PROJECT PLANNING

Team Members:
Mark Viola
Mike Petrella
Hyeong Ook Yu
ZiXian Chen
Michael Liu

Table of Contents

1. Introductory Questions

- What tools, if any, will you use for your task board?
    - ZenHub
- What tools, if any, will you use for your burn-down chart?
    - ZenHub
- Who will maintain the burn-down chart? How?
    - ZenHub will automatically update the burn-down chart according to the number of completed tasks. Mike Petrella is responsible for making sure that the burn-down chart is created correctly for each sprint.
- What is every team member's role?
    - Maintaining burn-down chart: Mike Petrella
    - Proofreading: Mark Viola
    - Master Branch Organizer: ZiXian Chen
    - Meetings Manager: Hyeong Ook Yu
    - Deadline Reminder: Michael Liu
- What tools, if any, will you use for communication?
    - Facebook Messenger
    - Phone call/ texting
    - Discord/Skype
- When do you plan to meet in person?
    - Tuesday 2pm - 4pm
    - Wednesday 12pm - 2pm
- How will you use your repository on GitHub?
    - Use branching to deal with potential conflicts
    - ZenHub has GitHub integration to allow viewing of the task board and burndown chart
- Which machines will be used to development by each team member? E.g., the lab machine, a Linux laptop, a Windows home computer, etc.
    - Personal Mac/Windows computers

2. Product Backlog

Plugin Support

Priority: High
Cost: 12 Story Points

As Hanno (an administrator), I want plugin API support for the application, where I can create, add, modify plugins written in a programming language that the application can use to extract data from other catalogs.

Standardizing Units

Priority: High
Cost: 8 Story Points

As Hanno (an administrator), I want each plugin to be able to standardize units of measurements found in its catalogue to one that I specify in the settings of the application.

Scheduling a Check for Updates

Priority: High
Cost: 5 Story Points

As Hanno (an administrator), I want the application to check the other exoplanet databases it is tracking, for new updates, on a specified interval (default is daily at 11:59pm).

User Permissions

Priority: High
Cost: 5 Story Points

As Hanno (an administrator), I want to use GitHub repo collaborators as a way of distinguishing which user has access to use the application (manage pull-requests, run the server).

Application Making Pull Requests

Priority: High
Cost: 20 Story Points

As Hanno (an administrator), I want the program to make pull requests to the OEC database when it finds changes in the databases that the application is monitoring, using an automated GitHub user account.

Accepting/Rejecting Pending Pull Requests

Priority: High
Cost: 5 Story Points

As Irving (a user), I want to be able to accept, reject, or amend pull requests made by the application through a user interface by pressing a button on a pop-up window.

Source of the Update

Priority: Medium
Cost: 2 Story Points

As Hanno (an administrator), I want the website source of the new changes to be a comment in the pull request in the database.

See History

Priority: Medium
Cost: 3 Story Points

As Hanno (an administrator), I want to see the history of pull requests, on a user interface.

Edit Pending Pull Requests

Priority: Medium
Cost: 4 Story Points

As Irving (a user), I want to be able to edit a pending pull request through a user interface by pressing an edit button when shown a list of new changes.

History of Updates

Priority: Medium
Cost: 4 Story Points

As Irving (a user), I want to see the planets that have been most recently added/edited by the application in the OEC, using the user interface.

Force a Check for Updates

Priority: Medium
Cost: 3 Story Points

As Hanno (an administrator), I want to be able to force the application to run even if it is not scheduled to check the databases.

Creating a User Interface

Priority: Medium
Cost: 49 Story Points

As Irving (a user), I want to be able to interact with the application using a user interface.

Difference Between Updates

Priority: Low
Cost: 25 Story Points

As Irving (a user), I want to be able to click on a newly updated system from a list in the UI and have lines highlighted, showcasing which parts in the XML file have changed.

Settings Form

Priority: Low
Cost: 15 Story Points

As Hanno (an administrator), I want to be able to change time controls, bot account settings, and conversion units, in a settings form in the application.

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3. Release Plan

Sprint 1:

- As Hanno (an administrator), I want each plugin I've created to standardize units of measurements found in its catalogue to one that I specify in the settings of the application.
- As Hanno (an administrator), I want plugin API support for the application, where I can create, add, modify plugins written in a programing language that the application can use to extract data from other catalogs.
- As Hanno (an administrator), I want the application to check other exoplanet databases for new changes on a specified interval (default is daily at 11:59pm).
- As Hanno (an administrator), I want to use GitHub repo collaborators as a way of distinguishing which user has access to use the application (manage pull-requests, run the server).

Sprint 2:

- As Hanno (an administrator), I want the program to make pull requests to the OEC database when it finds changes in the databases that the application is monitoring, using an automated GitHub user account.
- As Irving (a user), I want to be able to accept or reject pull requests made by the application through a user interface by pressing a button on a pop-up window. (**Only the backend half of this story**)
- As Hanno (an administrator), I want the website source of the new changes to be a comment in the pull-request in the database. (**Only the backend half of this story**)
- As Irving (an user), I want to be able to edit a pending pull request through a user interface by pressing an edit button when shown a list of new changes.
- As Irving (a user), I want to see the history of pull requests, on a user interface. (**Only the backend half of this story**)

Sprint 3:

- As Irving (a user), I want to see the planets that have been most recently added/edited by the application in the OEC, using the user interface.
- As Irving (a user), I want to be able to interact with the application using a user interface. (**Only half of this story**)
- As Hanno (an administrator), I want to be able to force the application to run even if it is not scheduled to check the databases.

Sprint 4:

- As Irving (a user), I want to be able to interact with the application using a user interface. (**Other half of this story**)
- As Irving (a user), I want to see the history of pull requests, on a user interface.

Sprint 5:

- As Hanno (an administrator), I want the website source of the new changes to be a comment in the pull-request in the database.
- As Irving (a user), I want to be able to click on a newly updated system from a list in the UI and have lines highlighted, showcasing which parts in the XML file have changed.
    - The lines that were changed will stand out from the ones that didn't. OR be stored in a separate text file and will be displayed using a simple table from the UI. The text file will contain the line number and changes for the lines that were changed.
- As Hanno (an administrator), I want to be able to change time controls, bot account settings, conversion units in a settings form in the application. (**Half**)

Sprint 6:

- As Hanno (an administrator), I want to be able to change time controls, bot account settings, conversion units in a settings form in the application. (**Half**)
- Finish leftovers and testing

4. Sprint Plan

4.1 Sprint Backlog

For the first sprint (10/17/2016 – 10/23/2016), the user stories that will be completed are the users stories found in 2.1, 2.2, 2.3, 2.4. Each sprint will have a sprint velocity of 30 story points and will be 7 days long, starting on the Monday of every week. The developers at Spazio have estimated that they can each complete 6 story points per week. The following, details the user stories being completed and their corresponding tasks.

4.1.1 Plugin Support

Priority: High
Cost: 12 Story Points

As Hanno (an administrator), I want plugin API support for the application, where I can create, add, modify plugins written in a programming language that the application can use to extract data from other catalogs.

Task 1. Build/find a class library to make it easier to deal with web requests. **(2.5 story points)**
Task 2. Create plugin interface. **(1 story point)**
Task 3. Create a XML parser that will take a dictionary and output a XML format text, with fields in the same order as dictionary. **(2 story points)**
Task 4. Create serializer class and add plugin loading functionality. **(2.5 story points)**
Task 5. Create two default plugins for exoplanet.eu and NASA Exoplanet Archive. **(4 story points)**

4.1.2 Standardizing Units

Priority: High
Cost: 8 Story Points

As Hanno (an administrator), I want each plugin to be able to standardize units of measurements found in its catalogue to one that I specify in the settings of the application.

Task 6. Find/build a unit conversion library. **(8 story points)**
- Create a way of making general conversion (i.e., specify original unit and convert to whatever is defined in the settings)

4.1.3 Scheduling a Check for Updates

Priority: High
Cost: 5 Story Points

As Hanno (an administrator), I want the application to check the other exoplanet databases it is tracking, for new updates, on a specified interval (default is daily at 11:59pm).

Task 7. Create a server framework that will run the plugins with threads. **(4 story points)**
Task 8. Have server constantly check system time. **(1 story point)**

4.1.4 User Permissions

Priority: High
Cost: 5 Story Points

As Hanno (an administrator), I want to use GitHub repo collaborators as a way of distinguishing which user has access to use the application (manage pull-requests, run the server).

Task 9. Create GitHub API management class, and add oauth2 login functionality. **(4 story points)**
Task 10. Add ability to check if user is a collaborator of the repo. **(1 story point)**

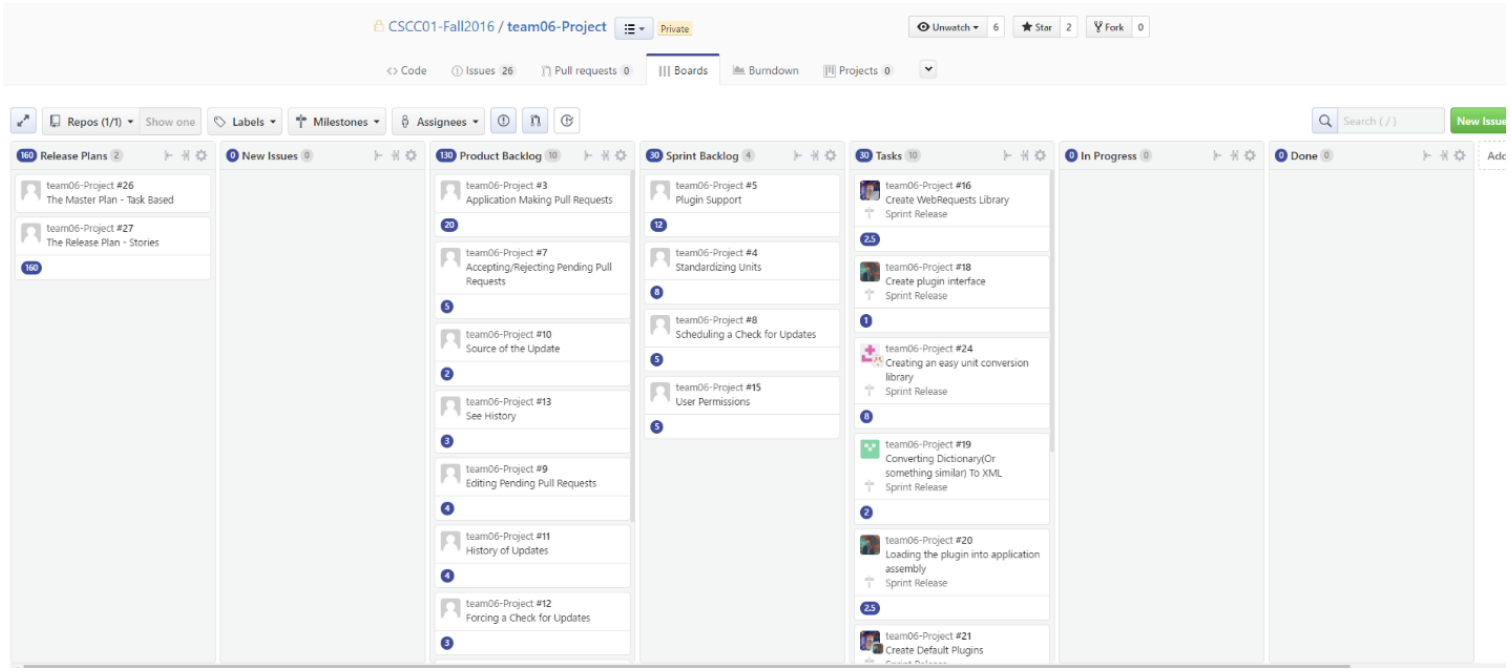
4.2 Detailed Plan

	Oct 17	Oct 18	Oct 19	Oct 20	Oct 21	Oct 22	Oct 23
Task 1		2.5					
Task 2		1					
Task 3			2				
Task 4			2.5				
Task 5			2.5 + 1.5				
Task 6			6 + 2				
Task 7				4			
Task 8						1	
Task 9						4	
Task 10						1	

Legend:

Mark Viola
Mike Petrella
Hyeong Ook Yu
ZiXian Chen
Michael Liu

4.3 Task Board Snapshot



4.4 Burn-Down Chart Snapshot