Virtual Spectrophotometer

User Guide

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1.0 System Interface

## 1.1 Login
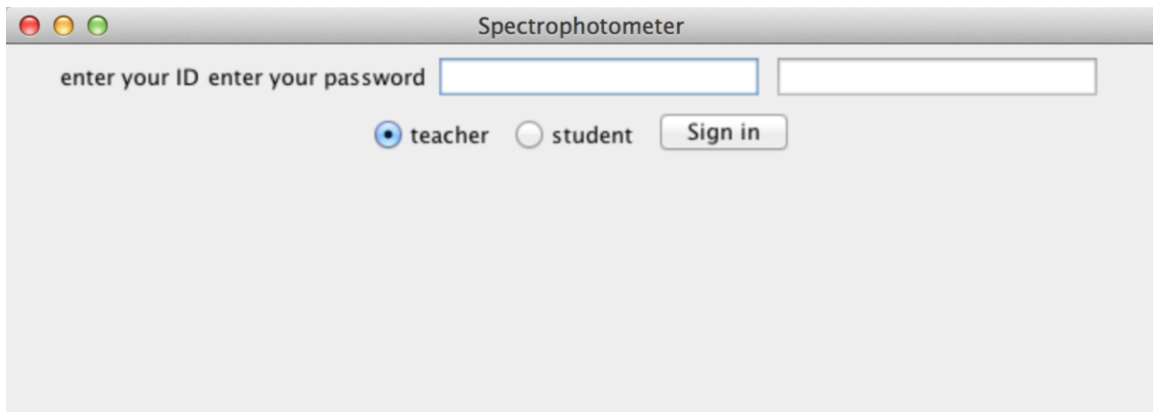
Figure-1

1.2 Student Interface
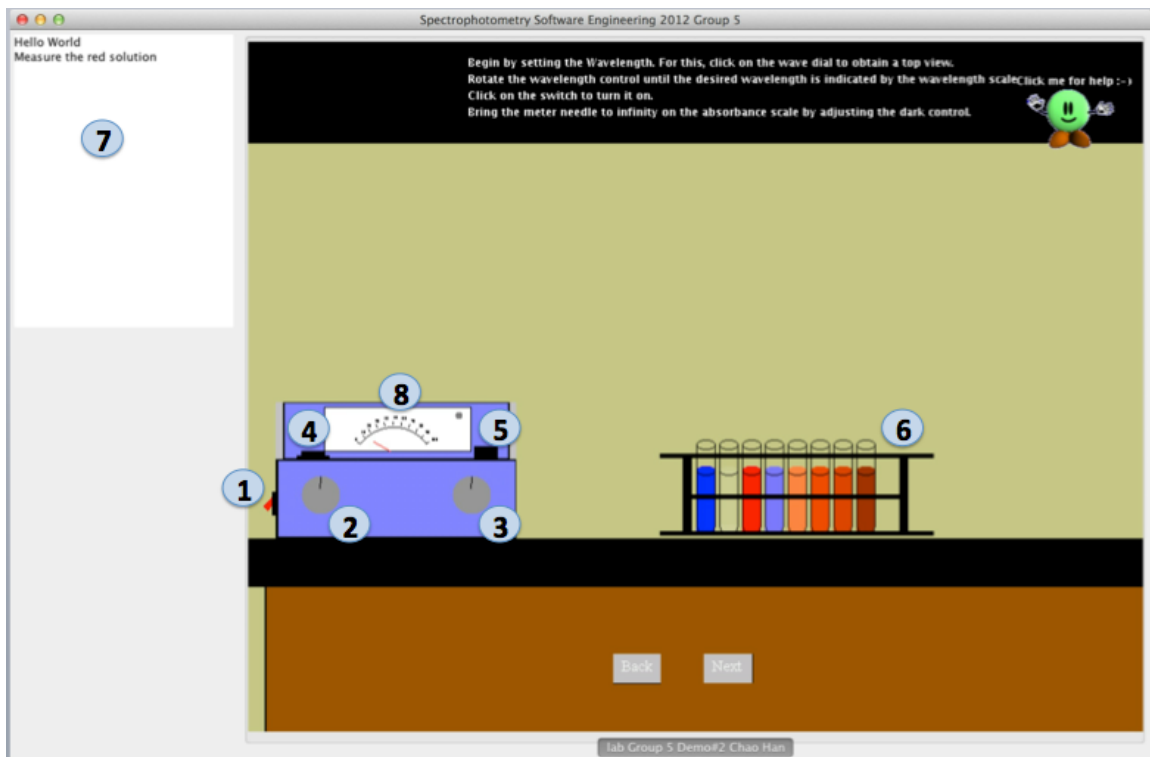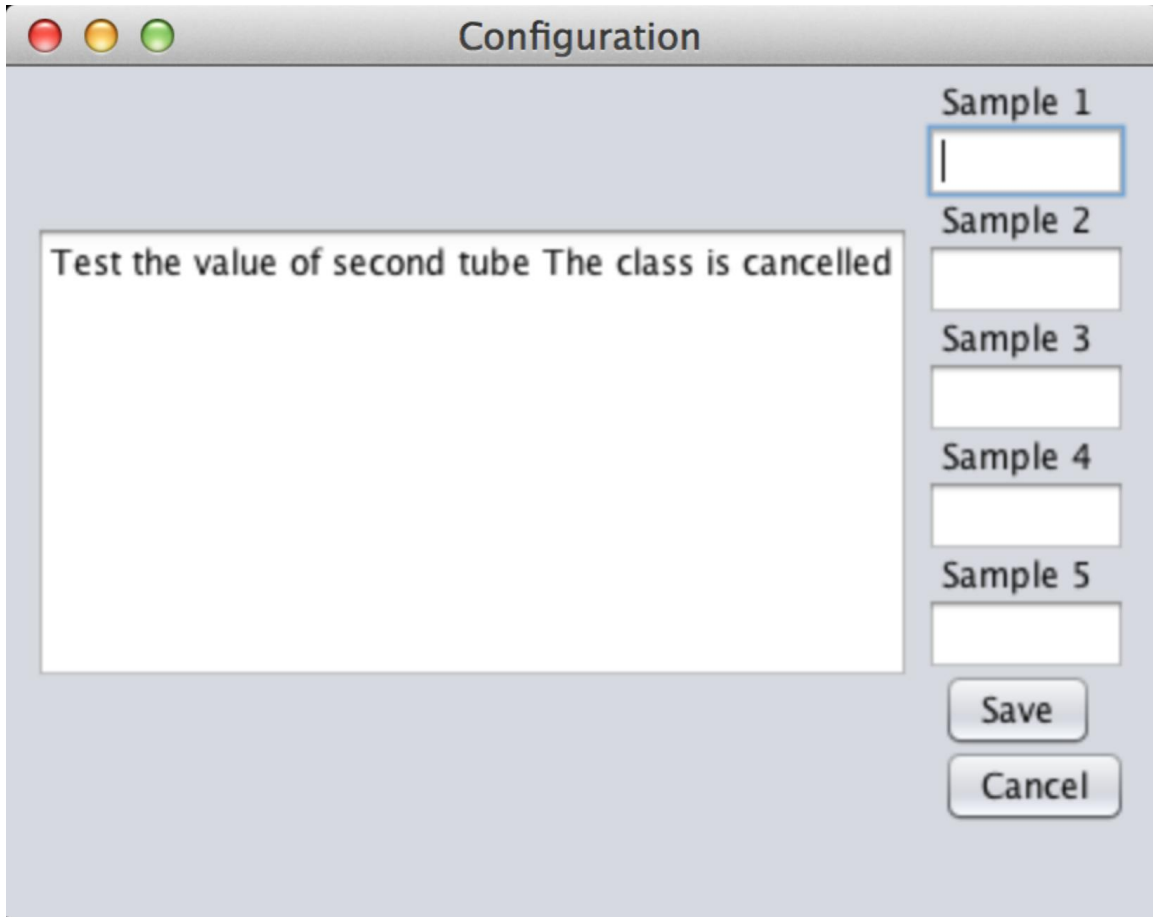
Figure-2

1.3 Teacher Interface

Figure-3

2.0 Student

2.1 Login

The student users can choose student check box and then type in their user name and password to login the system.

2.2 Switch on

When enter the student interface, student user should turn on the switch (① in Figure-2).

2.3 AdjustZero

After turn on the virtual device, the first step is to adjust zero. In order to do this, student should rotate the Zero Adjust Knob to make sure the needle in meter point to zero (② in Figure-2).

2.4 SelectWavelength

In this step, student user should rotate the Wavelength Knob (⑤ in Figure-2) to select proper wavelength. Notice that improper wavelength will lead to inaccurate result, for example, if the concentration of test tube material is very low, a too large wavelength will result in a smaller value.

2.5 OpenLid

Student user should click on sample lid (③ in Figure-2) to open it, so that they can insert test tube afterwards.

2.6 Select and Insert Tube

Student user should select and than click ok to insert the tube (⑥ in Figure-2). Notice that before insert the test sample tube, the blank tube(usually distilled water) should be inserted first and the blank adjust operation should be done as well.

2.7 Adjust Blank

The Blank Adjust Knob (⑤ in Figure-2) is used to help student get the accurate result.

2.8 GetTeacher Tips

Student can click on update button (⑦ in Figure-2) to get teacher tips from the text label.

3.0 Teacher

3.1 Update Information to Student

Teacher can set up notification in text label located at teacher interface.

3.2 set sample value

Teacher can set up sample value of each test tube in student interface. Each number corresponds to each tube.

4.0 FAQ

Q.No matter what I have done, there is no respond on this virtual machine. Why it does not work?

A. Make sure you turn on the machine.

Q. Why I always get incorrect result.

A. There are several conditions will result in incorrect results: 1) forget zero adjust operation. 2) Forgetblank adjust operation. 3) Error operation process. For instance, during the blank adjust process, the student insert the test tube instead of blank tube.

Q. I'm a teacher how can I send information to my students?

A. Just log in the system and type in your information in text label.

Q. Unfortunately I forget the password, how can I get it back?

A. Send e-mail to us, we'll help you.

Q. There are many mistakes in this demo, I can't run it on my computer, what should I do?

A. If your operating system is windows, make sure you install the Java and JDK correctly. Moreover you should configure your environment variables. If your operating system is Mac OS X, make sure you install Java and JDK correctly.

Q. Why I can't find test tube?

A. The test tubes are listed on the ⑥ in Figure-2. Remember 0 tube is the blank tube, which is used in blank adjust.