

## Unit Test Document

System:	Epic Learning and Engagement Tool
Test description:	Fully test the valid, borderline, and invalid test cases for the functionality of the Tool.
Version:	V1.0
Tested by:	Adam Marley
Developed by:	Team 08 - Wolfpack
Prerequisites:	Access to Chrome browser.

### Scenario 1: Signup and Login

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Test Signup with valid input for a student account.	Email: <a href="mailto:student@gmail.com">student@gmail.com</a> Password: Qwerty1 Username: TheStudent Admin:	The input is accepted and the user is signed into the student homepage.	As expected.	Pass	
2	Test Signup with valid input for an admin account.	Email: <a href="mailto:admin@gmail.com">admin@gmail.com</a> Password: Qwerty1 Username: TheAdmin Admin: CompSci	The system will recognise the admin input and the user is signed into the admin homepage.	As expected.	Pass	
3	Test Signup without an email.	Email: Password: Qwerty1 Username: NoEmail Admin:	The system will return an appropriate error message underneath the email input box and won't sign in.	As expected.	Pass	
4	Test Signup	Email: NotAnEmail Password: Qwerty1	The system will return	As expected.	Pass	

	with an invalid email.	Username: BadEmail Admin:	an appropriate error message underneath the email input box and won't sign in.			
5	Test Signup without a password.	Email: <a href="mailto:nopass@gmail.com">nopass@gmail.com</a> Password: Username: NoPass Admin:	The system will return an appropriate error message underneath the password input box and won't sign in.	As expected.	Pass	
6	Test Signup with a weak password.	Email: <a href="mailto:weakpass@gmail.com">weakpass@gmail.com</a> Password: weak Username: WeakPass Admin:	The system will return an appropriate error message underneath the password input box and won't sign in.	As expected.	Pass	Conditions for a weak password by default for Firebase is it needs to be longer than 6 characters. Complexity can be added by preference.
7	Test Signup without a username.	Email: <a href="mailto:nouser@gmail.com">nouser@gmail.com</a> Password: Qwerty1 Username: Admin:	The system will return an appropriate error message underneath the username input box and won't sign in.	An error was encountered as expected, but the error was in a different format to the default way the Firebase errors are presented.	Pass	
8	Test Signup with an email that	Email: <a href="mailto:student@gmail.com">student@gmail.com</a> Password: Qwerty1 Username: TheStudent	The system will return an appropriate error	As expected.	Pass	

	already exists	Admin:	message underneath the username input box and won't sign in.			
9	Log in with the student details.	Email: <a href="mailto:student@gmail.com">student@gmail.com</a> Password: Qwerty1	The user will be logged in and directed to the student home page.	As expected.	Pass	
10	Log in with the admin details.	Email: <a href="mailto:admin@gmail.com">admin@gmail.com</a> Password: Qwerty1	The user will be logged in and directed to the admin home page.	As expected.	Pass	
11	Leave the email input box blank.	Email: Password: Qwerty1	An error message will be displayed under the email input box and the user will not be logged in.	As expected.	Pass	
12	Leave the password input box blank.	Email: <a href="mailto:student@gmail.com">student@gmail.com</a> Password:	An error message will be displayed under the password input box and the user will not be logged in.	As expected.	Pass	
13	Leave both boxes blank in the login.	Email: Password:	An error message will be displayed under the first input box and the user will	As expected.	Pass	

			not be logged in.			
14	Clicking the Sign Up/Sign In span switches from the Signup inputs to the Sign In inputs.	Signup/Signin span clicked.	It will switch between the two and will use the correct method for logging in.	As expected.	Pass	

### Scenario 2: Home Page and NavBar

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Signing in as a student goes to the student home page, and displays appropriate information about the student features.	None	Displays the student home page, with relevant information displayed in cards.	As expected.	Pass	What these look like are more obvious when actually using the program.
2	Signing in as an admin goes to the admin home page, and displays appropriate information about the admin features.	None	Displays the admin home page, with relevant information displayed in the cards.	As expected.	Pass	
3	Each button on the NavBar in the student page correctly goes to the appropriate page according to what you clicked.	Clicking on Home, Modules, Deadline, Assignments, Results, Forum, Feedback.	All go to their assigned destination in the program.	As expected.	Pass	

4	Each button on the NavBar in the student page correctly goes to the appropriate page according to what you clicked.	Clicking on Home, Analytics, My Classes, My Assignments, Forum, Feedback.	All go to their assigned destination in the program.	As expected.	Pass	
5	Logout button on the student page goes back to the login/signup page.	Clicking on the logout button in the nav bar.	The logout button successfully logs out the current user and returns them to the login/signup screen.	As expected.	Pass	
6	Logout button on the admin page goes back to the login/signup page.	Clicking on the logout button in the nav bar.	The logout button successfully logs out the current user and returns them to the login/signup screen.	As expected.	Pass	

### Scenario 3: Assignments and Deadline Tracker

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	When there are no modules in the database, nothing is displayed.	None	No modules are able to be clicked.	As expected.	Pass	
2	Clicking on the module "Security".	Module "Security" is in the database.	All assignments relevant to the module will be shown, including its assignment name, deadline date and module leader.	As expected.	Pass	
3	Clicking on the module "Algorithms", which has two assignments.	Module "Algorithms" is in the database, which has two assignments.	The assignments shown have the same information in as the above, and are shown in separate boxes.	As expected.	Pass	
4	Clicking the assignment's module.	Clicking the module link on the assignment.	The button should take you to somewhere that gives a brief overview of what the module is about.	The button does do that, but switches you to the admin side in the process.	Fail	Try again with the latest patch, with role permissions included.

5	The Deadlines tracker is accessed by the user to view all current remaining deadlines.	Clicked on the Deadline tab in the nav bar.	Displays all outstanding deadlines from every module the user is signed up to.	As expected.	Pass	
6	Adding a new deadline refreshes the tab.	Refreshed the Deadline page.	The newest deadline should automatically be added to the deadline tracker page.	As expected.	Pass	Not immediate, since the app needed time to catch up with the server.

#### Scenario 4: Forum

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Being able to select a help page.	Clicking on the Forum link in the nav bar.	The user is taken to the Forum page, where all module help forums relevant to the student are made available to them.	As expected.	Pass	
2	Selecting the Algorithms thread, opening the current ongoing discussion.	Clicking on the "Algorithms Help" button in the Forum page.	The user is directed to the Algorithm forum, and is able to view all previous messages, and is able to post at	As expected.	Pass	

			the bottom.			
3	The user is able to type a message in, and post it to the current thread.	Message: "Hello World"	The message is posted, and the page is updated to display the new message along with the old ones.	As expected.	Pass	
4	The user is able to return to the main forum page, and is able to access a different module thread in the same instance.	Clicking "Back to Threads", and then "Security Help"	Returning to the main page, you can access a different thread with different messages.	As expected.	Pass	
5	When logged in as an admin, your messages should appear green.	Message: "Hello World"	Hello World is added to the thread, with a green colour applied to the admin's name.	As expected.	Pass	
6	Admins can create a new thread by using the create input box.	Thread name: "Nanomachines"	The page will update with the new thread being available for use.	As intended.	Pass	



7	Admins can also delete entire threads by typing in its name.	Thread name: "Nanomachines"	The page will update with the chosen thread having been removed.	As expected.	Pass	
8	Attempt to delete a thread that doesn't exist.	Thread name: "No Threads"	The page will remain unchanged.	The threads remained the same, but no error message was returned to the user for the issue.	Pass	

#### Scenario 5: Student Modules and Results

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Going to the module tab lets the user see their current set of modules.	Clicking on the Modules link in the nav bar.	The user is taken to the Module page, where all outstanding modules may be viewed.	As expected.	Pass	
2	Clicking on a module allows you to view information to what the module is about.	Click the "Algorithms" tab.	A brief summary of the module is displayed.	As expected.	Pass	The process for all modules are identical, and they all pass.
3	While logged in as a student, view your results in graphical form.	Click the "Student Results" tab.	A chart will display the user's results and provide accurate analysis of them, including an average,	Through development this chart was like a scatter graph, but recently was changed to a bar chart.	Pass (?)	It is debatable that the new form is less readable for users compared to the old scatter

			quartiles, and a percentage breakdown of how that user did.			graph method,
--	--	--	--	--	--	------------------

### Scenario 6: Module Feedback

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Going to the feedback tab allows the user to select from all remaining modules to give feedback on.	Clicking on the Feedback link in the nav bar.	The user is taken to the Feedback page, where all outstanding modules yet to be given feedback on are displayed.	As expected.	Pass	
2	Clicking on a module sends you to a further screen to specify your feedback.	Clicking on module "Security".	User is given a choice to give feedback on a specific assignment, or the module as a whole.	As expected.	Pass	
3	The user can give assignment feedback.	Clicking on "Assignment Feedback" button. Dropdown: "Algorithms Assignment 1". Input: "Very good."	A prompt will pop up, allowing the user to choose between the module's assignments to give feedback on.	Feedback is able to be given, but the dropdown doesn't sort the assignments out that aren't in the current module. (Aka	Fail	I don't think this is intended, so is considered a failure.

				Algorithm assignments are able to be accessed from Security)		
4	The user can give generic feedback on the module.	Clicking on "General Feedback"	A prompt will pop up, allowing the user to give non-specific feedback.	As expected.	Pass	
5	An admin can select a specific assignment in a module using the dropdown, and view that assignment's feedback.	Clicking on "Algorithms Assignment 1" in the dropdown box. Click "View" button.	It will return any feedback given to the module.	As expected.	Pass	
6	Try to get feedback for a module without any feedback.	Clicking on "Algorithms Assignment 5". Click "View".	A suitable error message should be returned, saying it is yet to receive feedback.	As expected.		

### Scenario 7: My Classes

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Going to my classes displays all modules being ran by the admin group.	Clicking on the "My Classes" link in the nav bar.	The user is taken to the Feedback page, where all outstanding modules yet to be given feedback	As expected.	Pass	

			on are displayed.			
2	Clicking on a module displays its current description and a box which can be used to update it.	Clicking on the "Algorithms" button.	The user is taken to the Algorithms description, and an input box displays an editor which can be submitted.	As expected.	Pass	
3	The edit submit will update the page on submission with the new description.	Add "Plaudite, acta est fabula" to the end of the Algorithms description and click "Done".	The text preview is updated with the new information as it typed, and done submits the new page for use.	As expected, though there is seemingly no prompt to let the user know it has been successfully updated.	Pass	
4	Deleting the current description of a module using the delete button.	In the Algorithms description, click the "Delete" button, and then "Done".	The input box becomes blank, and the preview becomes empty.	As expected.	Pass	The delete button comes up with an alert to prevent any accidental misclicks.
5	An admin can create a new module, along with giving it a name and description.	Click the "+" in the modules tab, input "Nanomachines" in the name input and a description input of "Tiny robots.". Click "Create".	The module is accepted, and is visible next to the existing modules.	As expected.	Pass	
6	The new module can be immediately edited like in test 3.	Navigate to the "Nanomachines" module and change its description to "Hardens in response to physical trauma.". Click "Done".	The module is updated to the description specified.	As expected.	Pass	

## Scenario 8: My Assignments

Test No.	Action	Inputs	Expected Output	Actual Output	Pass/Fail	Comments
1	Going to my assignments lets an admin click on a module to view assignments for, or create a new one.	Go to the "My Assignments" link on the nav bar, and select "Algorithms".	The user is shown all ongoing assignments for this module. They are able to be clicked for further details.	As expected.	Pass	
2	All information about an assignment should be made available when clicking on it.	Click "Algorithms Assignment 1".	Assignment name, description, deadline, marks, creator of the assignment, and date it was created should be available.	As expected.	Pass	The list of current submissions was empty, since no submissions had yet been made for this assignment.
3	An admin is able to create an assignment, and post it for users to see.	Click the "Create Assignment" button. Title: Nanomachines Assignment Description: Tiny Robots. Marks: 10 Module: Nanomachines Date: 01/02/21	The assignments section in the Nanomachines tab is updated with the new assignment, with the appropriate details.	As expected.	Pass	Took a short while to add the assignment.