# Project Plan

## Bioethics Unite

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# Summary

The Bioethics project's goal is to create a non-linear learning tool. This tool will be used by studying medical students and practicing medical practitioners. It will be an interactive story used to enhance their understanding of ethical situations and how to navigate those ethical decisions. This project will also enable clients to help users understand the different scenarios that a medical practitioner encounters.
During this phase of development the goal is to determine if there exists a solution that will allow administrators to create non-linear stories. Assuming that a solution is found, the project team will develop an API, code structure, and a database schema to support the client's needs. Alternatively, if the open source solution Twine works as a backend, the solution will be integrated into the website. If a solution is not found, recommendations will be made about what the client's next steps should be.

# Measurable Organizational Value (MOV)

The project will be successful if by the end of the semester we create a working backend of the bioethics referencing tool which smoothly leads the next community outreach development team into refining the backend and creating an interface.

# Key Stakeholders

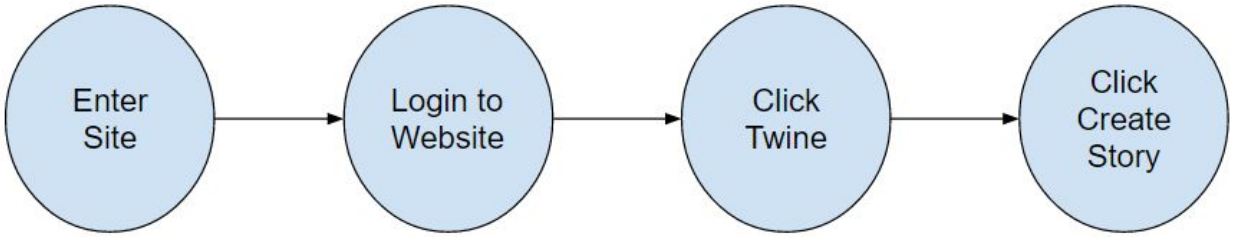
- Dalhousie Department of Bioethics
- Health care providers or administrators facilitating and uploading application content
- End users who will use this application for diagnostic purposes
- Developers of the project

# Master Story List

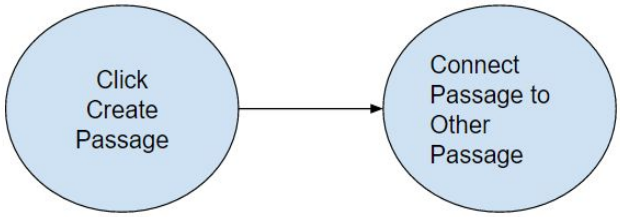
## A) User Stories

### Editor

- As an editor, I want to easily create cases so that users can interact with them to find a solution.



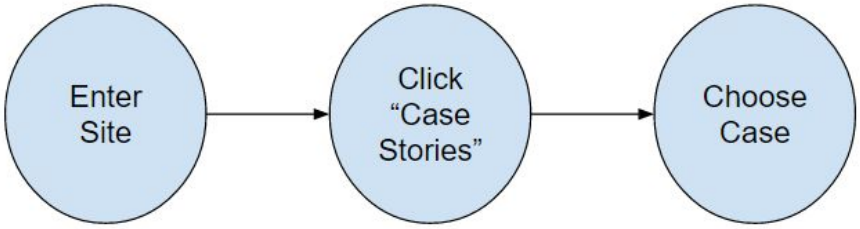

- As an editor, I want to write choices so that choices can lead to other choices.




- As an editor, I want to be able to edit cases as bioethical solutions shift externally to the website.
- As an editor, I want to be able to bundle cases in collections to keep stories organized for the reader and I.
- As an editor, I want to have clear documentation so as to easily learn how to use the website and Twine.

**Reader**

- As a reader, I want to read stories so that I gain knowledge.

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- As a reader, I want to be able to navigate backwards and forwards through a case so that I am not punished for my choices.
- As a reader, I want feedback on the quality of my choices.
- As a reader, I would like to be able to flag questions as confusing or missing context/knowledge.
- As a reader, I want to be able to view similar cases after I finish a case.
- As a reader, I want to be able to contact the editor should I need further information.

## B) Order of Importance to the Client

1. As a reader, I want to read cases so that I gain knowledge.
2. As an editor, I want to easily create cases so that users can interact with them to find a solution.

3. As an editor, I want to write choices so that choices can lead to other choices.
4. As an editor, I want to be able to edit stories as bioethical solutions shift externally to the website.
5. As a reader, I want to be able to navigate backwards and forwards through a case so that I am not punished for my choices.
6. As an editor, I want to have clear documentation so as to easily learn how to use the website and Twine.
7. As a reader, I want feedback on the quality of my choices.
8. As an editor, I want to be able to bundle stories in collections to keep stories organized to the reader and I.
9. As a reader, I want to be able to view similar cases after I finish a case.
10. As a reader, I want to be able to contact the editor should I need further information.
11. As a reader, I would like to be able to flag questions as confusing or missing context/knowledge.

## C) Point Estimation of Stories

| User Story | Estimation Points |
|---|---|
| 1. As a reader, I want to read stories so that I gain knowledge.<br>**Dependencies:** This user story depends on user story 2.<br>**Breakdown of points:**<br>● Create entry point to story on the website. | 3 |
| 2. As an editor, I want to easily create stories so that users can interact with them to find a solution.<br>**Breakdown of points:**<br>● Integrate Twine software into website. | 5 |
| 3. As an editor, I want to write choices so that choices can lead to other choices.<br>**Dependencies:** This user story depends on user story 2.<br>**Breakdown of points:**<br>● Feature is already implemented into Twine. | 1 |
| 4. As an editor, I want to be able to edit stories as bioethical solutions shift externally to the website.<br>**Dependencies:** This user story depends on user story 2.<br>**Breakdown of points:** | 3 |

| | |
|---|---|
| ● Feature is already implemented into Twine. However, files are saved in different locations and may require some scripting to keep consistency. | |
| 5. As a reader, I want to be able to navigate backwards and forwards through a case so that I am not punished for my choices.<br>**Dependencies:** This user story depends on user story 1.<br>**Breakdown of points:**<br>● Feature is already implemented into Twine. | 1 |
| 6. As a reader, I want feedback on the quality of my choices.<br>**Dependencies:** This user story depends on user story 1.<br>**Breakdown of points:**<br>● Depending on what feedback is necessary:<br>a. If a profile of the whole user's choices is necessary we would need to store user information in a variable and generate output based off of it.<br>b. If feedback is necessary for only one choice at a time, we can just give them feedback in the passage after their choice. | 5 |
| 7. As an editor, I want to have clear documentation so as to easily learn how to use the website and Twine.<br>**Dependencies:** This user story depends on all completed user stories.<br>**Breakdown of points:**<br>● Documentation will be written for how to use the Twine system and for any new code written for the Twine system. | |
| 7. As an editor, I want to be able to bundle stories in collections to keep stories organized for the reader and I.<br>**Dependencies:** This user story depends on user story 2.<br>**Breakdown of points:**<br>● There is no innate system for classification, the easiest method would be for editors to save the files into organized folders.<br>● An alternative method would be to create database entries for the twine files and do standard database queries for sorting/filtering. | 3 |
| 8. As a reader, I want to be able to view similar cases after I finish a case.<br>**Dependencies:** This user story depends on user story 7.<br>**Breakdown of points:** | 3 |

| | |
|---|---|
| ● Depending on the implementation of story 7, we should create a webpage that lists the different cases in different sorted ways. | |
| 9. As a reader, I want to be able to contact the editor should I need further information.<br>**Breakdown of points:**<br>● We need to build a simple contact page on the website. | 1 |
| 10. As a reader, I would like to be able to flag questions as confusing or missing context/knowledge.<br>**Dependencies:** This user story depends on user story 2.<br>**Breakdown of points:**<br>● This feature requires a custom button to be added to the twine system to allow for generating feedback on the current question. | 5 |

# User Story Subset

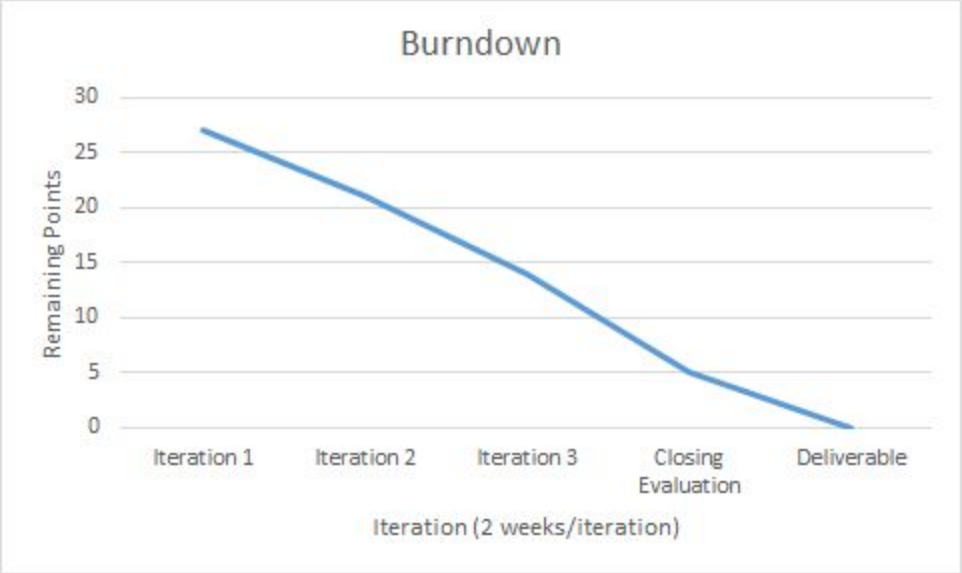
The completion of this project would create a new approach for health care providers and users alike to learn about health care practices, cases, and responses through the use of information dissemination portrayed through non-linear stories and examples.

The following is an example of how the application may be used by a healthcare professional to add content to the database. The healthcare professional can select a case study relating to a health ethics application from external sources, and add the case to the “case database”. The case database is a flowchart style database, allowing users to traverse through cases and stories in a non-linear format. Cases are added through the Twine interface, allowing quick editing with minimal learning curve and simple integration. Twine allow users to link to other pages and stories within the database using links similar to linking web pages. Cases and stories can also be “tagged” to allow for categorization of stories within categories of health ethics topics.

Users can access these cases through a browser style interface, starting at a homepage that may offer up categories of cases to browse through. Once a user has selected a case, they are able to read through the case. Embedded within the case are hotlinks to other pages relating to the case. For example, a health ethics case dealing with a hypothetical problem such as addiction may link to other pages such as harm reduction, substance abuse, the effects of drugs and alcohol on the human body, or other cases that may deal with similar topics. Through

reading these cases and the informational pages linked to them, users can be educated about health ethics topics and traverse through the system in a non-linear format.

# Burndown Chart




# Risks

## Client Impacting Risks

### Twine is built in such a way as to prevent extension of code.

In order to implement custom features, we will need to be able to customize the source code for Twine. If the code is too obfuscated or too tight-knit in its design we will be unable to implement some of the extra features that the client was interested in having. However, the basic required features that the client requested to be implemented during this phase will still work even if we are unable to customize Twine. The trigger of this risk will be when a group member fails to add a new feature by modifying the Twine source code .

### Files cannot be automatically saved onto the server due to Twine limitations.

To enable access to Twine stories, we will need to have them on the web server for users to access. By default Twine saves files into the browser cache, but also has an option to publish the story to an html document on the computer of the editing user. If we are unable to figure out

a solution to save onto the web server instead of locally, it would require the client to upload the files using SSH onto the server. The trigger for this risk will be when the team fails to create a solution.

### Client changes requirements halfway during the semester.

Scope leap and potentially scope creep will cause features to not be implemented. To prevent this, it is recommended that the team confirm scope changes after estimating the time and resource cost of them and having both the client and the team accept them. It is up to the team lead as the main source of contact with the client to address the changes. It is fairly unlikely that the scope will change since the client is leaving most of the implementation details in the hands of the team.

### Twine fails to have the necessary features requested by the client.

While the risk is low due to Twine being very flexible in its feature set, if a feature is needed and not built into Twine, it will be necessary for the team to either build the feature, discuss dropping the feature, or switch to a solution besides Twine. Depending on the solution, the impact can range from a loss of confidence from the client to a large impact on the scope due to switching away from Twine.

## Project Team Controlled Risks

### Documentation for the twine source code isn’t available.

Similar to the risk of twine not being customizable, having poor documentation will make customization and integration with the website difficult. Failure to have decent documentation will require the team to rely on figuring out how the code works through analysing its function stack and its test harnesses. This outcome is fairly likely after looking through the website and source code for documentation and not finding any. As a result, it may take more time for features to be implemented.

### Deadlines are missed because implementing code is more difficult than expected.

As a common risk to development it is a risk that must be accepted with the only mitigation in the form of expecting development to take longer than expected. It is up to the team members to report on the difficulty of tasks and up to the team lead to adjust the schedule as necessary.

# Low Control Risks

## A group member drops the class.

This risk would be caused by a group member losing interest in the course, becoming sick, or many other personal reasons. To combat this risk, the team leader should ensure that team members are given sufficient interesting tasks without overburdening them. In case of a group member leaving, a discussion with the client and the instructor will be necessary to adjust the scope of the project.