

Iteration 0

Team roles:


Product Owner: Prajwal Das

Scrum Master: FNU Nimisha

Developers: Shubham Gupta, Sai Harini Voruganti, Apurva Purushotama

Customer meeting date/time/place:

We had a meeting over Zoom with Dr. Walker on February 25th, 2022 3 pm - 4 pm to discuss the customer requirements for the project. The meeting minutes are available here:

 Minutes of meeting: Customer Meeting-1 . Meetings will continue weekly Fridays at 3pm - 4pm CST.

Summary:

The customer for this project is Nicola Ritter from VetMed (Veterinary Medical & Biomedical Sciences department at Texas A&M University). The main customer need is to develop and integrate interactive animations into the Stepstone learning environment and WordPress-based web site to improve the biology learning experience of middle school students. StepStone is an application authoring system provided by the Texas A&M Center for Educational Technologies. It is designed to work over HTML5 for desktop and mobile platforms. The motivation behind developing animations for learning is to design the curriculum to be more engaging and motivating for the students. Interactive animations are an effective learning tool to keep the young students motivated to learn new and complex things quicker, and to keep them engaged in the material and will provide the students with an entertaining visual approach to learning and remembering the material.

There is a framework already built for this project. Our primary goal for the project is to identify all the developed animations across all modules and deploy them into the StepStone learning environment if not done already and also deploy them in the WordPress-based web site. Next, we focus on working on the animations (based on customer provided requirements) which are still not developed, polishing the content based on the prior framework, and to parameterize the animations using json files so that these animations can be easily and effectively used in multiple modules. Finally, we develop some new animations, learning games and little quizzes to test student knowledge.

GitHub repo: <https://github.com/prajwaldas95/BiologyLearningGamesAndAnimations>

Pivotal Tracker: <https://www.pivotaltracker.com/n/projects/2554948>

VetMed Website: <https://vetmed.tamu.edu/peer/one-health/>

SpreadSheet(Deployment Status):

https://docs.google.com/spreadsheets/d/10NGrOZEGIdePJ_KSnPO_ENLpEQdU_VA3r1yopvTpGY/edit#gid=0

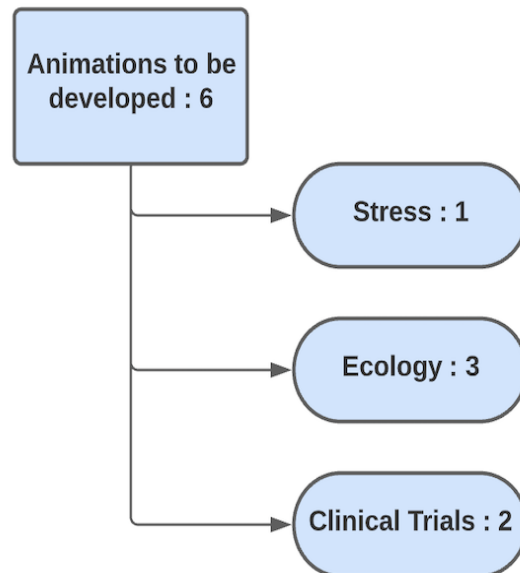
User stories (with User interfaces):

1. **Feature:** Inventory check and mapping of the new animations

As an Instructor

So that I can know the list of the animations are yet to be developed

I want to make an inventory of such animations

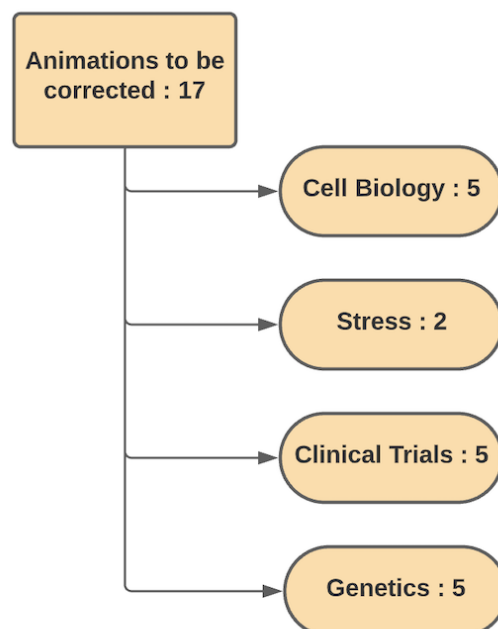


2. **Feature:** Inventory check and mapping of the existing animations

As an Instructor

So that I can know the list of the animations are not working or yet to be deployed

I want to make an inventory of such animations



3.Feature: Create new animations

As a student

So that I can test my knowledge of the content covered in the module and learn in an interactive way.

/ Producers Knowledge Check

Drag and drop the images to create the correct equation for photosynthesis.

The interface shows a light blue rectangular workspace with a black arrow pointing from left to right. Above the arrow are three yellow wavy arrows representing sunlight. Below the arrow are four green circles representing chlorophyll. The workspace is divided into four sections by plus signs: a blue box, a blue box, a blue box, and a blue box. Below the workspace is a row of five draggable items: a glucose molecule (a cluster of red, white, and blue spheres), a yellow box labeled 'sunlight', a blue circle labeled 'O₂ Oxygen', a black circle labeled 'Carbon dioxide CO₂', and a blue water drop labeled 'H₂O'. Below the row are two buttons: a green 'Submit' button and a yellow 'Next ->' button.



Producers Knowledge Check

Drag and drop the images to create the correct equation for photosynthesis.

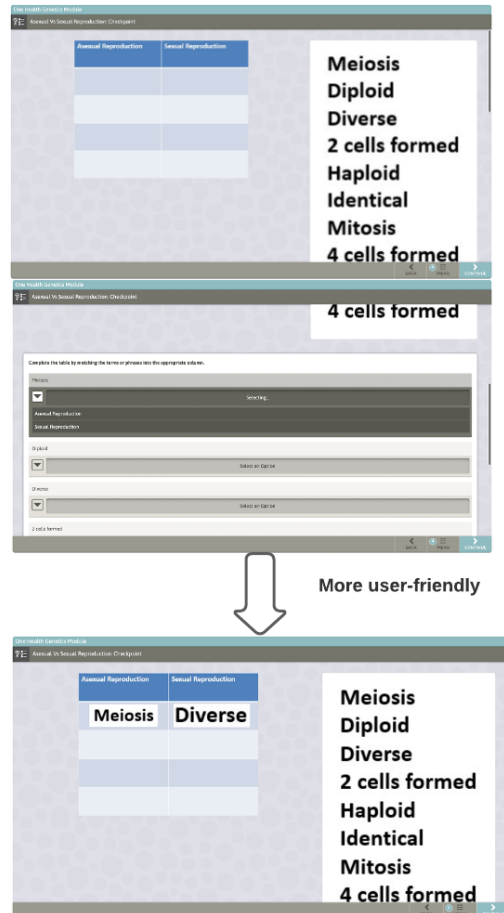
The interface shows the same workspace as the previous state, but with the items correctly placed. The 'sunlight' box is now above the arrow. The 'Carbon dioxide CO₂' molecule is in the first blue box, the 'O₂ Oxygen' molecule is in the second blue box, the 'H₂O' water drop is in the third blue box, and the 'glucose' molecule is in the fourth blue box. The 'Chlorophyll' circles are still below the arrow. A message box at the bottom center says 'You got 3 Answers correct!'. The 'Next ->' button is now a white button with a black border.

4.Feature: Enhance knowledge check across all Modules

As a student

So that I can view and interact with the animations in a more user friendly way

I want updated animations across all modules

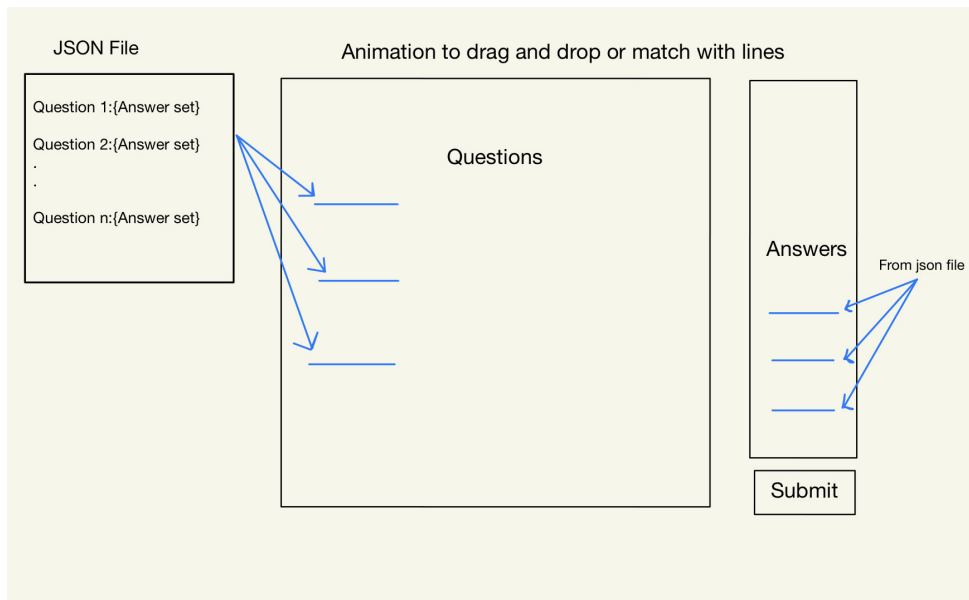


5.Feature: Parametrize the animations

As an Instructor

So that I can reuse the code over and over again in multiple modules

I want to parameterize the animations



6.Feature: Deployment of animations to Stepstone and WordPress based website

As a Instructor

So that the animations in the learning module is available to the students

I want to deploy the animations to the StepStone and WordPress based website

Strategy for legacy code improvement:

- Deploy animations which currently have placeholders
- Parameterize the existing animations so that they can be easily modified
- Making animations mobile devices compatible.
- Improvement of the previous animations

Grading approach:

Since most of the time, the developed applications are deployed into the StepStone environment in the final iterations, some of the user stories may not be completed until the last iteration. Therefore, the earlier iterations cannot be judged on the number of points completed in the iteration. The qualitative approach should be employed to compare the iterations i.e., the amount of progress made in the applications in each iteration.