

User Stories

Versions

Version	Date	Comment
1.0	13/04/2021	Create user stories 1-23 as the first version
1.1	24/04/2021	Add the user journey maps and user story map
2.0	06/05/2021	Add user stories 24-34 that are necessary for the digital prototyping, retire user story 6, 7 and 10
2.1	08/05/2021	Retire user story 28 and 31 and update the user story map

Discussion and Justification:

The user stories are generated from the brief description of the Motivation Model. The 5 epics are based on 5 classes of main functions. We analyze the size by ourselves and ask the clients for verification of the priority.

- Size Key: For one developer:
 - Large: 4-5 Days development
 - Medium: 1-3 Days development
 - Small: <1 Day development
- MoSCoW Priority:
 - Must have: Non-negotiable product needs that are mandatory for the team
 - Should have: Important initiatives that are not vital but add significant value
 - Could have: Nice to have initiatives that will have a small impact if left out
 - Will not have: Initiatives that are not a priority for this specific time-frame

Note: Highlighted user stories have been chosen for prototyping.

Process of Prioritizing:

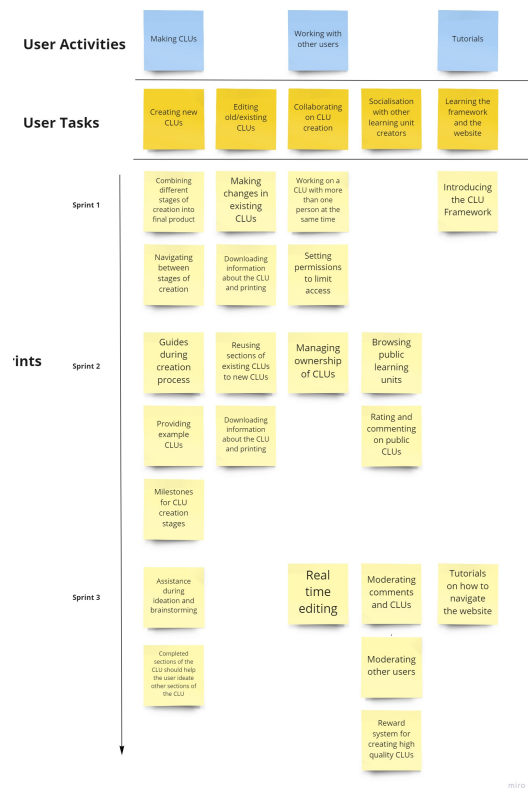
Priorities were initially generated and discussed during client [interview 4](#), however, the user stories in client interview 4 do not match the current user stories. Therefore, some initiative was taken to generate priorities based on the priorities given in interview 4.

Justification for MoSCoW Priority

Priorities were assigned based on the MoSCoW prioritization method, our reason for using this method is that it separates the most important user stories from others which are less important. The most important priority for user story is "must", and therefore by gathering all the "must" priority user stories we can generate a good understanding of the minimum features required for a product for this system. In our case, these features can be chosen to generate our paper prototypes, therefore ensuring that we model the most pressing features for our product for this sprint.

User Story Mapping:

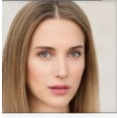
All columns within the user story map are individually prioritized (one column does not hold priority over another), however, this does not mean that one column does not hold a higher importance over another column.



Link: <https://miro.com/welcomeonboard/M2EjRy3ce9jel3yipKL3xAlryxkbTBb5ygMbvYjKQKj7b9hZPFivRFtaJzF6Gge0>

User Journey Mapping:

User Profile



Olivia Kelly - Casual User

- Has little knowledge about Creative Learning Unit Framework
- Hopes to improve her knowledge as a student teacher
- Wants to improve her understanding of education

Scenario

Olivia tries to find a tutorial which will assist in her understanding of the CLU framework on the website.

Expectation

- Learns and compares different methods of creating learning units
- Gets an understanding of the Creative Learning Unit framework

PHASES

SEARCH → DISCOVERY → TUTORIAL

PHASES	SEARCH	DISCOVERY	TUTORIAL
Actions	<ul style="list-style-type: none"> • Googles "creative learning units" • Finds our website 	<ul style="list-style-type: none"> • Lands on the homepage • Finds the introductory videos and content on the homepage and gives them a quick watch • Tries to find the tutorial section 	<ul style="list-style-type: none"> • Finds the tutorial section • Reads and Watches the tutorial content (videos and articles)
Thoughts	<ul style="list-style-type: none"> • "I want to improve my teaching skills and learning new ways to teach" • "I heard that Creative Learning Unit framework works pretty well, let me google it" 	<ul style="list-style-type: none"> • "There are several sample learning units in the homepage as well as some CLU knowledge videos" • "When I click the examples and links, they should provide me relevant knowledge about the Creative Learning Unit" • "I can't find where exactly the tutorial section is at the first glance" 	<ul style="list-style-type: none"> • "These knowledge are so abstract without examples." • "It's hard for me to find specific articles that I am interested in."
Emotions	<ul style="list-style-type: none"> • HOPEFUL about being able to learn something new 	<ul style="list-style-type: none"> • SATISFIED about finding a website that does exactly what she wants • TAKEN-ABACK by the amount of knowledge required for the understanding of the framework 	<ul style="list-style-type: none"> • OVERWHELMED by the abstract knowledge of Creative Learning Unit initially • INFORMED after they have completed the tutorial
Opportunities	<ul style="list-style-type: none"> • Leverage possible future popularity of the CLU framework by establishing early dominance of the product within the CLU space, making it the number one search option when CLU searches occur. 	<ul style="list-style-type: none"> • The videos and examples in the homepage could be linked to the tutorial section • Allow experienced users to create their own tutorials to be put onto the site • Make the tutorial section more prominent on the homepage so its easier to find 	<ul style="list-style-type: none"> • The articles can be combined with examples to better illustrate the concepts of the Creative Learning Unit • Abridged tutorial content may be created for users who want quick overviews
Internal Ownership	<ul style="list-style-type: none"> • No real ownership is possible, because this step relies on the external search procedure by which the website is found 	<ul style="list-style-type: none"> • Website UI designers and human experience designers should make the homepage feel as clean and informative as possible 	<ul style="list-style-type: none"> • Domain experts should consult with the client to get the necessary information to form the videos required for the system
Expectation Ratings and Thoughts	<p>Looks Like I found what I was looking for!</p> <p>It looks very complicated ... I'll give it a bit of a look</p> <p>Ugh, theres so much to know</p> <p>I'm glad I went through the short tutorial, now I know better</p> <p>I don't know where to start, but I'll google it</p>		

User Profile



James Brown - Skilled Sser

- Has solid understandings of Creative Learning Unit Framework
- Experienced computer user
- Takes pride in designing good courses to help students success

Scenario

James wants to create a learning using the CLU framework on the website.

Expectation

- Creates a learning unit smoothly using the tools provided by the website
- Website helps in the ideation process of the CLU

PHASES

SEARCH

CREATE

COMPLETE

Actions	Thoughts	Emotions	Opportunities	Internal Ownership	Expectation Ratings and Thoughts
<ul style="list-style-type: none"> Googles "creative learning units" Finds our website 	<ul style="list-style-type: none"> "I want to design better courses for my students to help them learn more knowledge" "I have some knowledge about Creative Learning Unit framework but I haven't found any website that can help me design a course in that way, let me google it" "The website has the tool I need!" 	<ul style="list-style-type: none"> HOPEFUL about finding a website to create learning units EXCITED to see that there is a website that meets his requirement 	<ul style="list-style-type: none"> Advertise the website among teachers and prioritize the ranking in the search result using Search Engine Optimization 	<ul style="list-style-type: none"> Frontend developers can adjust the contents of the website and its contents in HTML to prioritize the ranking of the website in search results Developers can add "invite" functions to the website to encourage the existing users to recommend the website to their friends 	<p>Looks Like I found what I was looking for!</p> <p>I want to find a website that I can create CLU.</p>
<ul style="list-style-type: none"> Lands on the homepage Finds the button on the homepage to start creating a learning unit Gets guidelines during the process 	<ul style="list-style-type: none"> "Some sections are not expected to show in the initial setup" "The design of the website couldn't give me the feeling that I am able to navigate between different stages" "Why are the changes I made in previous phases not reflected in the following steps" "It's good to have guidelines whenever I need them" 	<ul style="list-style-type: none"> UPSET that the website failed to incorporate the concept of CLU very well (as he understood it) ANNOYED at the constant tutorials and assistance he is given since he already knows most CLU concepts GRATIFIED that the website provides timely helps 	<ul style="list-style-type: none"> Consult experts in the Creative Learning Unit framework to better design the creation process Improve the user's brainstorming process by providing ideas during brainstorming 	<ul style="list-style-type: none"> UI designers should redesign the whole process of creating a learning unit to make the process clear, organized and detailed. Domain experts should come up with helpful messages to assist the ideation process 	<p>The design flow is not what I expected.</p> <p>The outcome is decent, but a bit too simple for what I envisioned</p>
<ul style="list-style-type: none"> Completes the creation of a learning unit Reviews the learning unit Adds more contents/edit contents when he feels like to do so. 	<ul style="list-style-type: none"> "Finally I finished it, but the outcome is not detailed as I expected" "I should review the unit I just created to see if I miss something or if there is anything that should be modified" "I should come back later and edit it if I got some new ideas" 	<ul style="list-style-type: none"> SATISFIED that he finished the creation of a learning unit HAPPY that there is a way to export the new learning unit 	<ul style="list-style-type: none"> Provide auto-examination across public learning units function to help users find how the user's learning units can be improved 	<ul style="list-style-type: none"> Developers should design a review page to present all the details of the learning unit the user just created 	<p>The website helps me refine my design, it looks better</p>

User Stories:

Highlighted Stories are those which are chosen for prototyping

Epic ID	Epic	User Story ID	User Story	Priority (MoSCoW)	Size	Justification(s)
1	Creating Creative Learning Units	1	As a teacher, I want to be able to navigate between the different stages of creative learning unit creation so that I can go to any stage in case I change my mind.	Should	Medium	<p>Priority: Although important, this is not a core feature of the system. Instead of having a homepage one can just go through the creation process for user story 6 again.</p> <p>Size: This user story involves the creation of a single page which acts as a "homepage" for the learning unit. Although the creation of the page itself is not difficult, linking the page to every stage of the process and displaying required information may take time.</p>

		2	As a new course creator, I want to be able to see examples of existing CLUs so that I have a better idea of what to write into certain places in my learning unit.	Should	Small	<p><i>Priority:</i> This user story is important for the success of the user to create learning units properly, but relies on story 6 and so is given a lower priority.</p> <p><i>Size:</i> The user story involves simply linking an example for each step of the learning unit creation process, and should not take long.</p>
		3	As a new course creator, I want to be guided throughout the learning unit design so that I am able to create a course using the CLU framework without extensive study.	Must	Small	<p><i>Priority:</i> This story is one of the core features of the project: since CLUs are a new framework, there needs to be some sort of guidance to help users create a user story.</p> <p><i>Size:</i> It will take a decent amount of time to write helpful messages for each step of the process, but it should not take too much time if the writer is familiar with the CLU framework.</p>
		4	As a teacher, I want to have milestones when I create CLUs so that I can better see the progress which I am making in creating a learning unit.	Should	Small	<p><i>Priority:</i> This user story is heavily linked to user story 1 (perhaps even being a sub-feature of story 1), and therefore should require a similar priority.</p> <p><i>Size:</i> Ultimately, this requirement simply requires some sort of bar or number that represents the amount of work left in the creation of the learning unit; as well as describing what work still has not been completed.</p>
		5	As a teacher, I want to be helped when I am brainstorming for ideas so that I am better able to ideate concepts which are useful to my course and students.	Should	Medium	<p><i>Priority:</i> This user story is not a requirement which our client has heavily focused our project on, and is more of an "add-on" for the project as a whole.</p> <p><i>Size:</i> This story likely involves adding some sort of integration with a search engine to help the user expand their ideas, which will take some time.</p>
		6	As a teacher, I want all the different sections of the learning unit to have influence over each other when I am getting help from the website in creating my learning units so that my learning unit has more internal cohesion rather than being multiple separate parts.	Should	Medium	<p><i>Priority:</i> This user story is a requirement which our client specifically requested after the prototyping process. Although it does not hold as high of a priority as actually being able to create the learning unit itself, it is extremely important in helping the user internally connect their learning unit.</p> <p><i>Size:</i> This story likely involves linking different completed sections of the learning unit, and then giving informational help to the user on uncompleted sections to help ideas remain consistent across the learning unit.</p>
		7	As a teacher, I want to be able to create learning units in the creative learning unit framework so that my future courses are better taught.	Must	Large	<p><i>Priority:</i> This user story represents the most important goal of the project, all other stories are simply add-ons.</p> <p><i>Size:</i> There is a large word document which acts as a template for this. Generating web-pages by making an interactive web-page for this document will take a lot of time, but not a lot of effort.</p>
2	Editing Existing CLUs	8	As a teacher, I want to be able to edit some existing CLUs so that I can fix errors and keep my learning units up to date.	Must	Medium	<p><i>Priority:</i> This story is incredibly important, since if it were not here, fixing any error within a LU will require the creation of an entirely separate learning unit.</p> <p><i>Size:</i> This requirement will likely involve the expansion of user story 6 to allow for editing at each stage of the project, so will take less effort.</p>
		9	As a teacher, I want to be able to copy sections of specific CLUs to other CLUs so that I can reuse content which I find interesting.	Should	Small	<p><i>Priority:</i> Ultimately, this story is a replacement for "ctrl+c". It will make it easier for users to copy entire sections of CLUs around, but can be easily replicated.</p> <p><i>Size:</i> The addition of a single button which allows importing sections of another CLU is all that is needed.</p>
		10	As a teacher, I want to be able to have references and linkages between different sections of a CLU such that when I change one section, the other section is automatically changed.	Should	Medium	<p><i>Priority:</i> This story exists to simplify any editing a user might want to do, and is therefore a low priority story which does not add to the total functionalities of the system.</p> <p><i>Size:</i> Adding references between different areas of a CLU is likely to be very intensive in making HTTP requests and updating the database, and will likely require a revamp of many areas of the codebase.</p>
1	Creating Creative Learning Units	11	As a teacher, I want to be able to download my learning unit information so that I can refer to it in class for guidance.	Should	Small	<p><i>Priority:</i> This story is important, although not as important as actually being able to create the user story itself. Therefore, it gets a slightly lower priority.</p> <p><i>Size:</i> This story involves formatting and exporting database data into a document, allowing the user to download that document to their computer.</p>
3	Collaboration	12	As a teacher, I want to be able to share and edit CLUs in real-time with other users so that changes made by someone else are not accidentally overwritten by me.	Should	Large	<p><i>Priority:</i> This story is similar to story 15, but the "real-time" aspect is simply an addition to the core functionality of actually being able to collaborate with others.</p> <p><i>Size:</i> Real time collaboration is a difficult problem since it requires everyone's devices to be updated once any one person makes an update to the learning unit. Therefore, it is a large user story.</p>
		13	As a teacher, I want to be able to set permissions and limit access between different users working on my learning unit	Must	Small	<p><i>Priority:</i> To prevent malicious action taken by others during collaboration, this user story is required, and so links heavily with user story 15 and gains a similar priority.</p> <p><i>Size:</i> This story can be implemented by simply having a mark of some sorts which disables a person from interacting with the learning unit.</p>

		14	As a teacher, I want to be able to view the edit history of any of my learning units so that I know who has been working on my learning unit.	Should	Medium	<p><i>Priority:</i> This story allows users to see the contributions made by others to their learning unit. Although important, it is not a must-have feature for collaboration.</p> <p><i>Size:</i> There is a necessity to record all edits made by every single contributor which may be difficult to achieve, and will likely mean changes to the backend and the frontend of the system.</p>
		15	As a teacher, I want to be able to manage the ownership of my learning units so that I can grant control to other users in case I want to resign from managing a specific learning unit.	Could	Small	<p><i>Priority:</i> This story allows users to transfer ownership of a learning unit to another user. This is unnecessary for any of the core functionalities of the system but will be nice to have as an add-on near the end.</p> <p><i>Size:</i> This story is easy to implement: by simply changing who the owner is within the database we can implement this feature.</p>
		16	As a teacher, I want to be able to collaborate with other people in creating learning units so that I can have help from others when I design my courses.	Must	Large	<p><i>Priority:</i> The entire purpose of the tool being a on the web is that it should be possible to interact with other people. As such, there is a high priority, for this story.</p> <p><i>Size:</i> Enabling multiple people to edit a single file at the same time is difficult (due to conflicts and such) and so will require a long time.</p>
4	Community	17	As a teacher, I want to be rewarded for my contributions when I create a public learning unit so that I have the motivation to return and create more courses	Could	Large	<p><i>Priority:</i> Our client discussed the importance of a reward system in the application. Although this is important, we must also note that this story does not fit into the main goals of our project.</p> <p><i>Size:</i> Monetary or publicity of the learning unit as rewards will be difficult to implement; there may alternatively be a "karma" system like that of Reddit which will be easier to implement but ultimately this story will require some time to develop.</p>
		18	As a teacher, I want to be able to browse other public learning units so that I can discover quality learning units which I can interact with and use.	Should	Large	<p><i>Priority:</i> In order to interact with other people's learning units there must be a way which allows users to discover those learning units. Due to that fact, this story is important for socialisation within the system. However, given that socialisation is less important than other epics, this feature does not take the highest priority.</p> <p><i>Size:</i> There is a requirement of gathering, and displaying information about multiple learning units across the whole site for the development of this story. This will involve updates to the front-end and back-end of the entire system and therefore requires a large amount of effort.</p>
		19	As a CLU enthusiast, I want to be able to moderate public learning units by deleting comments or learning units that are offensive so that the quality of the system remains high.	Should	Small	<p><i>Priority:</i> Moderation is a key component of allowing socialisation within the system. To prevent the system quality from becoming affected by bad actors, moderation must be considered of equal importance to the base features of socialisation.</p> <p><i>Size:</i> If a user has already been identified as a global moderator, this story simply requires the addition of an option for these users to delete low quality learning units and comments.</p>
		20	As a CLU enthusiast, I want to be able to manage public users by banning or suspending rule-breaking users so that bad actors cannot ruin the system.	Should	Small	<p><i>Priority:</i> Moderation is a key component of allowing socialisation within the system. To prevent the system quality from becoming affected by bad actors, moderation must be considered of equal importance to the base features of socialisation.</p> <p><i>Size:</i> If a user has already been identified as a global moderator, this story simply requires the addition of an option for these users to suspend bad actors by preventing them from commenting, rating and creating learning units for a period of time.</p>
		21	As a teacher, I want to be able to rate public learning units so that I can give feedback to other people to ensure quality remains high throughout the entire website.	Should	Medium	<p><i>Priority:</i> To be able to interact with public learning units is the goal of socialisation. As such, this feature should be as high priority as all the other key socialisation stories.</p> <p><i>Size:</i> Adding comments and ratings should be fairly simple; a basic implementation would be to simply associate comment strings and rating integers with the entry of the learning unit within the database.</p>
5	Tutorials	22	As a new course creator, I want there to be a tutorial which introduces me to the CLU framework when I first use the application so that I have a better understanding of what the framework is before creating learning units.	Must	Large	<p><i>Priority:</i> A key goal of the system is to teach the users the benefits of using the CLU framework to encourage its adoption within the education system. As such, this tutorial feature is incredibly important for the core system itself.</p> <p><i>Size:</i> The tutorial itself may be comprised of multiple videos, text descriptions and images. The creation of all of these media types requires an extensive understanding of the framework itself.</p>
		23	As a teacher with not much experience with computers, I want there to be clear tutorials and guidance on how to use the application when I do not know what to do so that it is always clear to me what I can and cannot do when using the application.	Must	Large	<p><i>Priority:</i> There exists a core userbase which may have not used a webtool like this project before. Oftentimes, teachers may be older and less technologically competent - it is therefore important to guide these teachers with interactive tutorials to teach them how to navigate the tool.</p> <p><i>Size:</i> This story scales with the amount of features within the system itself. Since every feature will ideally have some navigation tutorial, every story within this project will require some degree of a tutorial.</p>

1	Creating Creative Learning Units	24	As a teacher, I want to enter the primary details of the CLU I am going to create, like name and student group, at the beginning of my creation of CLU so that I can initialize my CLU.	Must	Medium	<p>Priority: This user story is part of the core features of the application. A user has to initialize the CLU before he can design different phases of the CLU. And the information provided in the initialization step will be utilized for the selection of tips and examples in future phase design.</p> <p>Size: The user story is not hard to implement: it only requires one web page as the initialization page containing forms and dropdowns for the client to enter the details.</p>
		25	As a teacher, I want to be able to create different steps of my CLU so that I can divide the journey of the learning unit into several steps and let each step have its own teaching approach and goal.	Must	Large	<p>Priority: This user story is the core of the application. Phases are the building blocks of a CLU and contain all the details a lecturer needs to know when he/she is using the CLU. Other user stories are just add-ons.</p> <p>Size: The user story needs developers to generate a template for the phase design. It also requires the integration of other functionalities listed in user stories 1-3 and 5 to make the overall creation process an interactive and navigational one.</p>
6	User Login /Authentication	26	As a teacher, I want to create a user identity in the web application so that I can have my own space to keep and view the learning units I created and engage in the community activities.	Must	Medium	<p>Priority: The sign-up function is necessary for the web application if it is going to implement user-related actions. New users cannot join the web application without this sign-up functionality.</p> <p>Size: This user story needs the developer to develop a UI for users to sign up and save the detailed information into the database. It may involve techniques like Email/SMS verification and also relevant database operations.</p>
		27	As a teacher, I want the website to authenticate my identity every time I log in so that other people cannot falsely log in as me and mess up my workspace.	Must	Medium	<p>Priority: This user story is essential for the user-related action. A user cannot do anything on the website before he logs in to the application.</p> <p>Size: This user story requires the developer to design a UI for users to put in their username/password to log in, the login page might also have a captcha validation so it might take some time.</p>
		28	As a teacher, I want the website to authenticate my identity every time I log in so that other people cannot falsely log in as me and mess up my workspace.	Must	Medium	<p>Priority: This user story is needed to ensure the security of the web application. A proper and effective authentication can prevent malicious users from faking an existing user and stealing/damaging the contents of users' workspaces.</p> <p>Size: This user story requires technologies relevant to web security and database. The authentication requires the server to retrieve user credentials from the database and compare them with the credentials a user provided. The login authentication should also be protected from attacks such as SQL injection, Brute Force Enumeration, etc.</p>
4	Community	29	As a teacher, I want to be able to edit the comments I posted under other users' created CLUs so that I can have a chance to fix any errors in my comments.	Could	Small	<p>Priority: This user story is needed to give users a second chance if they want to edit their comments. Although it's not necessary at the initial phase of the product, it is a reasonable requirement.</p> <p>Size: This user story simply requires the developer to implement an "update" functionality. An API call to the backend server and an "update" SQL statement can achieve this functionality.</p>
		30	As a teacher, I want to delete my comments I posted under other users' created CLUs so that I can delete the comment which I do not want to be public anymore.	Could	Small	<p>Priority: This user story is needed to give users the option to withdraw the comments they have posted. Although it's not necessary at the initial phase of the product, it is a reasonable requirement.</p> <p>Size: This user story simply requires the developer to implement a "delete" functionality. An API call to the backend server and a "delete" SQL statement can achieve this functionality easily.</p>
		31	As a teacher, I want to be able to clear the ratings I have given to a learning unit so that when I change my opinion about the CLU I can rate the CLU again.	Could	Small	<p>Priority: This user story is needed as the user might change their mind about the CLUs they have rated after they have looked closely at the CLU and they realize the CLU quality is better/worse than they expected. Although it's not necessary for the MVP, this functionality is a reasonable requirement.</p> <p>Size: This user story only requires the server to update the database about the overall ratings a certain CLU receives and update the user rating history. It is not hard to achieve that technically.</p>
1	Creating Creative Learning Units	32	As a teacher, I want to be able to see all the CLUs I have created in my workspace on my CLU homepage so that I can have a good idea of what CLUs I have created so far.	Should	Small	<p>Priority: This user story is required because the user should have somewhere in the web application to browse all the CLUs they have created. It helps the user to organize the CLUs and also acts as an entry point for the actions like "edit existing CLU" or "make a CLU public"</p> <p>Size: This user story only requires the application to retrieve the list of CLUs a user has created and display them on the web page. It should be easy to implement.</p>
3	Collaboration	33	As a teacher, I want to be able to see all the CLUs others have shared with me on a separate page so that I can separate them from the CLUs I have created and start/resume working on these collaboration works at any time.	Should	Small	<p>Priority: This user story is needed for the collaboration functionality because a user needs access to those CLUs that are shared with him to edit/view the contents for the collaboration work.</p> <p>Size: This user story is similar to user story 32, which requires the application to retrieve a list of CLUs shared with the user and display them on the web page.</p>

4	Community	34	As a course creator, I want to be able to report offensive content so that a moderator can take a look at the content I find offensive and delete it.	Should	Medium	<p>Priority: This user story is necessary for a community to exist because it is unreasonable to expect moderators to be able to find offensive content on the website at all times.</p> <p>Size: The user story involves having some sort of messaging system, possibly via emails or in-website notification system. This is an entire other component of the website and should be developed as such.</p>
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