Butterfly Longevity Tracker

Weekly Report 1 (11/15/24 - 11/21/24)

Project Information

- Project Title: Global Butterfly Longevity Tracker
- Group Number: sdmay25-03
- Client: Nathan Brockman
- Advisor: Maruf Ahamed
- Team Members:
    - Alex Herting - Full-stack Engineer
    - Andrew Ahrenkiel - Full-stack Engineer
    - Charles Dougherty - Frontend Developer
    - Jaret Van Zee - Backend Engineer
    - Carter Awbrey - Visionary

Summary

This week, we focused on setting the scope for the prototype, which we would like to present before the end of the semester. To do this we created multiple new GitLab issues and defined what needs to be done on both the frontend and the backend. For the frontend there are four main views that need to be configured for mobile and desktop devices, along with navigation that needs to be implemented. One out of four of these pages has been completed. For the backend, basic facility logic has been set up and new API endpoints have been created for the frontend to test and use. Our Postman collaborative project currently holds all API requests that are implemented for testing. Furthermore, the team collaborated to finish the lightning talk 8 slide deck for this week.

Accomplishments

- Alex
  - Continued work on making the UI responsive through css and html code changes
  - Code reviewed for Andrew on his coding changes prior to merging
  - Worked to complete lightning talk 8
- Andrew
  - Worked to finish the GuestEnterPage2 to track toward our project prototype milestone. CSS and HTML updates.
  - Collaborated with team to complete lightning talk 8 slide deck
  - Brainstormed and evaluated frontend work that needs to be completed before the prototype deadline.
- Charles
  - Continued linking frontend together and creating better flow through the site
  - Reworked some sites to better adapt to different displays
  - Worked with team to complete lightning talk 8 slides
- Jaret
  - Worked on organization of back-end file structure
  - Worked on generating API documentation system for backend APIs.
- Carter
  - Finished implementing the tag system and fixed a few related issues
  - Created the Model for Domains and Butterfly Species
  - Created the Controller/Endpoints for Domains and Species
  - Connected User Model to Domain Models
  - Fixed sighting model and Butterfly model to use updated tag system
  - Added relationships between Butterflies and Domains
  - Implemented HTTP methods for basic functionality of all existing models to test with
  - Added APIs to Postman for easy testing
  - Researched JWT and Oauth2 in Spring

Pending Issues

Front End

- Finish responsiveness for screens that will be in prototype 1
- Connect prototype 1 screens to backend
- Create simple site navigation for prototype 1 screen

Back End

- Configure SSL encryption
- Finish Implement JWT authentication
    - Decide Whether to use Oauth
    - Fingerprinting Database Actions
    - Permissions System
- Unit Tests
- API Tests
- Optimize Database Queries For Better Performance
- Improve Input Validation
- Create API documentation with “Spring REST Docs”

Individual Contributions

NAME	Individual Contributions *(Quick list of contributions. This should be short.)*	Hours this week	HOURS cumulative
Alex Herting	Frontend Responsiveness, Code Reviews, Lightning Talk	3	41
Andrew Ahrenkiel	• Frontend GuestEnterPage2 Complete • Lightning talk slide deck • Prototype planning	4	42
Charles Dougherty	Frontend structuring and linking, reworking site pages, lightning talk 8 slides	3	37
Jaret Van Zee	API Doc Generation Process, organization of file structures	5	36
Carter Awbrey	Large Backend Updates, Added APIs to Postman	14	48

Future Plans

For frontend we have a list of screens that we would like to complete for our initial prototype that we are working on. We would like to have these screens fully responsive by next week and be able to start connecting them to our backend. This will require code reviews, proper branch control, and correct usage of our issue board which we have been doing a good job at.

Significant progress was made on the backend, including setting up basic facility logic, implementing key models and relationships, and creating essential API endpoints for testing and frontend integration. The tag system was finalized, and existing models were updated to reflect its improvements. The team also successfully connected users to domains and butterflies to domains, ensuring cohesive relationships across models. All implemented APIs have been added to our Postman project for streamlined testing. Research into authentication mechanisms like JWT and OAuth2 in Spring further supported the project's future development.