Chapter 2: Dialog Boxes

CS 2070

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- A dialog box is a small graphical window that displays a message to the user or requests input.
- A variety of dialog boxes can be displayed using the JOptionPane class.
- Two of the dialog boxes are:
  - Message Dialog: a dialog box that displays a message.
  - Input Dialog: a dialog box that prompts the user for input.
- JOptionPane is found in **javax.swing.JOptionPane**. Use NetBean's Fix Imports tool to craft the import line.

The JOptionPane Class

There are two methods in JOptionPane that you should know about:

- JOptionPane.showMessageDialog will display messages to the screen.
- JOptionPane.showInputDialog will prompt the user to input data into a String object.

showMessageDialog

There are two arguments to JOptionPane.showMessageDialog:

- A reference to another GUI window. Since we aren't using one, this argument should be kept as "null".
- The message to display in the window.

showMessageDialog

Try it!

```
JOptionPane.showMessageDialog(null, "Hello, CS 2070!");
```

That's it. Click "OK" to make the message box go away.

showInputDialog

There's only one argument JOptionPane.showInputDialog:

- The message which is used as a prompt for the user.

showInputDialog

Try it!

```
String name =
    JOptionPane.showInputDialog("Please enter your name.");
JOptionPane.showMessageDialog(null,
    "Thank you. Nice to meet you, "+name+".");
```

These lines can be long because of the long method names.

showInputDialog: Take note

- The method will only return a String object.
- If the user clicks “Cancel”, the method will instead return a null String reference.
  - Since we haven’t covered “if” statements yet, we are not prepared to cover this circumstance.

Converting Strings to other types.

- As we said on the last side, the method will only return the user's data as a String object.
- If we wish for the user to enter a numerical value, we will then have to **parse** the String object into another data type.
  - For example, The string "3.14" can be converted to a **double** type 3.14.

Parse Methods

- Each of the numerical primitives have a **wrapper** class which mimics that primitve.
- The **int** primitive has a wrapper class called **Integer**.
  - The method in **Integer** to parse a string into an **int** is called **Integer.parseInt**.
- The **double** primitive has a wrapper class called **Double**.
  - The method in **Double** to parse a string into an **double** is called **Double.parseDouble**.
- The letter case in each of the above statements is important to remember.

Try it!

```
String ageStr =
    JOptionPane.showInputDialog("Please enter your age.");

int age = Integer.parseInt(ageStr);
int agePlusFive = age + 5;

JOptionPane.showMessageDialog(null,
    "Your age in five years will be "+agePlusFive+".");
```