API endpoint on the backend are made. A list of API endpoints is decided.	13/2/23	6 days	B

11)	Planning the database structure and schemas	An ER diagram is made showing the entities and relationships that will be part of the database, their attributes and how the connections will be implemented. Sample records are made for each planned collection.	27/2/23	4 days	B
12)	Planning the modules and functions for the frontend and backend	A list of modules and functions will be made to plan which part of the code will be responsible for each part of the frontend and backend.	7/3/23	6 days	B
13)	Decide how to test the application against the success criterions	A detailed testing plan with both abnormal and normal cases that test if the success criteria have been met or not by both user interaction and server requests.	13/3/23	4 days	B
14)	Install and setup the required software	MongoDB, NPM, node.js etc are installed and NPM projects are initialized for the client and server	20/3/23	2 days	C
15)	Implement the mongoose schema	Schema and model files are made for all the collections in the database based on the ER diagram with data validation using the sample records and ER diagram.	1/4/23	4 days	C
16)	Implement the CRUD operations in the backend	All the logic for the CRUD operations required by the application are implemented in the backend by referencing the flowchart	27/4/23	16 days	C
17)	Implement the email logic	All the logic for sending the emails and determining when to send the emails is implemented in the backend by referencing the flowchart	20/5/23	16 days	C
18)	Implement the express.js server routes	All the API routes and API logic in the application are implemented by referencing the flowchart	18/6/23	14 days	C
19)	Implement the import data tool	The tool to import the data in the format shared in Criterion A is made	30/6/23	3 days	C
20)	Insertion of dummy data in database	Dummy data is created in the format and inserted into database with dummy images for students.	31/6/23	1 day	C
21)	Basic testing and debugging	The backend is functioning at a basic level and issues with any logic or code are fixed	11/7/23	6 days	C
22)	Developing the UI elements	Logic for all the UI elements is implemented in the frontend using the data flow diagrams.	10/8/23	18 days	C
23)	Styling the UI elements	The styling for all the UI elements is done using CSS according to the design mockups.	2/9/23	12 days	C
24)	Conduct alpha testing	Using the testing plan in Criterion B tests are conducted on the basic functionality of the application and the application passes all the tests.	22/9/23	10 days	C, E

25)	Conduct beta testing	The application is handed over to the client and the client approves of the application as meeting all the success criterions decided.	16/10/23	2 days	C, E
26)	Implement necessary changes	For any issues in alpha testing or beta testing the fix is implemented	28/10/23	4 days	C, E
27)	Finalize product and Criterion C	Product is finalized and code is documented in Criterion C	29/11/23	12 days	C
28)	Solution implementation	Solution is successfully deployed and implemented by hosting the web application on the school server	10/12/23	7 days	C
29)	Final client interview	Client suggests suggestions or future improvements to the application from their beta testing and actual use of implemented solution	21/1/24	2 days	E
30)	Solution evaluation and reflection	Whether the solution meets the success criterion is decided and potential improvements and suggestions towards the product based on client and self evaluation are decided	15/2/24	10 days	E
31)	Completion of documentation	Documentation for all the criterions with record of tasks, bibliography and appendices is completed	10/3/24	12 days	A, B, C, E
32)	Demonstration of product	A 5-7 minute long video is recorded to demonstrate the features of the solution	17/3/24	2 days	D