# Tool tutorial protocol

## Code

Interviewer reads this highlighted text as is
Interviewer tells instruction to participant
Interviewer asks question to participant
Instructions for interviewer

## Pre-study instructions

- Tell the participant have Chrome install on their machines

## Instructions (5 minutes)

Good __. My name is _____. Thank you for coming.

This study involves a task focusing on debugging the performance of a configurable system with a debugging tool. The goal of the study is to see how the tool helps developers work on this task. The debugging tool was designed and developed based on a user study where we identified the process that developers follow and the information needs that they have when debugging the performance of configurable systems. I will, first, walk you through the tool on how to use it and what information it gives you. As part of the this tutorial phase, you will use the tool to debug the performance of a toy system. Subsequently, you will use the tool to debug the performance of a configurable system.

If it is okay with you, I would now like you to share your screen so that I record video and audio of our conversation. The purpose of the recording is so that I can get all the details of what you are thinking as you solve the task, but at the same time, I can carry on an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report without any reference to individuals. (Wait for participant to share screen and start recording). Could you please state on the recording that you consent to participating in this study and that you can stop the study at any time? (Wait for participant's consent).

## Tutorial (25 minutes)

Executing the following command in your terminal
`ssh -N -L 8090:127.0.0.1:8090` BLINDED FOR REVIEW
`vscode`
`127.0.0.1:8090`

The scenario for the toy and real systems is that you are working in the team of these configurable systems. The toy example performs some calculations and writes data to a file based on the configuration. I will later tell you what the real system does. In this scenario, assume that you have a general idea of what the system does, but do not have extensive knowledge of all components of the system nor how the configuration options affect the functionality and quality attributes of the system, including performance. One week, you are the engineer on-call, who is in charge of answering questions about the system on Stack Overflow and GitHub issues, and addressing bug reports. One bug report that you received and need to address is found in the README.md file.

- Read the performance bug report to you or out loud, it does not matter.
- What is the bug report saying?
  - The user is saying that the system is taking so long based on how they configured the system.

- Read the task
- What is the task about?

Instead of you debugging the system, let's first watch this video so that you can learn more about the tool that we developed and how it can help you debug the performance of configurable systems. If you have any questions about the tool and process, you can ask me those when you use the tool to debug the performance of the toy system

Watch this video

BLINDED FOR REVIEW

## Mini Task

This is how our tool works and the information that it provides. It does not give you all the information, but rather guides and helps you to debug performance. Now I will give you 15 minutes to debug the performance of a toy system. Don't worry, if you have any questions about the tool, I will answer them.

So, going back to the scenario where the user configured the system and they are saying that it is taking some time to execute, I want you to debug the performance of the system and tell me what is going on in the implementation

After the participant has worked on the task for 20 minutes

- I am going to stop you at this moment to start debugging the performance of the real system

Go to the main study protocol