Team 17 Sprint 1 Planning Document

Northrop Grumman Xetron Seismic Activity Map

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**Sprint Overview**

**Overview:**

This will be our first sprint. Our team members will start with setting up the working environment by downloading Vaadin framework, setup the tomcat server and integrate these with Eclipse.

We will begin with implementing basic User Interfaces for our project. We will start to implement basic functions such as an empty database, seismic events, sensor view, events view maps, and some basic servers.

Below, we have described the first user stories that we will try to tackle. The estimated time for each task is an arbitrary number with a base of 1 and a max of 8, with the numbers in-between being Fibonacci numbers (1, 2, 3, 5, 8).

**Scrum Master:** Aaron Peters

**Scrum Meeting Time:** 7PM T and R, 7PM Su

**Risks/Challenges:** The inexperienced skill in Vaadin and Google map API; Learning

Vaadin and Google map API

**Current Sprint Detail**

**User Story:** As a developer, I want to create an instance of the Vaadin service into Eclipse.

|  |  |  |
| --- | --- | --- |
| Task Description | Estimated Time | Owner |
| Download Vaadin framework | 1 | Everyone |
| Include this framework in Eclipse | 1 | Everyone |
| Setup Tomcat server | 2 | Everyone |
| Download all Vaadin’s required extensions and include them in Eclipse | 2 | Everyone |
| Create a new Vaadin project | 1 | Everyone |

**User Story:** As a developer, I want to implement an empty database with the structure needed for this project.

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| --- | --- | --- |
| Task Description | Estimated Time | Owner |
| Describe database requirements | 2 | Charles |
| Describe user needs for database | 2 | Charles |
| Describe schemes needed | 2 | Charles |
| Describe data structures and restrictions for each scheme | 2 | Charles |
| Draw conceptual design of all these descriptions | 2 | Charles |
| Implement a new MySQL database with this design | 5 | Charles |

**User Story:** As a user, I want to be able to view the seismic activity map

|  |  |  |
| --- | --- | --- |
| Task Description | Estimated Time | Owner |
| Create a Map instance using Google Maps API | 3 | Paul |
| Show the 3 tabs that the user can click on | 3 | Paul |
| Create a tab in Vaadin for this view | 5 | Ben |
| Add Google location button to map | 2 | Paul |
| Get seismic data from 5 most active sensors in US | 8 | Paul |
| Plot colors on the map to represent the amount of seismic activity at each sensor | 8 | Paul |

**User Story:** As a user, I want to be able to view the sensor view map

|  |  |  |
| --- | --- | --- |
| Task Description | Estimated Time | Owner |
| Create a Map instance using Google Maps API | 3 | Zhihao |
| Create a basic Sensor class frame that holds the information of each sensor | 8 | Zhihao |
| Connect to database to get that list of sensors and populate the sensor classes | 3 | Ben |
| Display list of all available sensors on map | 5 | Zhihao |
| Display a text box of information when a sensor is clicked | 3 | Ben |
| Show the 3 tabs that the user click on | 3 | Zhihao |
| Create a tab in Vaadin for this view | 5 | Zhihao |

**User Story:** As a user, I want to be able to view the events view map

|  |  |  |
| --- | --- | --- |
| Task Description | Estimated Time | Owner |
| Create a Map instance using Google Maps API | 3 | Ben |
| Create a basic Events class frame that holds the information of each event | 8 | Ben |
| Connect to database to get that list of seismic events and populate the events classes | 3 | Charles |
| Create a tab in Vaadin for this view | 5 | Ben |

**User Story:** As a user, I want to be able to access this system from any web browser on any device.

|  |  |  |
| --- | --- | --- |
| Task Description | Estimated Time | Owner |
| Create the basic Server class frame | 8 | Aaron |
| Implement methods such that this class can connect to three map view classes | 8 | Aaron |
| Connect our server to Amazon Web Services | 8 | Aaron |
| Try to connect to this public server from different devices (i.e. phone, laptop, different WiFi connections) | 5 | Charles |

**Remaining Backlog**

**Functional**

1. As a user, I want to be able to view a list of previous seismic events.
2. As a user, I want to be able to see the epicenter of an event.
3. As a user, I want to see the radius of an event on the map.
4. As a developer, I want to implement a system that categorizes seismic events based on data it produces so that users can see what kind of event is probably occurring.
5. As a developer, I want to read seismic data from public sensors so that I can add it to the map automatically.
6. As a user, I want to be able to see what areas on the map are least active seismically and which areas are most active seismically so that I can determine the best areas to test new sensors.
7. As a user, I want to be able to filter the seismic activity threshold to visualize the activity in different colors.
8. As a user, I want to be able to select and deselect certain seismic sensors so that I can view certain regions of seismic activity.
9. As a user, I want to have an easy-to-use interface for viewing database records of seismic events.

**Non-Functional**

1. As a developer, I want to calculate the epicenter of the seismic data.
2. As a developer, I want to calculate the predicted radius that the seismic event will affect.
3. *As a developer, I want to implement security features for our seismic database so that we can prevent unauthorized access (If Time Permitting)*
4. *As a developer, I want to standardize the information for the user about each seismic event in a uniform manner (If Time Permitting)*