Usability Plan for “IT”:

Interface for connecting to game server

# Participant Selection

The target audience is someone who doesn’t take time to relax in their busy schedule, for example the traditional college student. There is no specification as to age, major, gender, or other demographic markers.

To find participants for this study, please:

1. Go to Crossroads during a not-too-busy time. Perhaps 9:00am – 12:00am or 2:00pm – 6:00pm.
2. Look for someone at a table by himself/herself. Approach the table and ask the following questions: “Would you be willing to spend 5 minutes helping me with a homework assignment? I need feedback on a video game that a friend of mine has created.”

If the student agrees, produce the following participant agreement and have them sign it:

**To**: Prospective usability study participant

**Subject**: Usability study for a video game.

You are invited to participate in a usability study to help us find the defects in a piece of software. This study will consist of the usability engineer walking through a series of steps designed to represent a typical usecase of the software being studied. You will be asked to interact with the software and give your feedback as to what is good or bad about the current design.

During the course of this interview, data will be collected. At the very least, the usability engineer will take notes of the key events that transpired during the course of the study. You will be given the opportunity to review these notes at the end of the study. Optionally, the usability engineer’s may choose to use their computer to record your interactions with the software. This will include mouse movements as well as how the software responds to your input. Again, you will be given the opportunity to review the resulting movie at the end of the interview if you desire.

Participation in this study is voluntary. If at any point in time you would like the interview to end or the data to be erased, please indicate it to the usability engineer. Thank you in advance for your participation.

**Signed**:

# Hypotheses

* **Learnability**: Users will quickly figure out how to install the game without external help. Specifically, they will quickly learn how to clone the GitHub repository, run the appropriate scripts, and connect to the game server.
* **Welcome/Server Connection Dialog**: The welcome popup dialog will not immediately convey what how to connect to the game server.
* **IP Address/Port Labels**: The user will not be sure what the “IP Address” and “Port” labels mean. Specifically, they will be unsure which values to give as inputs.
* **Server Connection Dialog Labels and Placeholders**: The server connection names and placeholder values (“e.g. 192.168.1.12” and “11000”) in the popup dialog do not map to the user’s understanding of connecting to servers.
* **Connect**: A [Connect] button in the dialog is needed for users, or its absence is not helpful to the users who want to connect to the server.
* **Motivation**: The user will find the process of connecting to the game server enjoyable, easy, and stress-free.

# Experiments

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|  | HYPOTHESIS | EXPERIMENT | INTERPRETATION |
| A) | Learnability | Ask the participant to install the game without any help or encouragement | If the participant is able to successfully complete the installation process (i.e. cloning the GitHub repository, running the appropriate scripts, and connecting to the game server) without guidance, then the hypothesis is supported.  Any help or prompting will refute the hypothesis. |
| B) | Welcome/Server Connection Dialog | With the installation/setup instructions available to both you and the participant, install the game. After running the scripts, ask the user to describe what he/she thinks the welcome popup dialog/menu is designed to accomplish. | If the participant answers anything about connecting to a server, then the hypothesis is refuted.  If the participant eventually answers correctly or gets close, then the results are inconclusive. |
| C) | IP Address/Port Labels | Ask the participant to guess the values to be given in the “IP Address” and “Port” input boxes. After their giving guesses, reveal to him/her the correct values that should be given. Ask him/her if this is what they expected according to the label. | If the participant says that the IP Address/Port labels are self-explanatory, then the hypothesis is refuted.  Anything else supports the hypothesis |
| D) | Server Connection Dialog Labels and Placeholders | Ask the participant to give values for the “IP Address” and “Port” input boxes. When they are finished, the correct values are presented. Before he/she connects to the server with the correct values, ask him/her whether the contents of inputs boxes are what was expected | If the participant is surprised by the contents of the input values, then the hypothesis is supported. |
| E) | Connect | After the participant is done giving values for “IP Address” and “Port,” have them attempt to connect to the game server. At that point, ask him/her if a [Connect] button in the dialog is needed, or if its absence is not helpful to them for connecting to the game server. | If the participant suggests that connecting to the game server would have been easier if a button existed, then the hypothesis is supported. |
| F) | Motivation | After the participant has connected to the game server, ask him/her whether the connection and installation process was stress-free or enjoyable. If he/she gives a short answer, then ask him/her to elaborate | If the comments are positive, then the hypothesis is supported.  If the comments are neutral or negative, then the hypothesis is refuted. |
| G) | Motivation | Ask the participant what he/she liked most about the server connection process. Ask what he/she likes least about it. | If the positive comments are more lengthy, specific, or enthusiastic, then the hypothesis is supported. |

# Script

If the usability engineer chooses to use their computer to record the participant’s interactions with software, then before beginning the study, set up a screen-recording application like TinyTake (Windows) or QuickTime Player (Macintosh). Also record the audio of the interview with your phone.

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| STEP | INSTRUCTIONS | EXP. | INTERPRETATION |
| 1 | Greet the user and have him/her sign the participant form. |  |  |
| 2 | Bring up the installation/setup instructions to the participant. Ask the user to install the game without any help or encouragement | A, B | If the participant is able to successfully complete the installation process (i.e. cloning the GitHub repository, running the appropriate scripts, and connecting to the game server) without guidance, then the hypothesis is supported.  Any help or prompting will refute the hypothesis. |
| 3 | With the installation/setup instructions available to both you and the participant, install the game. After running the scripts, ask the user to describe what he/she thinks the welcome popup dialog/menu is designed to accomplish. | A, B | If the participant answers anything about connecting to a server, then hypothesis (B) is refuted.  If the participant eventually answers correctly or gets close, then hypothesis (B) is supported. |
| 4 | Ask the participant to guess the values to be given in the “IP Address” and “Port” input boxes. After their giving guesses, reveal to him/her the correct values that should be given. Ask him/her if this is what they expected according to the label. | A, C | If the participant says that the IP Address/Port labels are self-explanatory, then hypothesis (C) is refuted.  Anything else supports hypothesis (C). |
| 5 | Ask the participant to give values for the “IP Address” and “Port” input boxes. When they are finished, the correct values are presented. Before he/she connects to the server with the correct values, ask him/her whether the contents of inputs boxes are what was expected | D | If the participant is surprised by the contents of the input values, then hypothesis (D) is supported. |
| 6 | After the participant is done giving values for “IP Address” and “Port,” have them attempt to connect to the game server. At that point, ask him/her if a [Connect] button in the dialog is needed, or if its absence is not helpful to them for connecting to the game server | E, A | If the participant suggests that connecting to the game server would have been easier if a button existed, then hypothesis (E) and (A) are supported. |
| 7 | After the participant has connected to the game server, ask him/her whether the connection and installation process was stress-free or enjoyable. If he/she gives a short answer, then ask him/her to elaborate | F | If the comments are positive, then hypothesis (F) is supported.  If the comments are neutral or negative, then hypothesis (F) is refuted |
| 8 | Ask the participant what he/she liked most about the server connection process. Ask what he/she likes least about it. | G | If the participant is surprised by the contents of the lesson, then the hypothesis is supported.  If the positive comments are more lengthy, specific, or enthusiastic, then the hypothesis is supported |
| 9 | Ask the participant what he/she likes most about the application. Ask what he/she likes least about it. | G | If the positive comments are more lengthy, specific, or enthusiastic, then the hypothesis is supported |
| 10 | Thank the participant for his/her time |  |  |