Hello my name is Rusab. Today we will be playing a game about firewall administration to give you a good understanding of the way firewalls work and how they the rules can be configured using a Linux command line utility called ‘iptables’. Try your best to solve all the levels, but your participation today is purely voluntary, you may stop at any time. The purpose of this game is to teach you how to set up your own firewall rules. Please remember we are testing this games capability to teach this, not your own.

In this observation, we are interested in what you think about as you perform the tasks, we are asking you to do. In order to do this, I am going to ask you to talk aloud as you work on the task. What I mean by “talk aloud” is that I want you to tell me everything you are thinking from the first time you see the statement of the task till you finish the task. I would like you to talk aloud constantly from the time I give you the task till you have completed it. I do not want you to try and plan out what you say or try to explain to me what you are saying. Just act as if you were alone, speaking to yourself. It is most important that you keep talking. If you are silent for a long period of time, I will ask you to talk. Do you understand what I want you to do?

\*Wait for a response\*

Good. Now we will begin with some practice problems. First, I will demonstrate by thinking aloud while I solve a simple problem: “How many windows are there in my mother’s house?”

[Demonstrate thinking aloud]

\*Wait for response\*

Now it is your turn. Please think aloud as you multiply 120 \* 8.

[Let them finish]

Good. Now, those problems were solved all in our heads. However, when you are working on the computer you will also be looking for things and seeing things that catch your attention. These things that you are searching for and things that you see are as important for our observation as thoughts you are thinking from memory. So please verbalize these too. As you are playing the levels, I won’t be able to answer any questions. But if you do have questions, go ahead and ask them anyway so I can learn more about what kinds of questions the game brings up that it hasn’t explained. I will answer any questions after the session. Also, if you forget to think aloud, I’ll say, “please keep talking.” Do you have any questions about the think aloud?

[See if they ask a question]

Now I’m going to ask that you fill in this pre-game questionnaire. Please answer them as honestly as possible, as this is for the sake of research.

[Give them questionnaire and wait for them to finish it]

Now, please proceed to play the game, and remember to read everything carefully.