

COMI 2510 Advanced Programming and Design

Lesson 4: GUI Applications and Events

L a b

1. Complete this on your own, then review the videos and code in the class website: Recall the Ship, CruiseShip, CargoShip, and NavalShip classes from the Lesson 3 lab.

Add a graphical user interface as a front-end for the program that allows the user to select a ship type and enter the appropriate information for the ship.

The interface should start looking something like this:

Ship Builder

Ship Type

☐ Ship

☐ Cruise Ship

☐ Cargo Ship

☐ Naval Ship

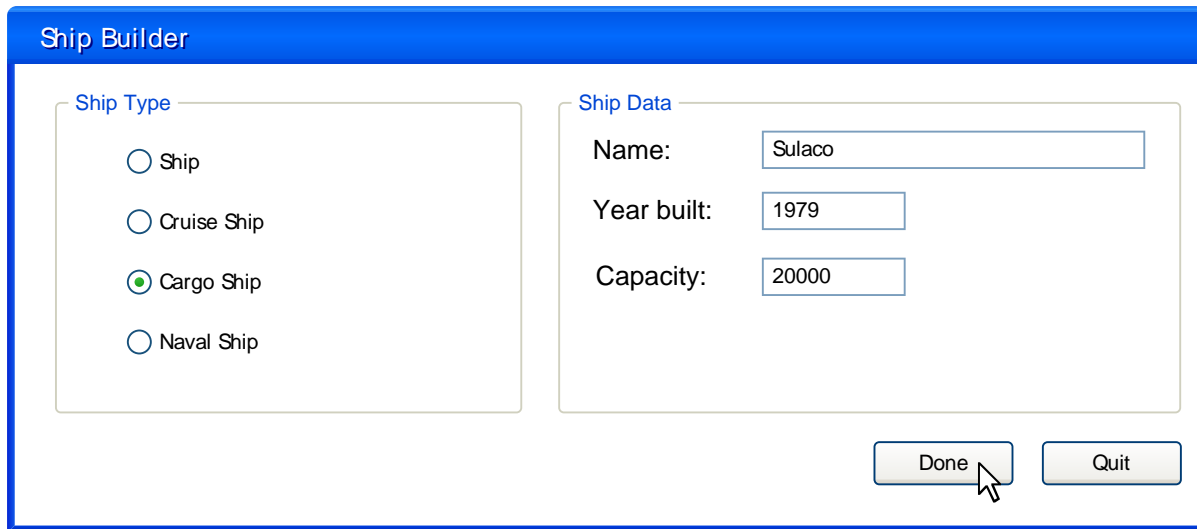
Name:

Year built:

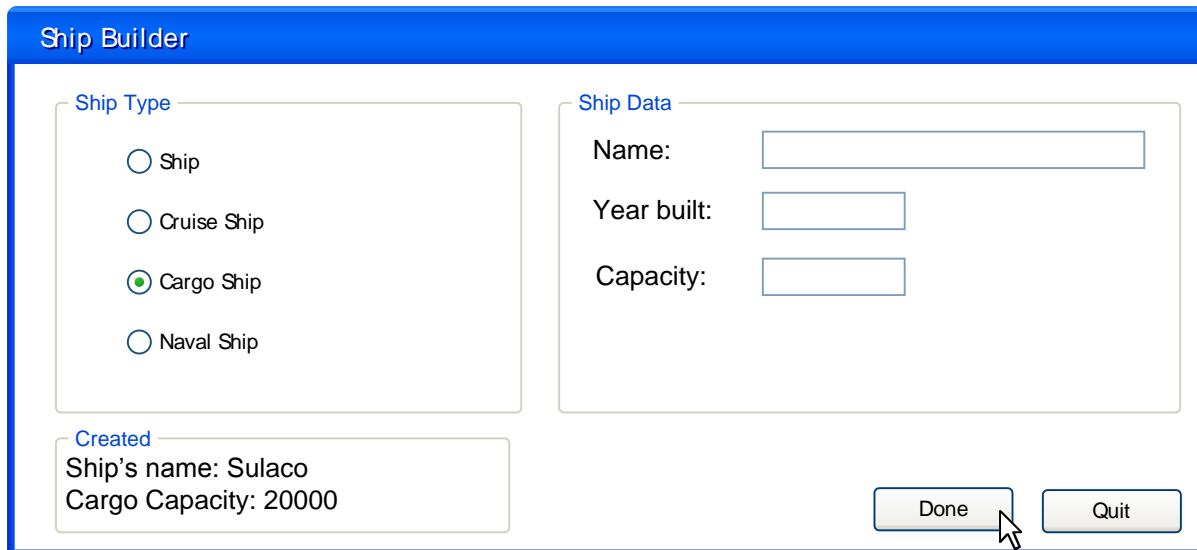
Quit

If the user changes the Ship Type by clicking a radio button, the Ship Data section of the interface should change. For example, here is the Ship Data section for the Cruise Ship radio button:

When the user clicks the Done button, one of the two following actions should take place. For complete information, the user should see this (before/after):



The 'Ship Builder' window has a blue title bar. It contains two main sections: 'Ship Type' on the left and 'Ship Data' on the right. The 'Ship Type' section has four radio buttons: 'Ship', 'Cruise Ship', 'Cargo Ship' (which is selected), and 'Naval Ship'. The 'Ship Data' section has three text input fields: 'Name' (containing 'Sulaco'), 'Year built' (containing '1979'), and 'Capacity' (containing '20000'). At the bottom right, there are two buttons: 'Done' and 'Quit'. A mouse cursor is pointing at the 'Done' button.



The 'Ship Builder' window is shown after clicking 'Done'. The 'Ship Type' section remains the same. The 'Ship Data' section now has three empty text input fields for 'Name', 'Year built', and 'Capacity'. A new 'Created' section has appeared at the bottom left, displaying 'Ship's name: Sulaco' and 'Cargo Capacity: 20000'. The 'Done' and 'Quit' buttons are still at the bottom right, with the mouse cursor now pointing at the 'Quit' button.

For incomplete information, the user should see an error box:



An error dialog box with a blue title bar labeled 'Error'. The message inside says 'One or more required fields is blank.' At the bottom center is an 'OK' button.

Size

☒ Large - \$11.99 + \$1.50 / reg topping + \$2.00 / prem topping

☐ X-Large - \$13.99 + \$1.50 / reg topping + \$2.00 / prem topping

☐ Small - \$7.99 + \$1.00 / reg topping + \$1.50 / prem topping

Remove...

☐ No Cheese ☐ No Sauce

Cooking Instructions

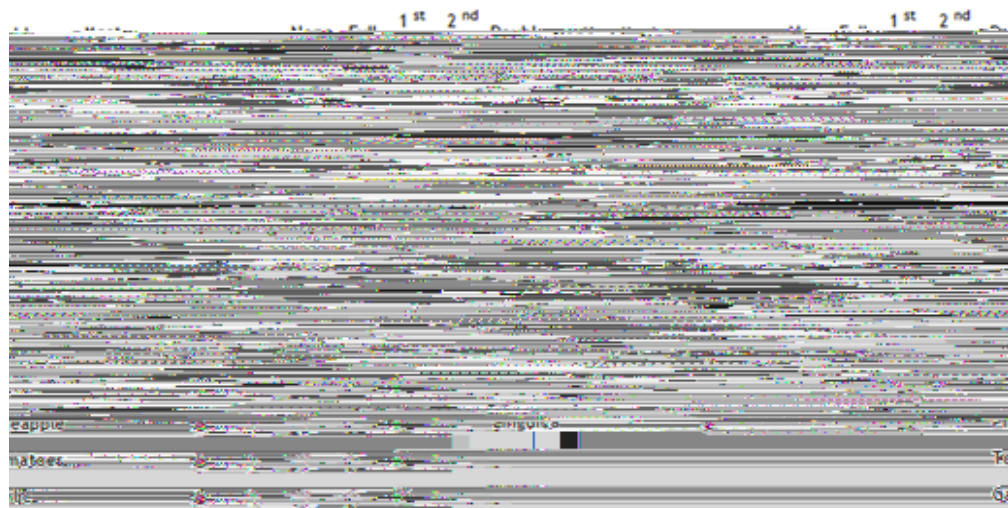
☐ Cook Lite ☐ Well Done

Cooking Instructions

☐ Cook Lite ☐ Well Done

☐ Extra Sauce ☐ Light Cheese

☐ Light Sauce



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