

# SENG 371 – Spring 2024

## Lab 03 – Concept Location and Impact Analysis

This lab explores the online software development platform called GitHub. By the end of this lab, you will:

- Explore a repository in your working directory using the Eclipse IDE;
- Locate typical concepts in the source code of a software project;
- Analyze the impact of a change request to help estimate its cost;
- Practice simple techniques of impact analysis.

In this lab, please use the same `frozen-jabref` GitHub repository that you created during Lab 2. If you decide to work in a pair different from Lab 2, be sure that your pair has a repository ready to work and a working directory in Eclipse with JabRef before you start the lab.

By the way, you can add another developer to a private repository that you own so that both may commit changes on it. Of course, by using SSH and private repositories, each developer must have an RSA key for authenticating on GitHub before they clone a repo (recall Lab 2 instructions for adding RSA keys).

Use the link below to add someone to a private repository you own.

<https://docs.github.com/en/account-and-profile/setting-up-and-managing-your-personal-account-on-github/managing-access-to-your-personal-repositories/inviting-collaborators-to-a-personal-repository>

### First change request

Change Request:

**Add FileMonitor for LaTeX citations #10585**

<https://github.com/JabRef/jabref/issues/10585>

Using a search strategy of your choice, identify the class(es) where the concept is located. Briefly record the steps you followed during concept location.

Starting from the initial impact set, analyze the potential impact of the change as if you were performing it, and find the final impact set (keep those classes open in your IDE to show them your lab instructor). Briefly record the steps you followed during impact analysis.

### Second change request

Change Request:

**Rewrite code of CitaviImporter to avoid JAXBContext #9539**

<https://github.com/JabRef/jabref/issues/9539>

Using a search strategy of your choice, identify the class(es) where the concept is located. Briefly record your steps to later show the lab instructor the process you followed during concept location.

Your concept location must have produced an initial impact set, i.e., a small set of classes where the concept in the change request is located in the source code. Starting from this initial impact set, analyze the potential impact of the change as if you were performing the change, and find the final impact set of the change, i.e., a final set of classes that you believe will be affected by the change (keep those classes open in your IDE to show them to your lab instructor). Briefly record your steps to later show the lab instructor the process you followed during impact analysis.

## Present your results to your lab instructor

Take a few minutes to present the results of your work to your lab instructor. That is how you will be assessed in this lab.

You may use more than one checkpoint during the lab session to show the lab instructor your results as soon as you finished each relevant task. For example:

1. Locating the concept and analyzing the impact of the first change request;
2. Locating the concept and analyzing the impact of the second change request.