Criterion A: Planning

Words: 381

Scenario

My client is Peter Devry, one of the computer science teachers at school. He wanted to monitor

students during class and had explored other software options, but they were overcomplicated

and difficult. He wanted a much simpler program with only the features he knew he would be

using.[1]

Solution

Two separate programs, one for the teacher and one for the students. Executing the students'

program will automatically connect their school computer to the teacher's computer, where the

teacher can send messages or stream their screen. The client program should never stop running

on the students' PC until the student logs off or the PC shuts down, while the server program

should only run when the teacher wants to view the students' screens.

Rationale

I decided to use Java for the entire project due to my familiarity with it. It also had a variety of

different packages that included what I needed. This includes the java.net package to create the

network, the java.awt package and javax.imageio packages to capture images of the screen, and

the javafx package to create a GUI for the teacher as well as display messages on the students'

screens. Moreover, its ability to create objects would allow me to easily maintain multiple

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[1] Refer to appendix, 1.1

connections with different computers. Furthermore, this language would already be installed on every computer in the lab, as the computer lab is standardized on Java 8.

Because of Mr. Devry's mention of how difficult it was to use other software,[2] I decided to make the GUI as simple as possible and to minimize user input by implementing only the features he requested. Since the students are supposed to be unaware of this program and unable to interact with it, there should be absolutely no user input or GUI on the students' screens aside from the teacher's message.

Success Criteria

A	The GUI is intuitively simple
B	The students are identifiable by name
C	The teacher can stream students' screens
D	The teacher can switch between students' screens from a list of all connected students
E	The teacher can send messages to individual students
F	The student's computer automatically connects to the teacher's computer during runtime
G	The teacher's computer automatically discards a student's connection when the student's computer disconnects

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[2] Refer to appendix, 1.2