Biology Learning Games and Animation

CSCE 606 Software Engineering

<u>Team Report : Iteration 2</u>

<u>Team Roles:</u>

Product Owner: Prajwal Das

Scrum Master: FNU Nimisha

Developers: Shubham Gupta, Sai Harini Voruganti, Apurva Purushotama

<u>Customer meeting date/time/place:</u> Link to Minutes of Meetings

We had a meeting over Zoom with Dr. Walker on 11th March, 2022 to discuss progress for iteration 1, and user stories to implement for iteration 2. Further updates and discussions about the iteration were addressed over email as the meeting on April 1st,2022 was cancelled.

<u>Important Links:</u>

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

Pivotal Tracker: https://www.pivotaltracker.com/n/projects/2556976

Slack:
https://join.slack.com/t/seproject-1oc6126/shared_invite/zt-141c9mqw1-YZvyPf_VxICrw8ThiZ63Vg

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

SpreadSheet(Deployment Status):
https://docs.google.com/spreadsheets/d/10NGrOZEGldePJ_KSnpPO_ENLpEQdU_VA3r1yopvTpGY/edit#gid=0

Inventory Sheet: SpreadSheet:
https://docs.google.com/spreadsheets/d/10NGrOZEGldePJ_KSnpPO_ENLpEQdU_VA3r1yopvTpGY/edit#gid=0

Summary:

Deployment: We obtained the email address of Daniel Shuta's supervisor-(nritter@cvm.tamu.edu) and for deployment we will contact them in further iterations. We know that the deployment on Stepstone and Peer website has dependency on Daniel and Samiksha respectively. We've gone through the previous team's documentation regarding deployment tutorials and deployment will be done in the next iteration since it has dependency on people outside the team.

Testing:

As discussed with Prof. Walker, the testing would be done manually.

There is no need for a design diagram as the biology animation games are small animations of their own.

Status:

User Story	Status (Not started/Started/Developed/Deployed/Completed)
1.Infectious diseases module - Knowledge Check: What are the data?	**Developed**
2. Infectious diseases module - Knowledge Check: Which axis is the right?	**Developed**
3. Infectious diseases module - Knowledge Check: Name that variable	**Developed**
4. Infectious diseases module - Knowledge Check : Calculate the Value	**Developed**
5. Testing of Sprint 1 user stories locally and on Stepstone testing environment	**Completed**
6. Clinical Trial module - Hypothesize Knowledge Check	**Not started**
7. Clinical Trial module - Identify the Variables	**Not started**
8. Clinical Trial module - Prove that you are a scientific method expert!	**Not started**
9. Clinical Trial module - Organize the	**Developed**

Details of Clinical Trial Phases	
10. Clinical Trial module - Think about it	**Not started**
11. Clinical Trial module - Did you grasp the concepts?	**Not started**
12. Clinical Trial module - Can you count the costs?	**Developed**
13. Ecology module - Ecological Succession Knowledge Check	**Developed**
14. Ecology module - Producers Knowledge Check	**Developed**
15. Ecology module - Living or Non-Living Knowledge Check	**Developed**
16. Stress module - Label the Neuron	**Not started**
17. Stress module - Keep it in Balance	**Not started**
18. Stress module - Can You Sense the Answers	**Not started**
19. Inventory Check : Mapping existing animations which have bugs and needs to be fixed	**Completed**
20. Inventory Check : Mapping new animations to be developed	**Completed**

For this iteration 2, we picked the following user stories:

UserStory No. 9: "Develop Clinical Trial module - Organize the Details of Clinical Trial Phases?"

UserStory No. 15: "Develop Ecology module - Living or Non-Living Knowledge Check?"

UserStory No. 12: "Develop Clinical Trial module - Can you count the costs?"

UserStory No. 13: "Develop Ecology module - Ecological Succession Knowledge Check"

UserStory No. 14: "Develop Ecology module - Producers Knowledge Check"

In this iteration, we have focused on developing new animations for the "Clinical Trial module and Ecology module". With that, all the animations for that module will be developed to work on Wordpress and Stepstone.

User Stories:

1. **[Prajwal: 3 pts] Feature** - *UserStory No. 15***:** Develop Ecology module - Living or Non-Living Knowledge Check?

    As an Instructor

    I want the students to use interactive animations for the Ecology module - Living or Non-Living Knowledge Check?

    So that the students can understand the concepts better.

Progress: Developed

Design diagram:

Place the words into the correct category

Abiotic	Biotic

Bacteria
Worm
Deer
Grass
Sun
Oxygen
Fire
Rabbit
Fungi
Soil
Temperature
Water

Submit

Place the words into the correct category

Abiotic	Biotic
Rabbit	Bacteria
Sun	Deer
Oxygen	Fire
	Temperature

Worm
Grass
Fungi
Soil
Water

Submit

Explanation:

We have developed a drag and drag animation for the slide ''Living or Non-Living Knowledge Check?'' from the Ecology module. The Student has to drag the answers from the ''Answers'' box and place them onto the correct boxes corresponding to Biotic and Abiotic.

Respective prompts are shown depending on the questions that the students get right.

The answers and the background photos are parametrized so that the code is easy to maintain and modify in the future. The animation has been developed such that resizing the window doesn't affect the working of the animation and it is also compatible with touch devices.

The color combinations, fonts and image sizes are chosen keeping accessibility in mind.

2. **[FNU Nimisha: 3 pts] Feature -** *UserStory No. 14*: Develop Ecology module - Producers Knowledge Check
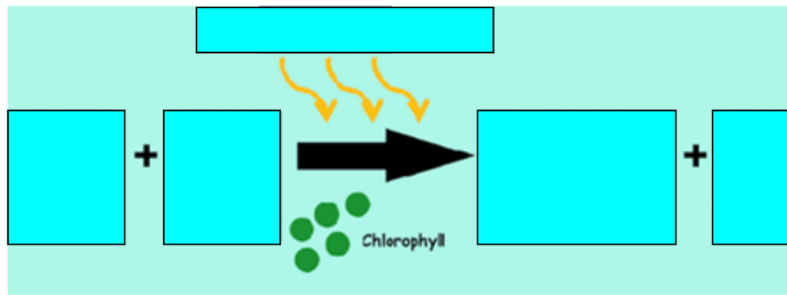
> *As an Instructor*
>
> *I want the students to use interactive animations for the Ecology module - Producers Knowledge Check*
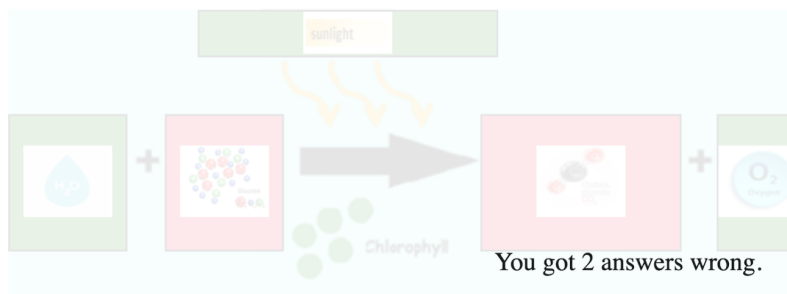>
> *So that the students can understand the concepts better.*

Progress: Developed

Design diagram:

Explanation:

We have developed a drag and drag animation for the slide "Producers Knowledge Check" from the Ecology module. The Student has to drag the answer images from the ''Answers'' box and place them onto the correct boxes for the photosynthesis process in the plants.

Respective prompts are shown depending on the questions that the students get right.

The answers and the background photos are parametrized so that the code is easy to maintain and modify in the future. The animation has been developed such that resizing the window doesn't affect the working of the animation and it is also compatible with touch devices.

The color combinations, fonts and image sizes are chosen keeping accessibility in mind.

3. **[Sai Harini Voruganti: 3 pts] Feature** - *UserStory No. 12*: Develop Clinical Trial module - Can you count the costs?

As an Instructor

I want the students to use interactive animations for the Clinical Trial module - Can you count the costs?

So that the students can understand the concepts better.

Progress: Developed

Design diagram:

Drag and drop the word or statement that adds to the cost (financial and time) of clinical trials.

The Costs of Clinical Trials	
	Insurance
Physicalprocesses	
	#9
Veterinarians	Facilities

Research
Travel
Food
Education
Patients/Subjects
Data analysis
Vacation
Vehicles

Submit

Drag and drop the word or statement that adds to the cost (financial and time) of clinical trials.

The Costs of Clinical Trials	
	Insurance
Physicalprocesses	
Veterinarians	Facilities

Research
Vacation
Travel
Data analysis
Food
Education
Vehicles
Patients/Subjects

Submit
You matched 2/6 options correctly!

Explanation:

We have developed a drag and drop animation for the slide "Can you count the costs?" from the Clinical Trial module. The Student has to drag the answers from the "Answers" box and place them onto the correct boxes and click on the submit button to check their answers.

Respective prompts are shown depending on the questions that the students get right.

The answers and the background photos are parametrized so that the code is easy to maintain and modify in the future. The animation has been developed such that resizing the window doesn't affect the working of the animation and it is also compatible with touch devices.

The color combinations, fonts and image sizes are chosen keeping accessibility in mind.

4. **[Apurva Purushotama: 3 pts] Feature** - *UserStory No. 13***:** Develop Ecology module - Ecological Succession Knowledge Check

> *As an Instructor*
>
> *I want the students to use interactive animations for the Ecology module - Ecological Succession Knowledge Check*
>
> *So that the students can understand the concepts better.*

Progress: Developed

Design diagram:

Drag the description to the correct column

Primary Succession	Secondary Succession

Submit

An F4 tornado uproots trees and bushes in a forest forcing many species to relocate. New trees and plant life grow in the spaces left behind.

Settlers clear forest and plant food crops in their place.

An oil rig is intentionally sunk off of the Texas coast. Over time, algae and invertebrates such as coral attach to the rig creating a reef.

Drag the description to the correct column

Primary Succession	Secondary Succession
	Settlers clear forest and plant food crops in their place.
An F4 tornado uproots trees and bushes in a forest forcing many species to relocate. New trees and plant life grow in the spaces left behind.	Sand dunes form as wind blows sand to a sheltered area of a beach. Eventually, grasses take root on the dunes.

Submit

An oil rig is intentionally sunk off of the Texas coast. Over time, algae and invertebrates such as coral attach to the rig creating a reef.

Explanation:

We have developed a drag and drag animation for the slide "Ecological Succession Knowledge Check" from the Ecology module. The Student has to drag the answers from the "Answers" box and place them onto the correct boxes to answer the questions listed on the left hand side. The student has to click on the submit button to check their answers. The answer box resizes when answers are dragged and dropped into the question containers.

Respective prompts are shown depending on the questions that the students get right.

The answers and the background photos are parametrized so that the code is easy to maintain and modify in the future. The animation has been developed such that resizing the window doesn't affect the working of the animation and it is also compatible with touch devices.

The color combinations, fonts and image sizes are chosen keeping accessibility in mind.

5. **[Shubham Gupta: 3 pts] Feature** - *UserStory No. 9*: Develop Clinical Trial module - Organize the Details of Clinical Trial Phases

As an Instructor

I want the students to use interactive animations for the Clinical Trial module - Organize the Details of Clinical Trial Phases

So that the students can understand the concepts better.

Organize the Details of Clinical Trial Phases
Drag and Drop the description into appropriate Phase

Phase I	Phase II	Phase III	Phase IV

Safety
Safety
Long term study
Fewer than 100 people
Effectiveness
Comparision to similar treatments
At least 100 people
Side Effects
Side Effects
At least 100 people

Submit

Organize the Details of Clinical Trial Phases
Drag and Drop the description into appropriate Phase

Phase I	Phase II	Phase III	Phase IV
Side Effects		Safety	
	Safety		
At least 100 people		Effectiveness	

Side Effects
At least 100 people
Comparision to similar treatments
Fewer than 100 people
Long term study

Submit

Progress: Developed

Design diagram:

Explanation:

We have developed a drag and drag animation for the slide "Organize the Details of Clinical Trial Phases" from the Clinical Trial module. The Student has to drag the answers from the "Answers" box and place them onto the correct boxes to answer the questions listed on the left hand side. The student has to click on the submit button to check their answers.

Respective prompts are shown depending on the questions that the students get right.

The answers and the background photos are parametrized so that the code is easy to maintain and modify in the future. The animation has been developed such that resizing the window doesn't affect the working of the animation and it is also compatible with touch devices.

The color combinations, fonts and image sizes are chosen keeping accessibility in mind.

Code Quality Report:

(1) **Entire Project :**The detailed report is also available here
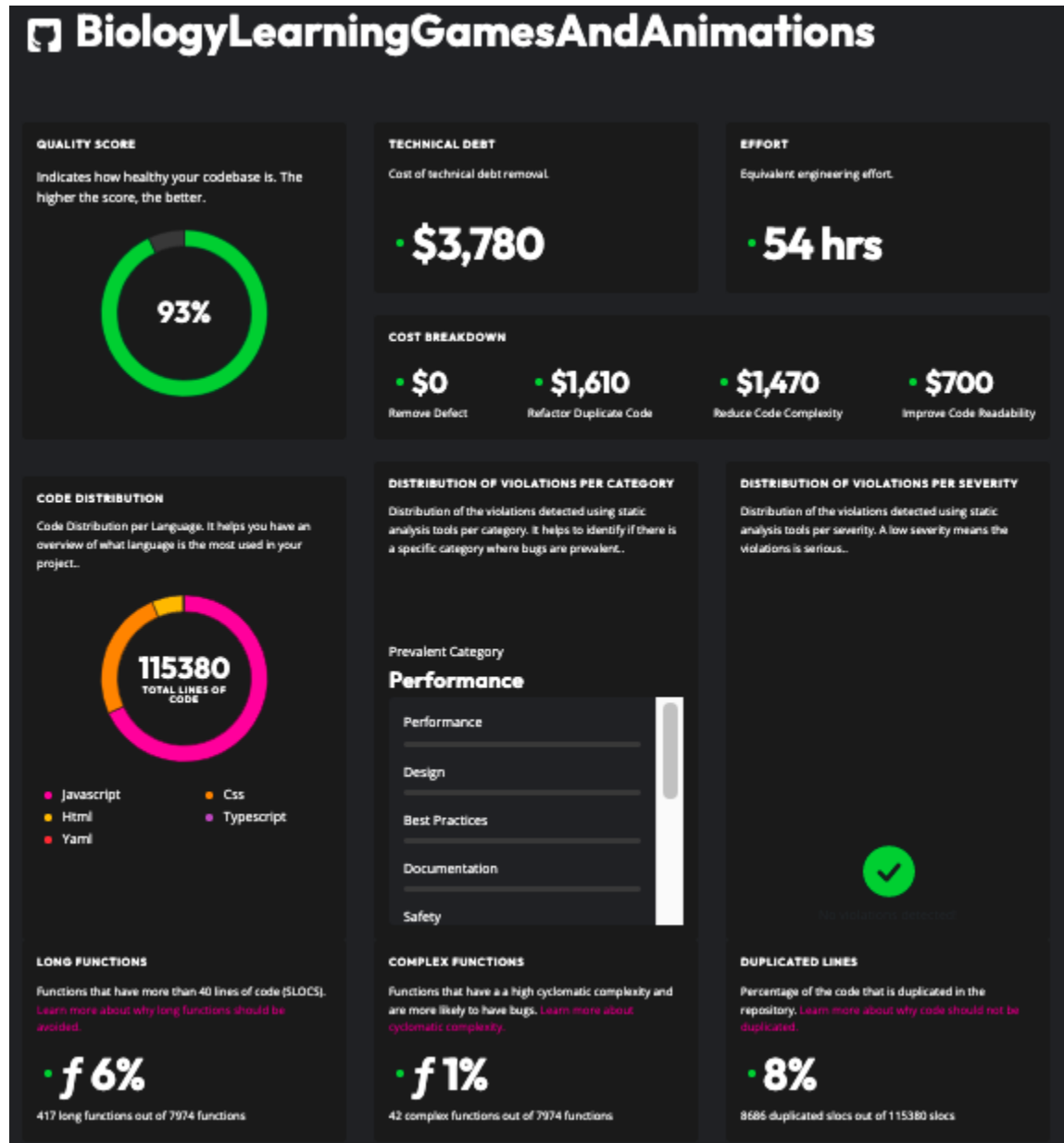
(2) **User Stories picked up in this iteration:** The detailed reports for user stories picked up by each developer can be found here.