Swing and JOptionPane

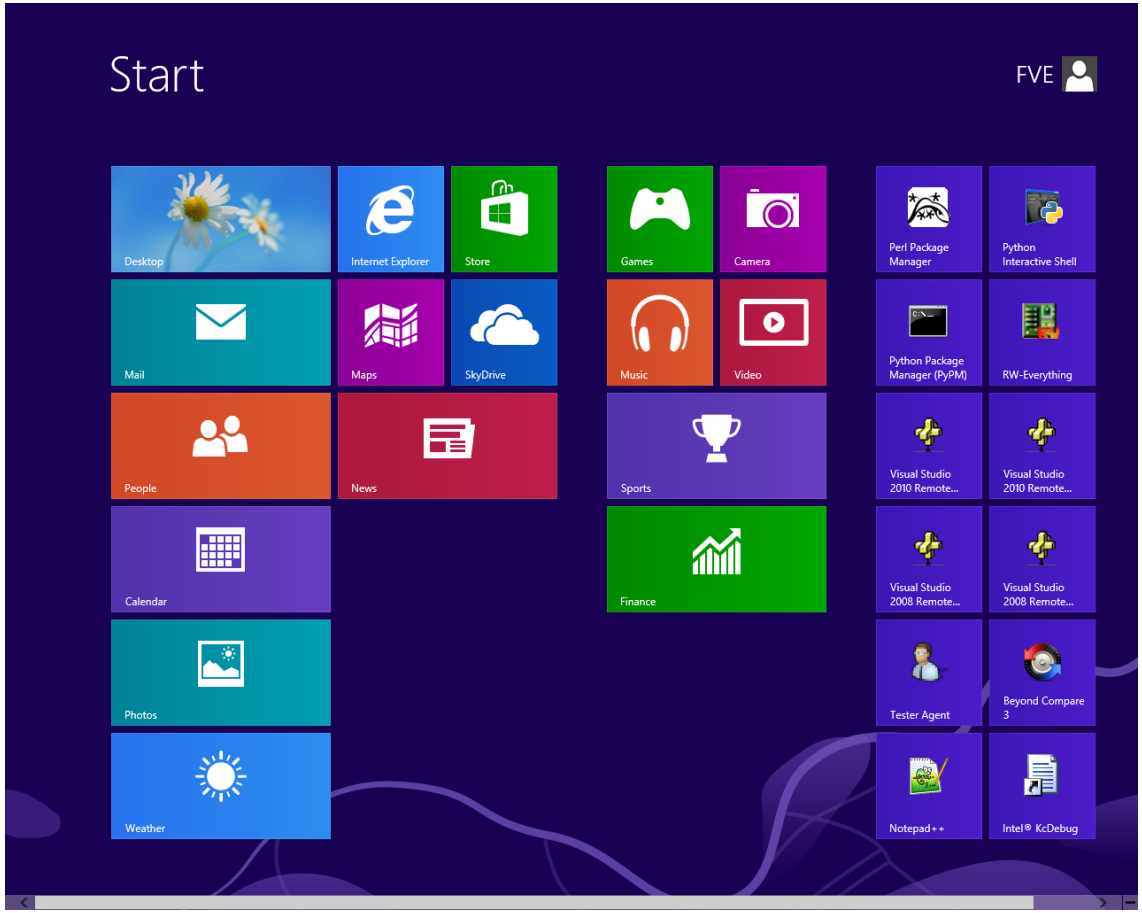
Using Graphical User Interface (GUI) Components

Produced by: Dr. Siobhán Drohan
Mr. Colm Dunphy
Mr. Diarmuid O'Connor

Waterford Institute *of* Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

Department of Computing and Mathematics
http://www.wit.ie/

Graphical User Interface (GUI)



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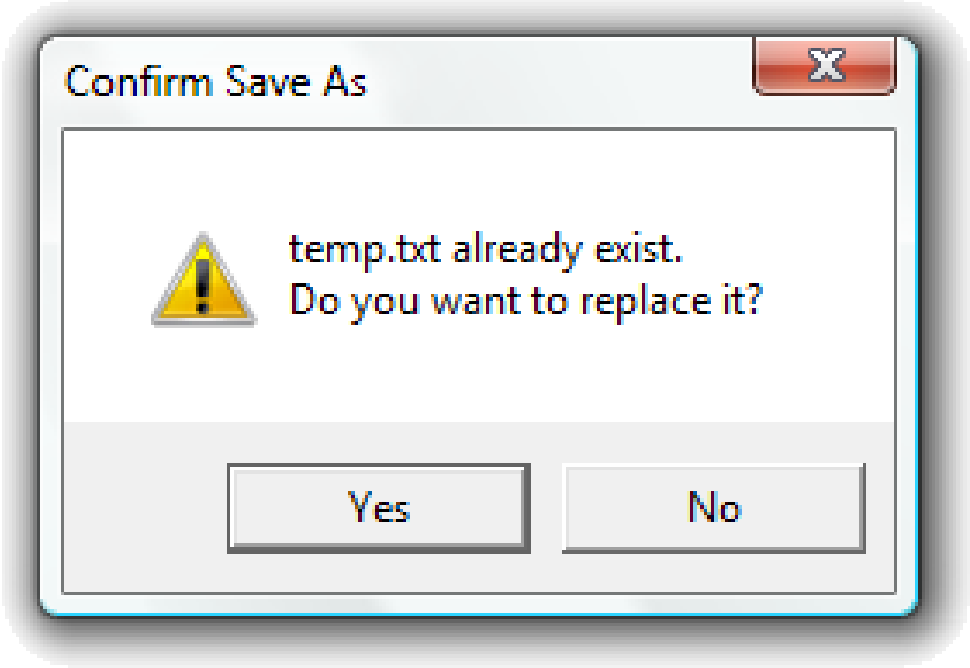
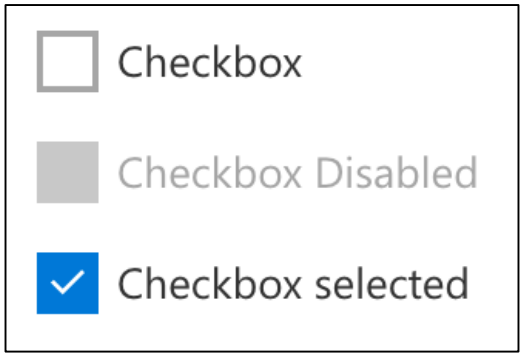


Topics list

- Swing
- JOptionPane
- JOptionPane methods

What is Swing?

- **Swing** is a set of program components for **Java** programmers that allow you to create graphical user interface (GUI) components



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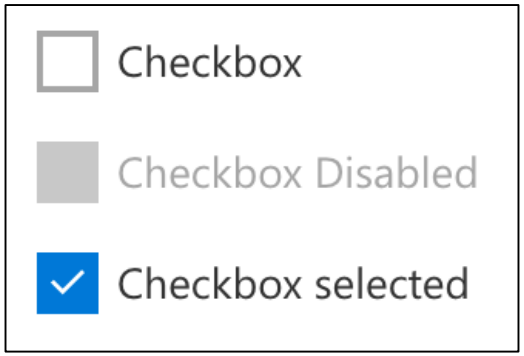

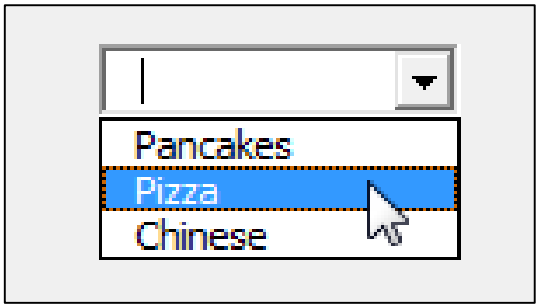

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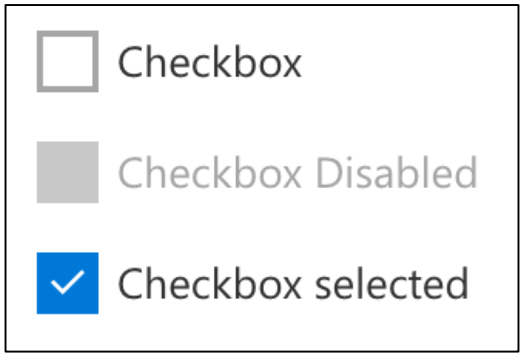

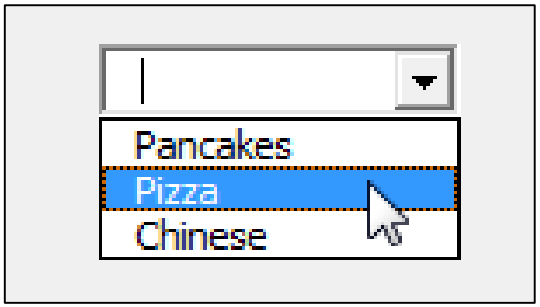

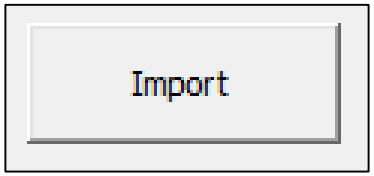

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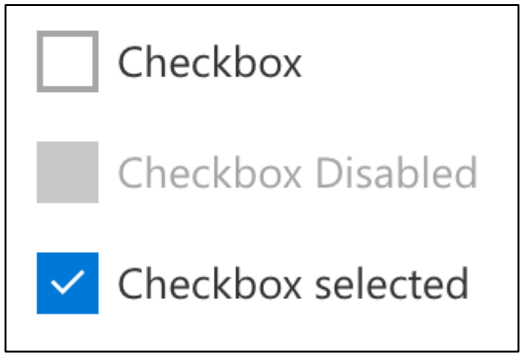

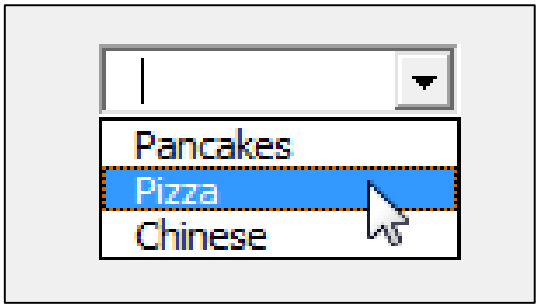

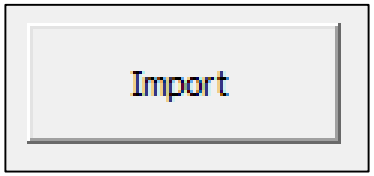

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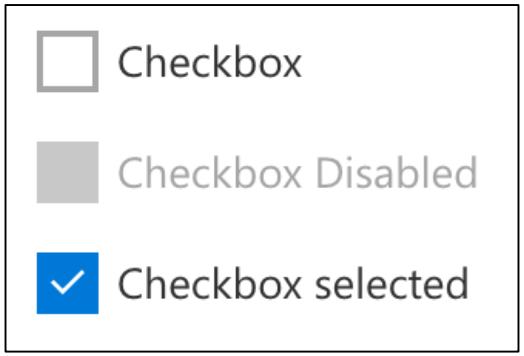

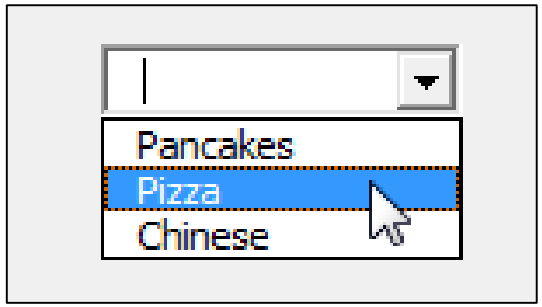

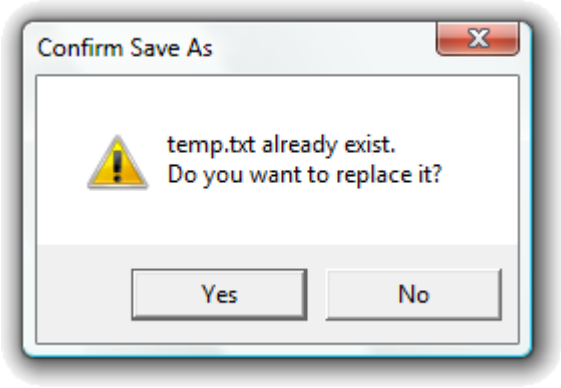

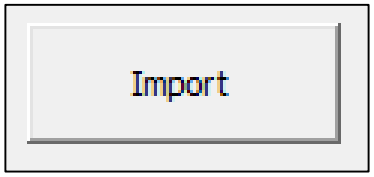

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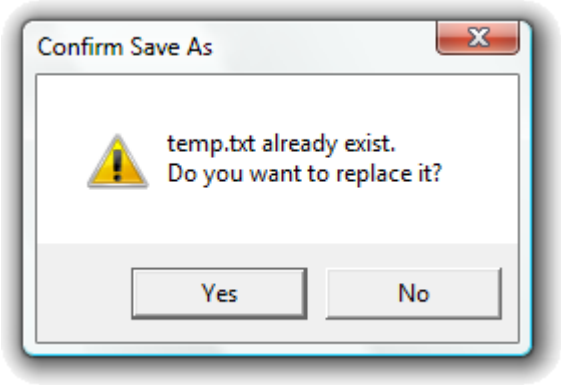
In this module, we are only interested in working with dialog /message boxes.



Using Swing

- We make **Swing** components available to us by importing the Swing components at the start of the program.

```
import javax.swing.*;
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```

However, this imports **all** the Swing components (and there are a lot!)

Using Swing

- We make **Swing** components available to us by importing the Swing components at the start of the program.

```
import javax.swing.JOptionPane;
```

As we only plan on using JOptionPane, we can just import that Swing component.

Using JOptionPane with Swing

- Having imported **JOptionPane** from **Swing**, we can use these methods:

  showMessageDialog

  showInputDialog

  showConfirmDialog

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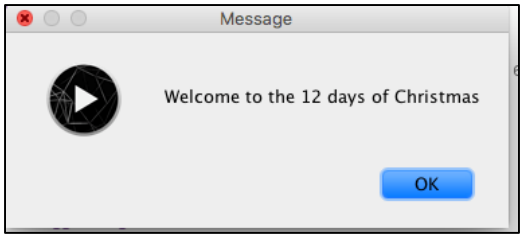
  - Simple message output



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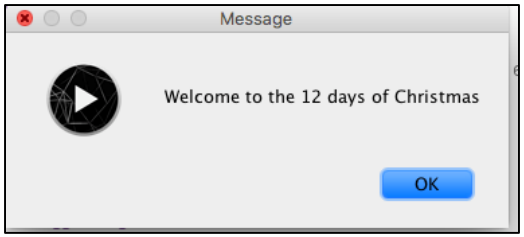
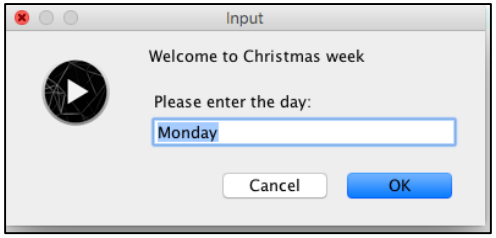


  showInputDialog

  - Allows user to type in (string) input



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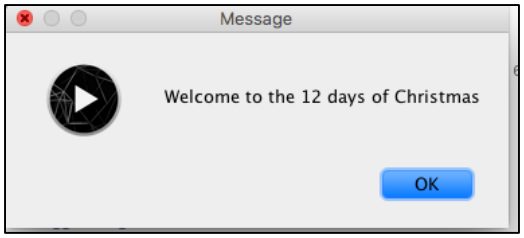

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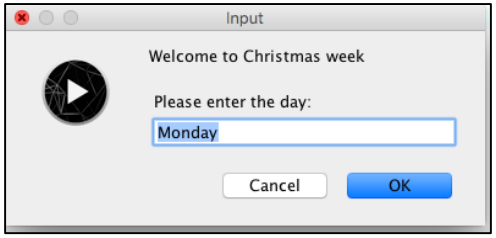
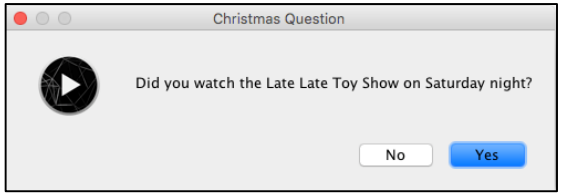
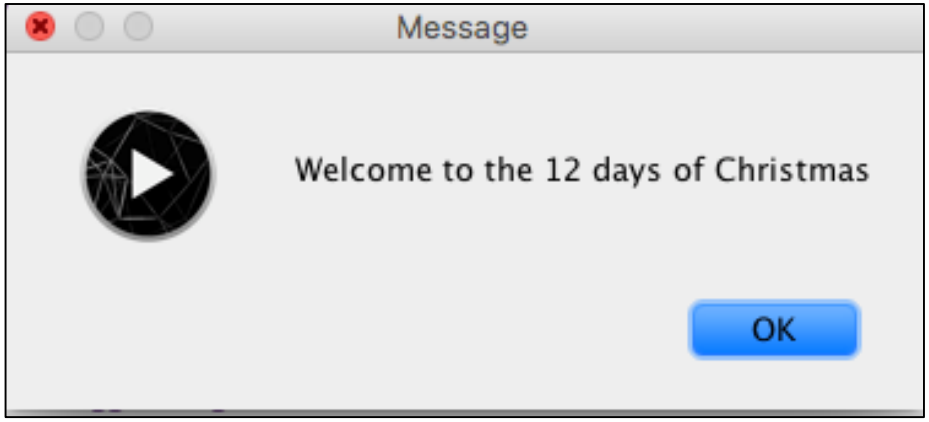


showConfirmDialog

- Allow the user to choose an option



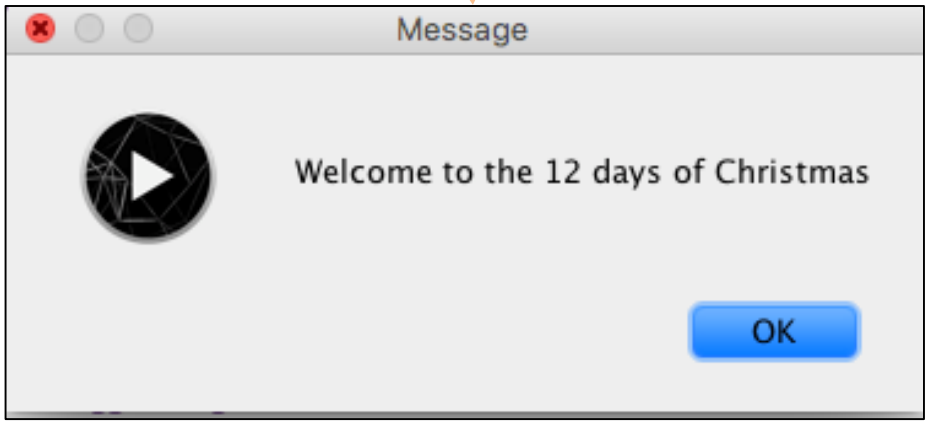
showMessageDialog - Simple Message output



https://docs.oracle.com/javase/tutorial/uiswing/components/dialog.html

showMessageDialog - Simple Message output

```
JOptionPane.showMessageDialog(null,
                "Welcome to the 12 days of Christmas");
```



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Text in Dialog box

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showMessageDialog - Simple Message output

Parent Component – for our purposes, **null** will work as first parameter.

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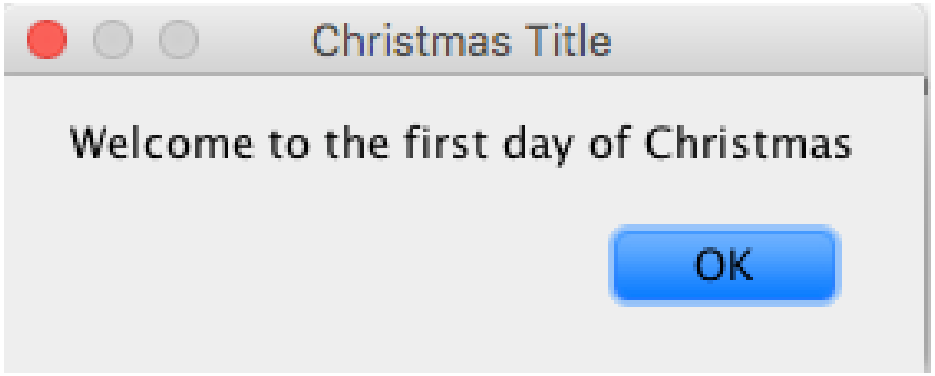
showMessageDialog - Message output with label



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showMessageDialog - Message output with label

```
JOptionPane.showMessageDialog(null,
                "Welcome to the first day of Christmas”
                “Christmas Title”,
                JOptionPane.PLAIN_MESSAGE);
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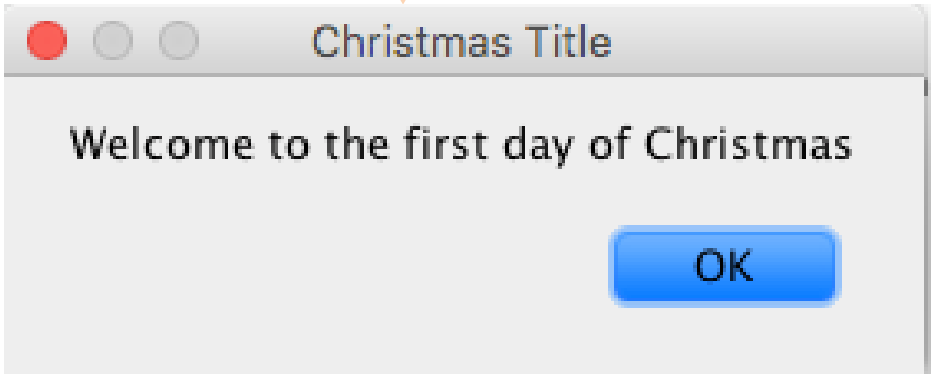

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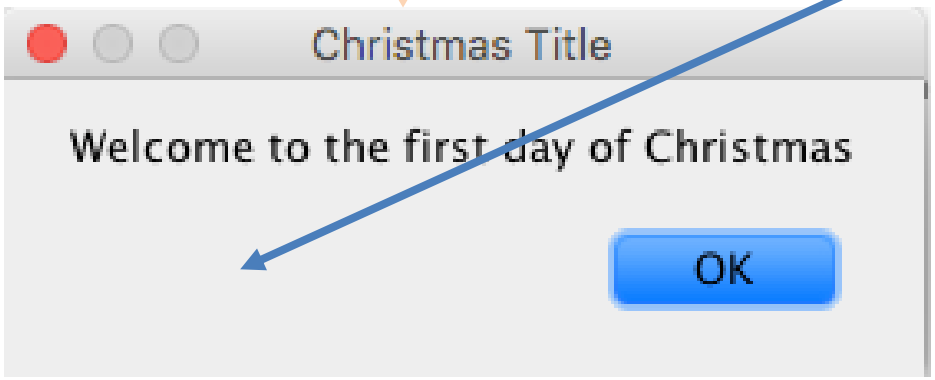

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Text for title of box

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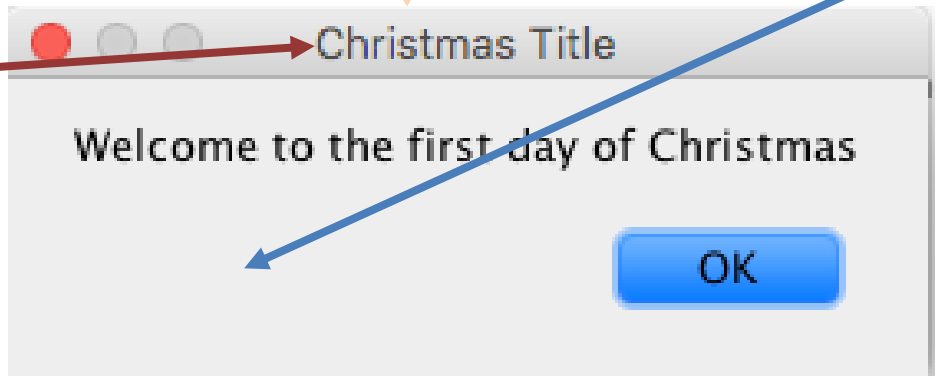

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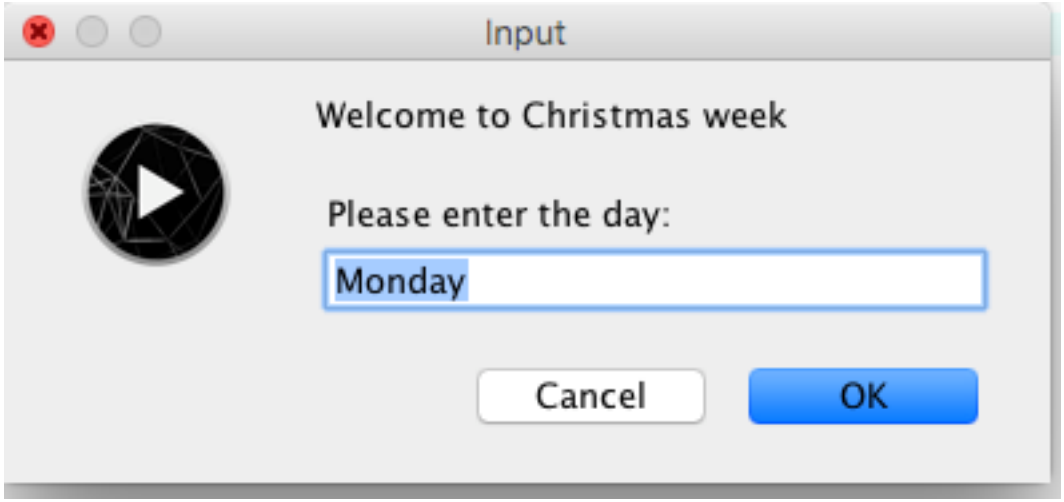

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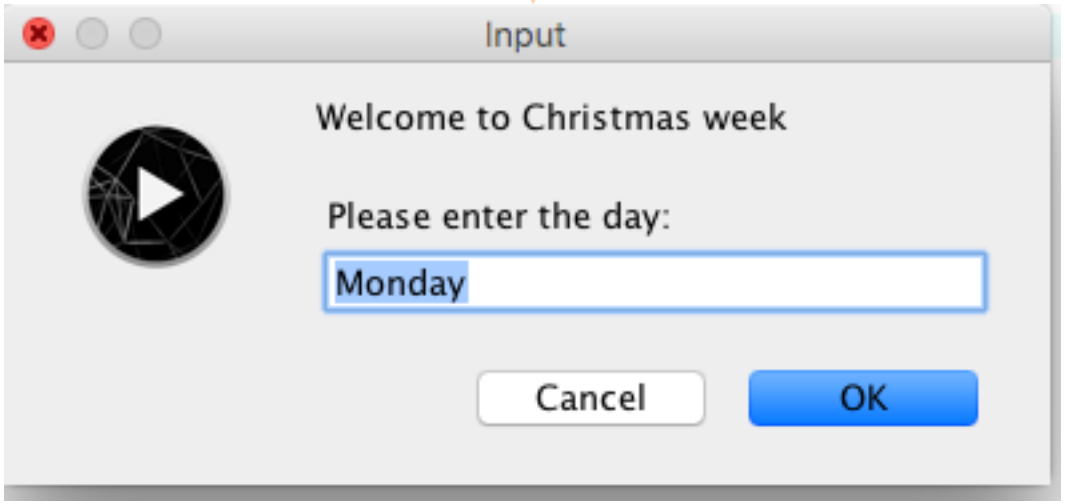
showInputDialog - Message output with label

```
String day = JOptionPane.showInputDialog(
                "Welcome to Christmas week\n\n " +
                "Please enter the day: ",
                "Monday"););
```



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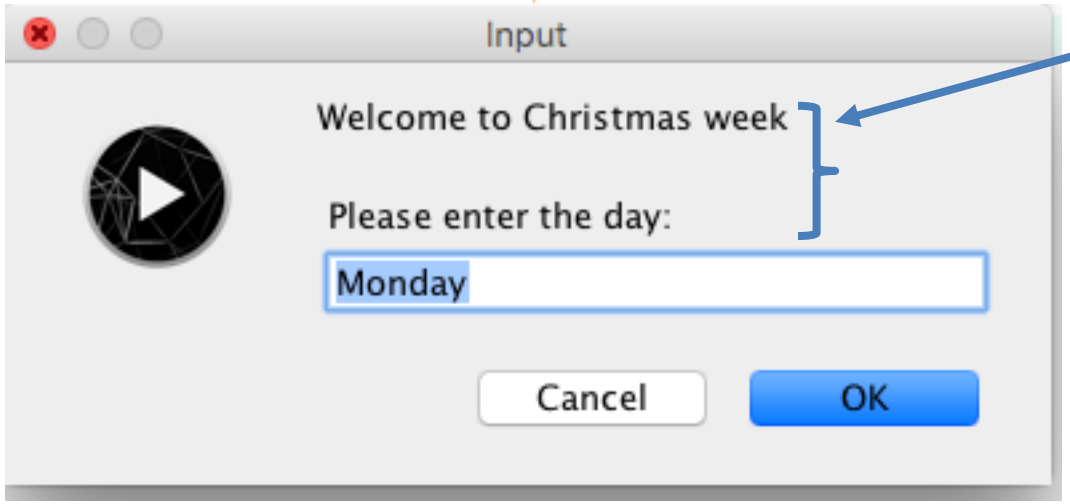

Prompt text

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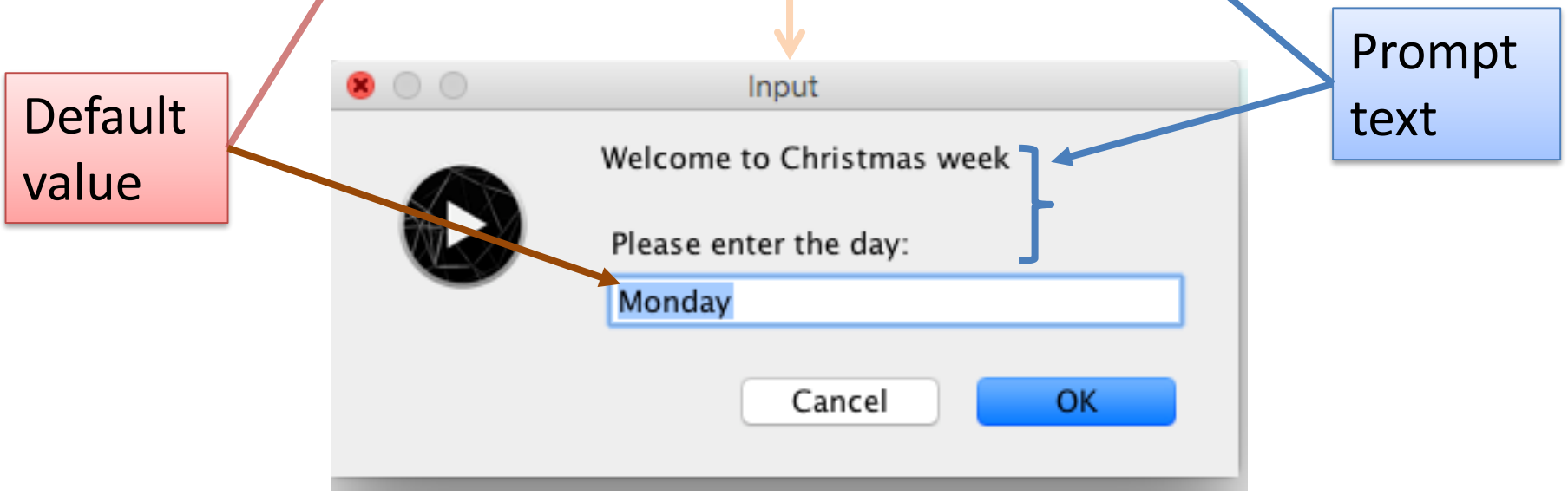

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Reading in numbers via JOptionPane

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- Solution
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Reading in numbers via JOptionPane

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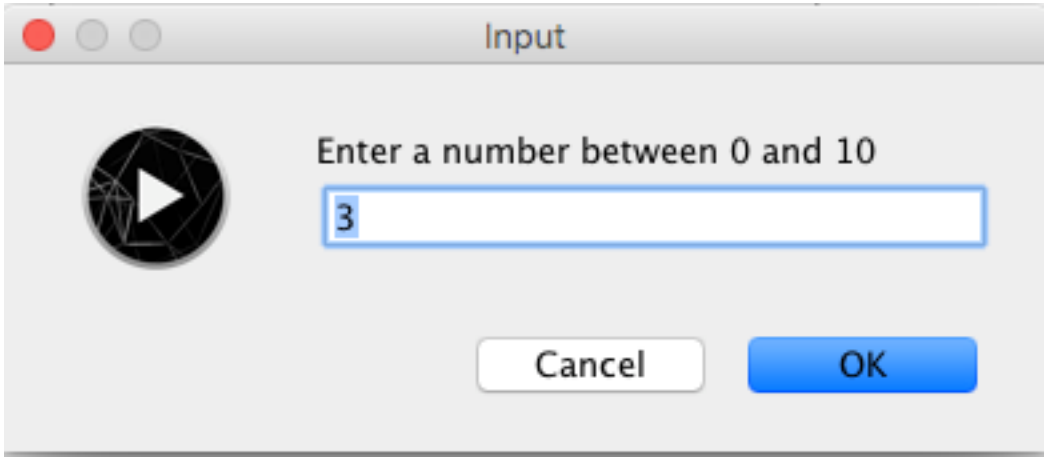
  - showInputDialog returns a String
  - So if you type 22, it is the string “22”, so cannot use it as a number
- Solution
  - Use a predefined method to convert it (or any such string) to a number.

Will print the number 25.

```
int number = Integer.parseInt("22");
println (number + 3);
```

Using parseInt with input



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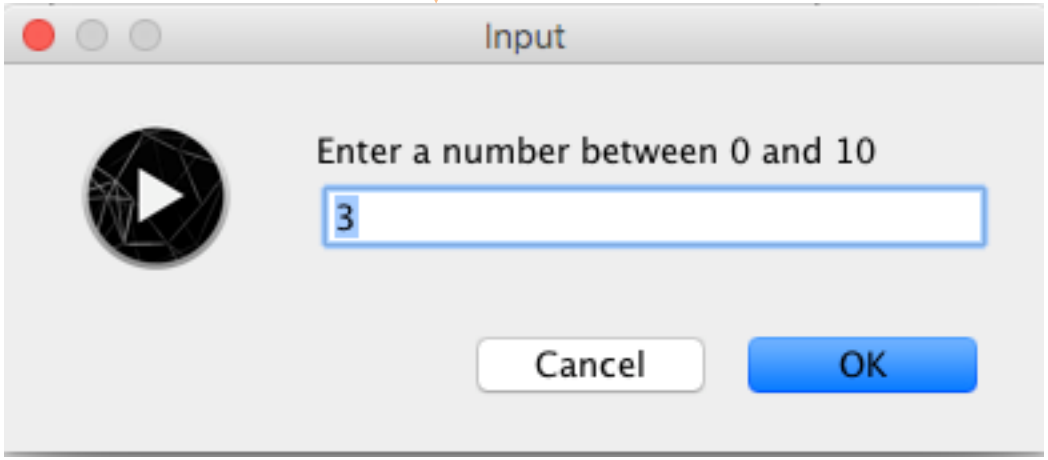
Using parseInt with input

```
int num = Integer.parseInt  (JOptionPane.showInputDialog(
                    "Enter a number between 0 and 10", "3" ) );
```



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Using parseInt with input

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int num = Integer.parseInt  (JOptionPane.showInputDialog(
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```
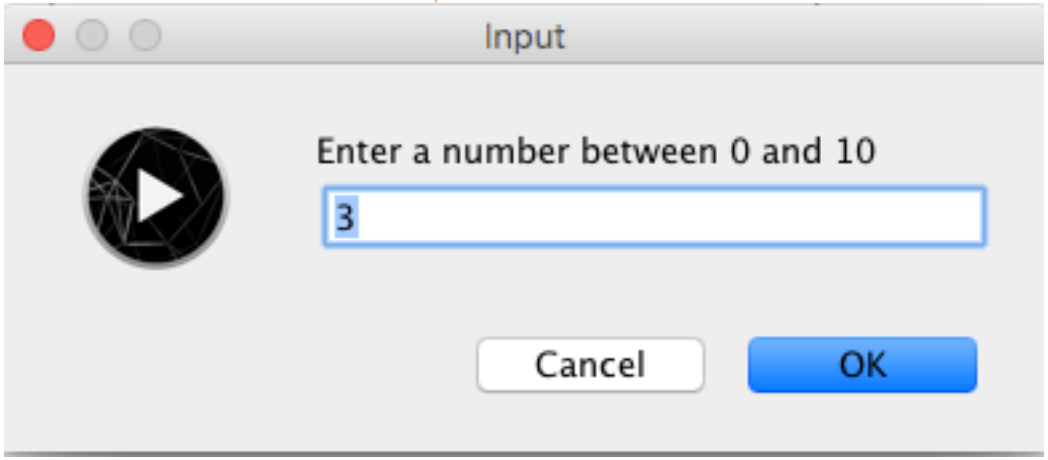

This converts the input String to an Integer and stores it in **num.**



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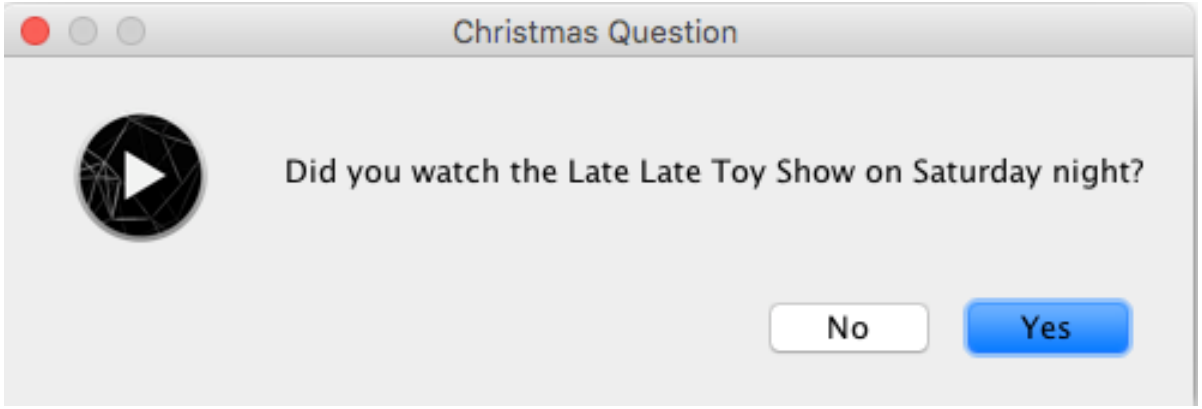
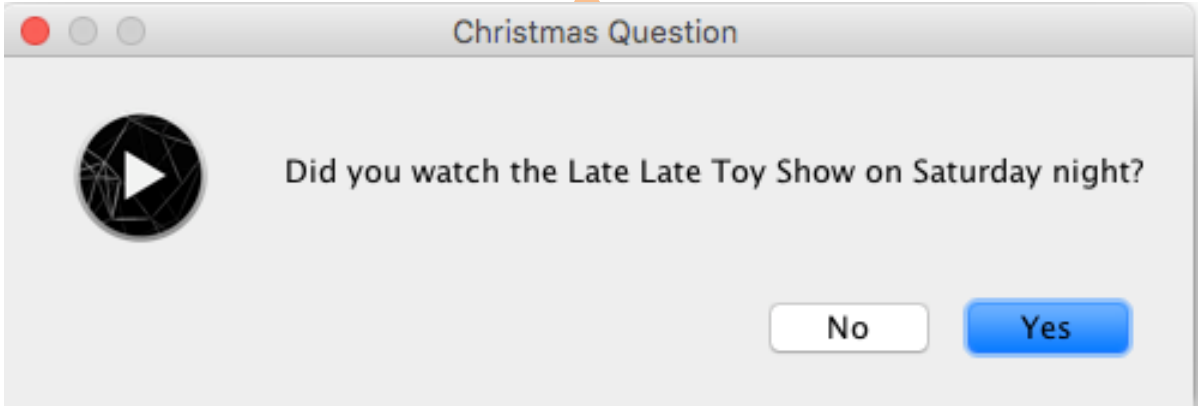
showConfirmDialog - Using the Yes/No option



https://docs.oracle.com/javase/tutorial/uiswing/components/dialog.html and RTE

showConfirmDialog - Using the Yes/No option

```
int reply = JOptionPane.showConfirmDialog(null,
            “Did you watch the Late Late Toy Show on Saturday night?",
           "Christmas Question",
           JOptionPane.YES_NO_OPTION);
```



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showConfirmDialog - Using the Yes/No option

```
int reply = JOptionPane.showConfirmDialog(null,
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```
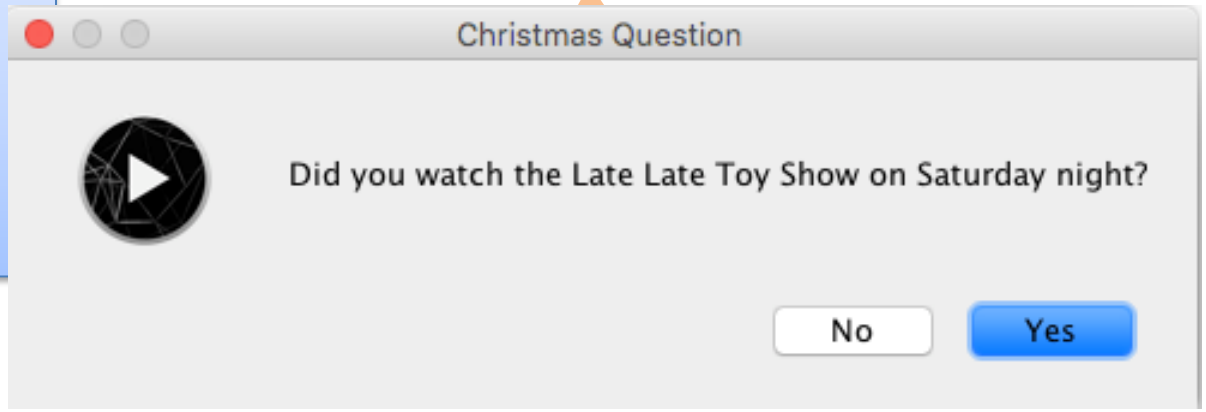

If you press ‘Yes’, JOptionPane.YES_OPTION will be returned, JOptionPane.NO_OPTION otherwise (reply will be assigned this value)



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Questions?