

Progress Report

Project Info

Name: Project G - Educational Game for Learning Genetic Algorithm

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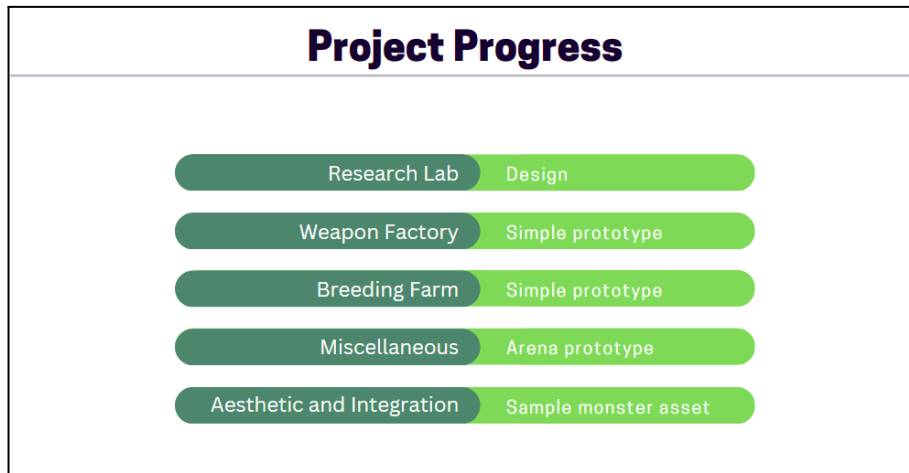
As we use the Scrum framework, the task breakdown of our project will be represented in a form of a product backlog as follows. The highlighted story is a backlog that has been adjusted during the operation in term 1.

Product Backlog

| ID | Story | Effort Estimate (Man-Half-Days) | Priority |
|-------|--|------------------------------------|----------|
| 1* | Developers need to do project documents. | 24 | 1 |
| 2 | Players can learn about the Genetic Algorithm. | 36 | 2 |
| 3 | Players can apply knowledge to solve real-world problems. | 36 | 3 |
| 4 | Players can breed their monsters. | 24 | 4 |
| 5 | Players have mandatory goals for playing a game. | 16 | 5 |
| 6 | Players have other activities to spend their time during the breeding phase. | 36 | 6 |
| 7* | Developers integrate all the systems. | 24 | 7 |
| 8* | Developers add more aesthetics to the game. | 12 | 8 |
| 9 | Developers assure quality. | 32 | 9 |
| Total | | 240 | |

Finished

For better clarity, the progress will be described in the manner of in-game systems. For example, the backlog (story) about "Players can learn about the Genetic Algorithm" can be roughly described as a "Research Lab System" since it's a game system for achieving that story. The progress is simply shown in the following figure.



The design of the three main systems was already finished. The Weapon Factory which is related to Real-world problems and the Breeding Farm which is a part of Genetic Algorithm learning has a simple wireframe prototype. The Battle Arena which is a part of the miscellaneous system has a simulation prototype already. And the sample asset of the monster is the game has already been designed.

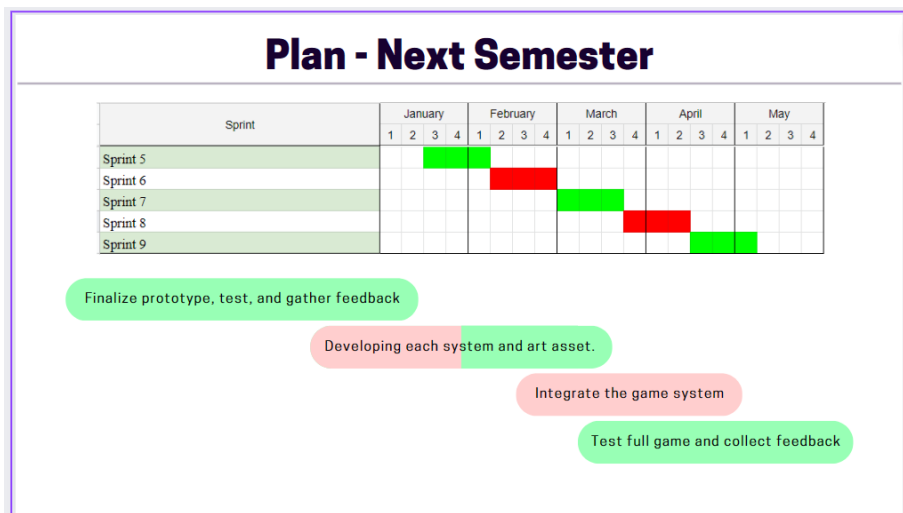
To-Do

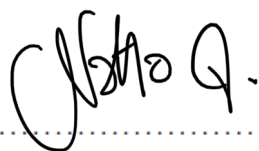
In this sprint, we will implement some functions into prototypes to be evaluated and adjusted later. We have selected the core functionalities of the game to implement first; the research lab, puzzle, farm, factory, and quest system.

| Product Backlog Item | Sprint Task | Volunteer | Initial Estimate | Sprint Review |
|--|---|-----------|------------------|---------------|
| Developers need to do project documents. | Progress report and plan | Gun, Pun | 0.5 | |
| Players can learn about the Genetic Algorithm. | Implement the research lab prototype. | All | 4 | |
| | Implement the Geneteic Algorithm puzzle prototype | Poj | 2 | |
| | Testing and Gathering Feedback | All | 1 | |
| Players can apply knowledge to solve real-world problems. | Implement the weapon factory prototype. | Gun | 5 | |
| | Testing and Gathering Feedback | All | 0.5 | |
| Players can breed their monsters. | Implement the breeding farm prototype. | Pun | 8 | |
| | Testing and Gathering Feedback | All | 0.5 | |
| Players have mandatory goals for playing a game. | Design the quest content. | All | 1 | |
| | Implement the prototype. | All | 4 | |
| | Testing and Gathering Feedback | All | 0.5 | |
| Players have other activities to spend their time during the breeding phase. | Implement the prototype for other activities (shop and side quest). | All | 1 | |

Plan

For later sprints, we will continue clearing the product backlogs listed above. First, we will create a complete game prototype and use it to test and collect feedback from target groups. After that, two sprints will be used to develop each system of the game separately, which will be fused together later. Finally, we will test, collect feedback, and try to fix those issues before publication.





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