FOSS Field Trip

Organization

This activity will be organized using the Process Oriented Guided Inquiry Learning (POGIL) approach. You will work in groups of three to complete the activities below in the amount of time that is suggested, and then report your findings and observations to the rest of the class.

Each student in your group should take on one of the following roles:
* Manager: Manages the group. Ensures that members are fulfilling their role, the assigned tasks are being accomplished on time, and all members of the group are participating in the activities.
* Recorder: Records the important aspects of the group discussions, observations, insights, etc.
* Presenter: Presents oral reports to the class for the group.
If there are only two people in your group, the Manager and Presenter roles can be filled by one person.

Background

Open source pre-dates the Web, but the Web and Internet connectivity have been essential for the blossoming of FOSS in recent years. FOSS projects need to be available on the Web to ever gain much attention. There are a growing number of sites (often called “forges”) that provide a home and visibility to FOSS projects (although many of the biggest projects live on their own sites).

Part 1 - GitHub (20 minutes)

One of the best known of these FOSS project hosting sites is GitHub. In this activity you will search for projects on GitHub based upon category.

Do the following:

1. Go to: https://github.com/
2. Use the Search feature on the top right next to the Sign in or Sign up links to search for educational applications by placing the word education in the search box and click Search.
    1. How many repositories are there in this category?
    2. Click on the first project. Click on Graphs, then Commits. What information does this page provide?

3. Go back to the main page and use the Search feature to look for humanitarian applications. Type the word humanitarian in the search box and click Search.
    1. How many repositories are there in this category?
    2. Locate the HTBox/crisischeckin project. When was the last update?
4. Use the Search feature to look for disaster management applications. Type the phrase disaster management the search box and click Search.
    1. How many projects are there in this category?

Keep this browser tab open while you move onto Part 2.

Part 2 - OpenHub (20 minutes)

In this activity, you will use OpenHub to search for both educational as well as humanitarian projects.

Searching OpenHub:

1. Go to: https://www.openhub.net/
2. In the search space, enter: education
    1. Notice it tells you how many pages of results there are, not number of projects. By default, there should be 10 projects per page. How many projects were returned?
    2. KDE Education should be the second result. Click on it. Look on the right hand side of the page and click on Code Locations. There are a number of projects listed here. Is any of the code located on GitHub?
    3. Go back one page. Under the Code Locations, it provides several projects that are Similar. Click on Similar Projects. How many similar projects are listed?
    4. Scroll down. What information does OpenHub provide about the project?
3. Perform searches for both humanitarian and disaster management.
    1. How many projects were returned for each search?
    2. Click on the Activity icon. Why do so many projects do not have activity information available?
4. Click on Organizations.
    1. What information is provided on this page?
5. Search for OpenMRS.
    1. When was the last commit for OpenMRS Core?
6. Go back to GitHub and search for OpenMRS Core.
    1. When was the last commit?

2. Why do you think these sites have different information?

7. What would be the benefits/drawbacks of using both GitHub and OpenHub to search for a project?

Be sure that the Recorder is writing down the answers, the Manager is keeping everything on track, and the Presenter will be ready to discuss the answers with the rest of the class within 5 minutes!

Next step: Investigate a popular project! (15 minutes)

Go to http://openhub.net and then choose a project from the “Most Popular Projects” listing on the left side of the page.

Now answer the questions below:

1. What is the main programming language used on this project? What other programming languages, if any, are used?
2. How many lines of code are there in this project?
3. How many commits have there been in the past 30 days? In the past year?
4. How many contributors were there in the past 30 days? How many were new?
5. What is the ratio of code lines to comment lines?
6. What is the ratio of lines added to lines removed (sometimes known as “code churn”) in the past 30 days?
7. What is the peak number of contributors to this project?
8. How many of the top 10 contributors to the project are still active?
9. Based on your findings, how easy do you think it would be to contribute to this project in this course? Why?

Be sure that the Recorder is writing down the answers, the Manager is keeping everything on track, and the Presenter will be ready to report the answers to the rest of the class within 5 minutes!

Step 2: Investigate a smaller project (15 minutes)

Now go back to the OpenHub homepage, then select and search for one of the following projects:

* gnome-mousetrap
* jrugged
* WhirlyGlobe
* OpenTreeMap-iOS
* Apache Kafka

* python-tox

Then answer these questions (same as above):

1. What is the main programming language used on this project? What other programming languages, if any, are used?
2. How many lines of code are there in this project?
3. How many commits have there been in the past 30 days? In the past year?
4. How many contributors were there in the past 30 days? How many were new?
5. What is the ratio of code lines to comment lines?
6. What is the ratio of lines added to lines removed (sometimes known as “code churn”) in the past 30 days?
7. What is the peak number of contributors to this project?
8. How many of the top 10 contributors to the project are still active?
9. Based on your findings, how easy do you think it would be to contribute to this project in this course? Why?

Also answer these questions:

1. What do you think are some of the advantages and disadvantages of choosing to contribute to this project?
2. What other information would you like to know about a project before choosing to contribute to it?

As in Step 1, be sure that the Recorder is writing down the answers, the Manager is keeping everything on track, and the Presenter will be ready to report the answers to the rest of the class within 5 minutes!