

## **General Note About My GUI Pictures**

In designs for previous CISC 323 projects, I've used many dialogs. After implementation, I found the program quite irritating to use; to get anything done at all, you ended up bouncing around between several screens, which slowed the process down. So I decided to try to avoid that with this design. The result uses one large, rather complicated frame, with small dialogs popping up for some operations. The advantage is fewer screen changes, with fewer button clicks, which should mean the operator can get things done faster. The disadvantage is kind of a "busy" main frame that serves multiple purposes.

In the context of usability, my design may increase training time but also increase speed of performance for trained users. I felt this was a reasonable trade-off, since I picture the program being used heavily by a fairly small set of trained operators.

Many other sorts of GUI designs were possible. You could have a small, simple main frame that lets you choose from a number of alternatives. Entering exposure data would be just one of these alternatives, and would take you to a separate dialog. This would be OK too.

One more note: I have included only one button for creating a researcher report. The requirements say that we should be able to create two kinds of researcher reports: one for all researchers, and one for only those researchers who must be recalled. I realized too late that my specifications for the database do not allow this. The database remembers an accumulated exposure number for each researcher, but not the exposure for the latest orbit. Instead of adding to the complexity of the database, I'm simplifying by getting rid of the second kind of researcher report. If student designs included such a report, that's OK.

## Main Frame

SCorTrap		
researcher name: <input type="text"/>		<b>Other Functions:</b>  <input type="button" value="change my password"/>  <input type="button" value="log me out"/>  <input type="button" value="create researcher report"/>  <input type="button" value="create operator report"/>  <input type="button" value="add new operator"/>  <input type="button" value="delete operator"/>  <input type="button" value="change recall number"/>  <input type="button" value="exit program"/>
<b>Other Researcher Information</b>  <input type="button" value="researcher is on the ship"/>  <input type="button" value="researcher is on the planet"/>  <input type="button" value="researcher has recovered"/>	<b>Enter Exposure Data:</b>  time (PODS): <input type="text"/>  pressure (PFs): <input type="text"/>  temperature (TFs): <input type="text"/>  O2 content (%): <input type="text"/>  H2O content (%): <input type="text"/>  O3 content (%): <input type="text"/>  body mass (MFs): <input type="text"/>  <input type="button" value="submit"/> <input type="button" value="clear"/>	

This frame will be visible on the screen at all times, sometimes with dialogs in front of it. If the current operator is not an administrator, the "add operator", "delete operator" and "change recall number" buttons will be disabled.

I've used lines to separate different areas of the screen; these areas will obviously be separate panels. In your implementation for Assignment 4, those lines don't have to show up on the screen. I will post simple instructions for putting borders around panels if you'd like to include the lines. It's also OK to leave them out. Another option for showing a separation between different parts of the screen is to use different colours for each panel.

## Log-In Dialog

Please log in to SCorTrap

name:

password:

This dialog will appear in front of the main frame at the start of the program, ensuring that no one can use the program without first logging in. It will reappear after an operator logs out.

In a real program, we wouldn't want passwords to be echoed on the screen as they are typed. You can accomplish this by making the password field a `JPasswordField`, which is just like a `JTextField` except that it shows asterisks ("\*") instead of the characters that were typed. This isn't a requirement; it's OK to echo passwords.

## New Operator Dialog

Please enter information about new operator

name:

password:

## Exposure Information Pop-Up

### Exposure Data For Researcher Janeway

total exposure to date: 805.47 BTUs

estimated exposure after next orbit: 917.53 BTUs

researcher may remain on planet

OK

### Exposure Data For Researcher Picard

total exposure to date: 1262.01 BTUs

estimated exposure after next orbit: 1389.00 BTUs

**RESEARCHER SHOULD BE RECALLED!**

OK

I expect to implement this using a JOptionPane, but I wanted to draw pictures to make the format clear and save myself words on my activity diagram. The above are examples of what the pop-up will look like for a researcher that should be recalled and one that should not be recalled.