

Instructions to Participants

Study Description

The study investigates what parts of a method/function programmers/developers examine during code summarization.

In this study, you will be asked to read and summarize Java methods. The methods are from five different open source Java systems (information about the systems is given to you as a handout). The study will take approximately 45-60 minutes. The participation of this study is voluntary and you can terminate at any time. Your responses will be anonymous. While you are reading code and writing summaries, your eyes' movement will be captured using an eye-tracker.

The study consists of three main parts in the following order:

- (1) Collecting demographic information.
- (2) Performing the main study which involves reading and summarizing a set of 23 Java methods.
- (3) Answering a post-questionnaire that collects your preferences about what are the main aspects of a method/function that are most important for summarization.

You will work within the Eclipse IDE. You can navigate through the classes using the Package Explorer on the left of the screen. The right part of the screen consists of two parts. In the upper part you see the list of tabs of the methods that you will summarize. The lower part is designated for writing your method summary; as well as, providing any comments you may have about the method.

Before you begin the task, we will perform a short calibration so that the eye tracker can see your eyes. This will take about a minute. During the length of the study, please try to remain in the relatively same location in your chair and avoid leaning towards the monitor. The moderator will monitor you during the study to make sure your eyes are in visible distance to the system. You may look at the hard copy documents provided as needed as the eye tracker will pick up your eyes when you look back on the screen. We will start and stop the eye tracking for each task i.e., each method summarized.

Instructions

- Start with the left most method open. This is the first one listed on your hard copy list if you need to refer to it.
- Summarize the method in your own words. You are free to refer to any part of the system while you summarize the method.
- When you are done summarizing the method (and the eye tracker is stopped by the moderator), please enter the difficulty and confidence rating for your summary in the space provided in the text file. If you have any comments you may also note them in the space provided. Note that this part of the study is not eye tracked.
- To move to the next method, you can use the method's tab located at the upper-right part of the screen. The moderator will start tracking for the next method when you are ready.
- You may navigate through all the classes and the methods in the entire codebase at any time.
- You can refer to the method list provided to you if you lose track of opened methods. They are all opened at the start of the study for your convenience.

We thank you for your participation.

Are you ready to begin?