Swing and JOptionPane

Using Graphical User Interface (GUI) Components

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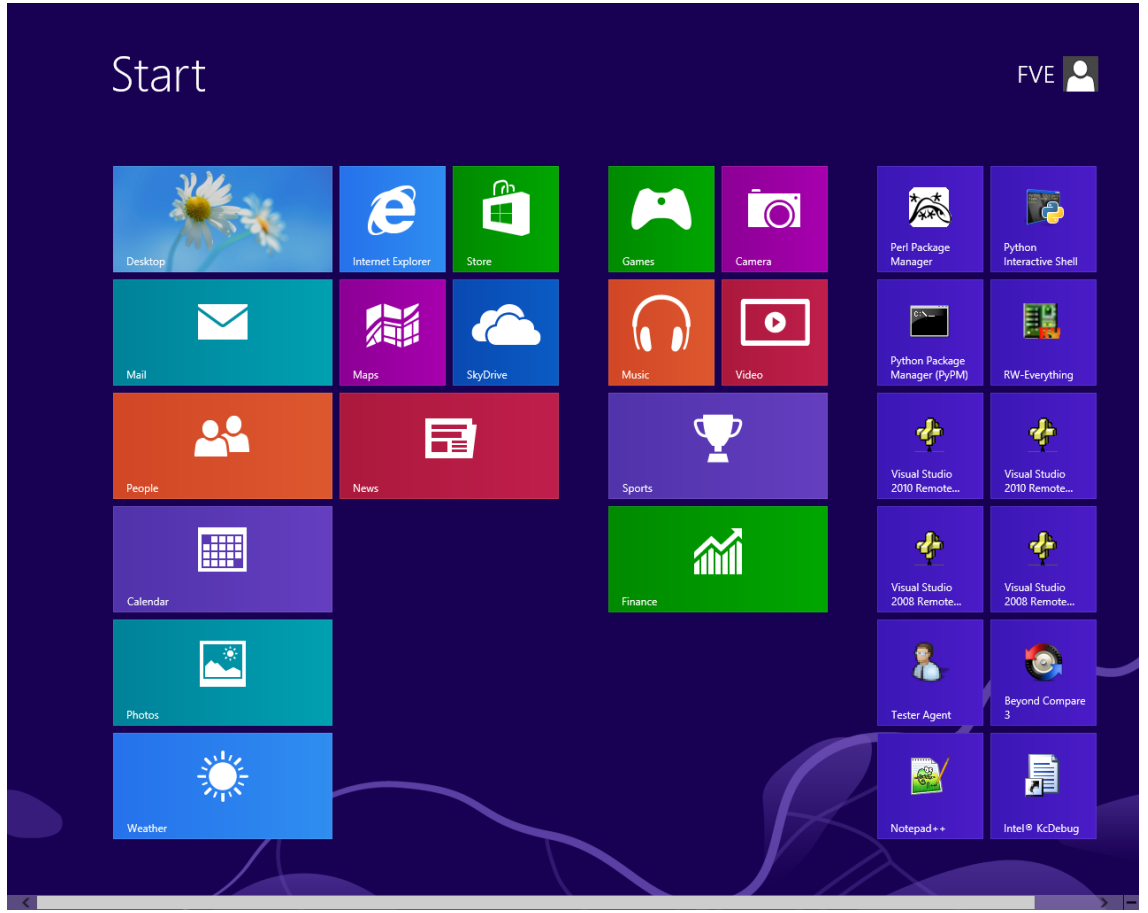
Graphical User Interface (GUI)



Graphical User Interface (GUI)

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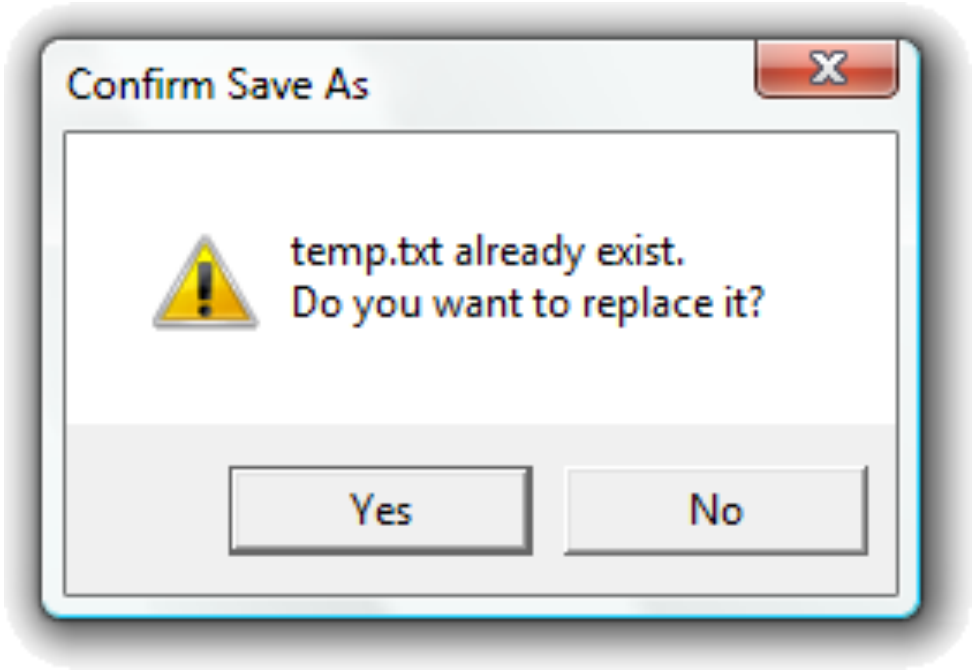


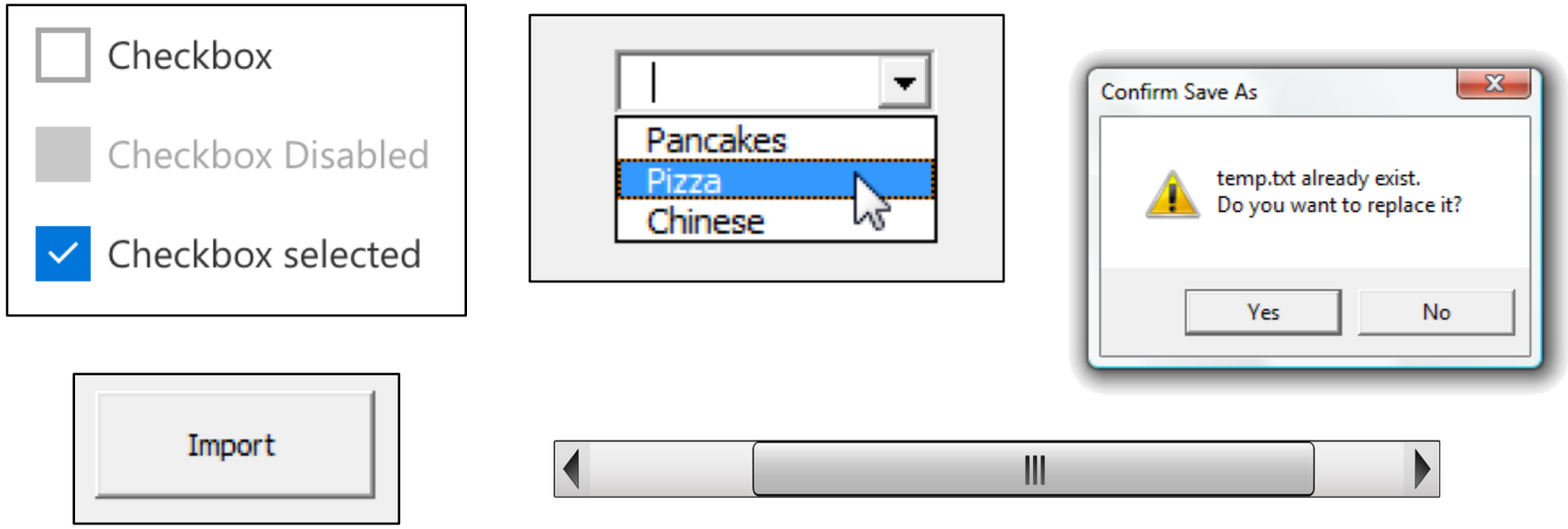
Topics list

Swing

- JOptionPane
  - JOptionPane methods
    - show**Message**Dialog()
    - show**Input**Dialog()
    - show**Confirm**Dialog()

What is Swing?

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



What is Swing?

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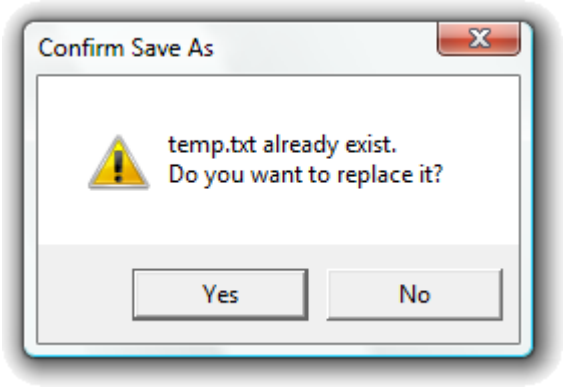
This module:

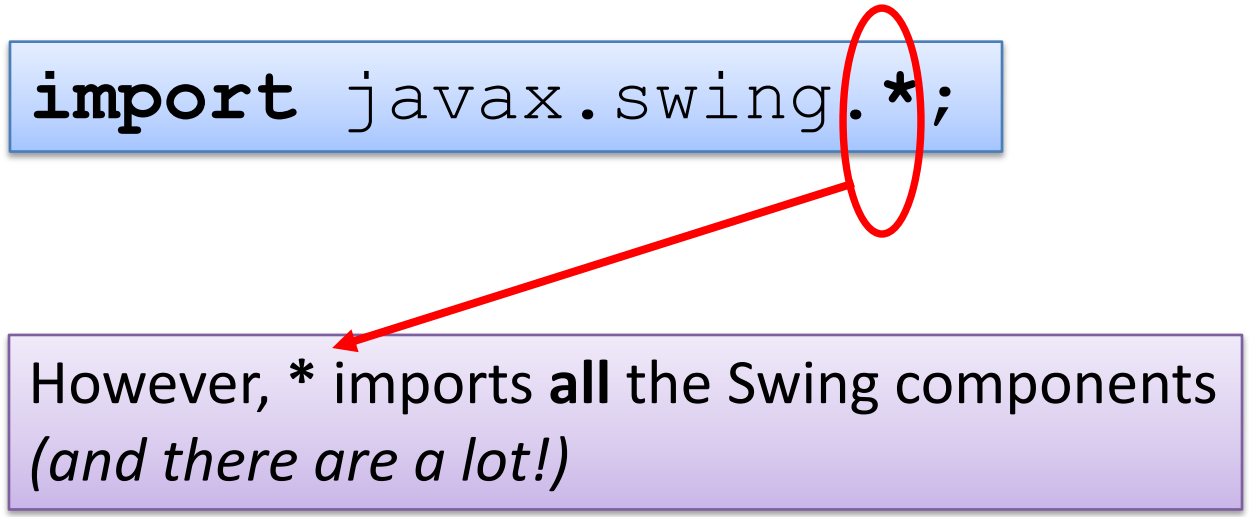
dialog /message boxes only



Using Swing – **import** the **library**

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

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



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

Using Swing – **import** specifics

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

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

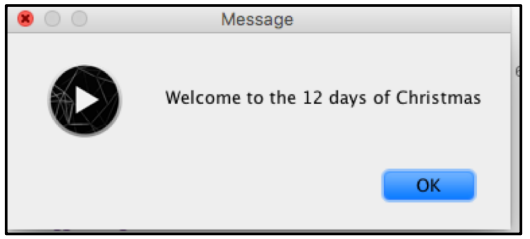
As we only plan on using **JOptionPane**,
we can just import that specific Swing component
instead of the entire library.

Using **JOptionPane** with Swing

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

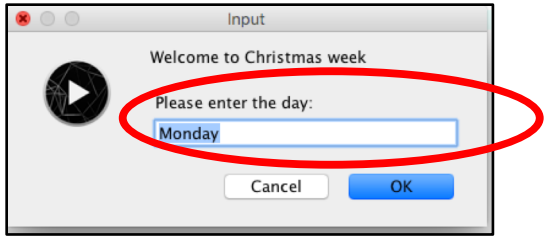
show**Message**Dialog()

- Simple message output



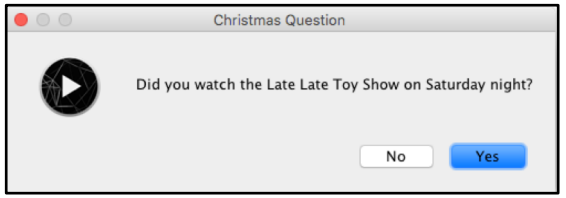
show**Input**Dialog()

- Allows user to type in (string) input



show**Confirm**Dialog()

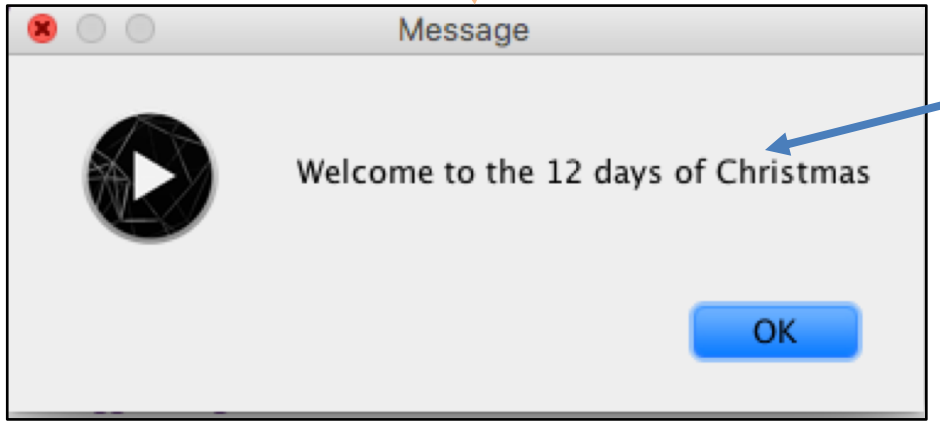
- Allow the user to choose an option



show**Message**Dialog - Simple Message output

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

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



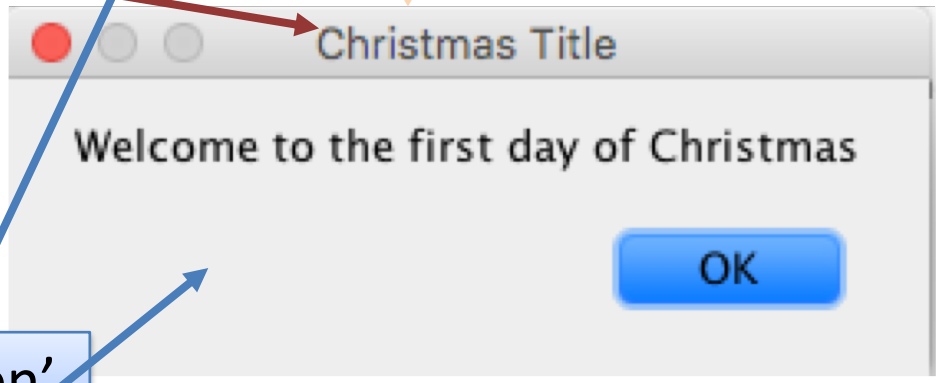
Text in Dialog box

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

show**Message**Dialog - Message output with **label**

```
JOptionPane.show Message Dialog (
      null,
      "Welcome to the first day of Christmas",
      "Christmas Title",
      JOptionPane.PLAIN_MESSAGE);
```

Text for **title** of box

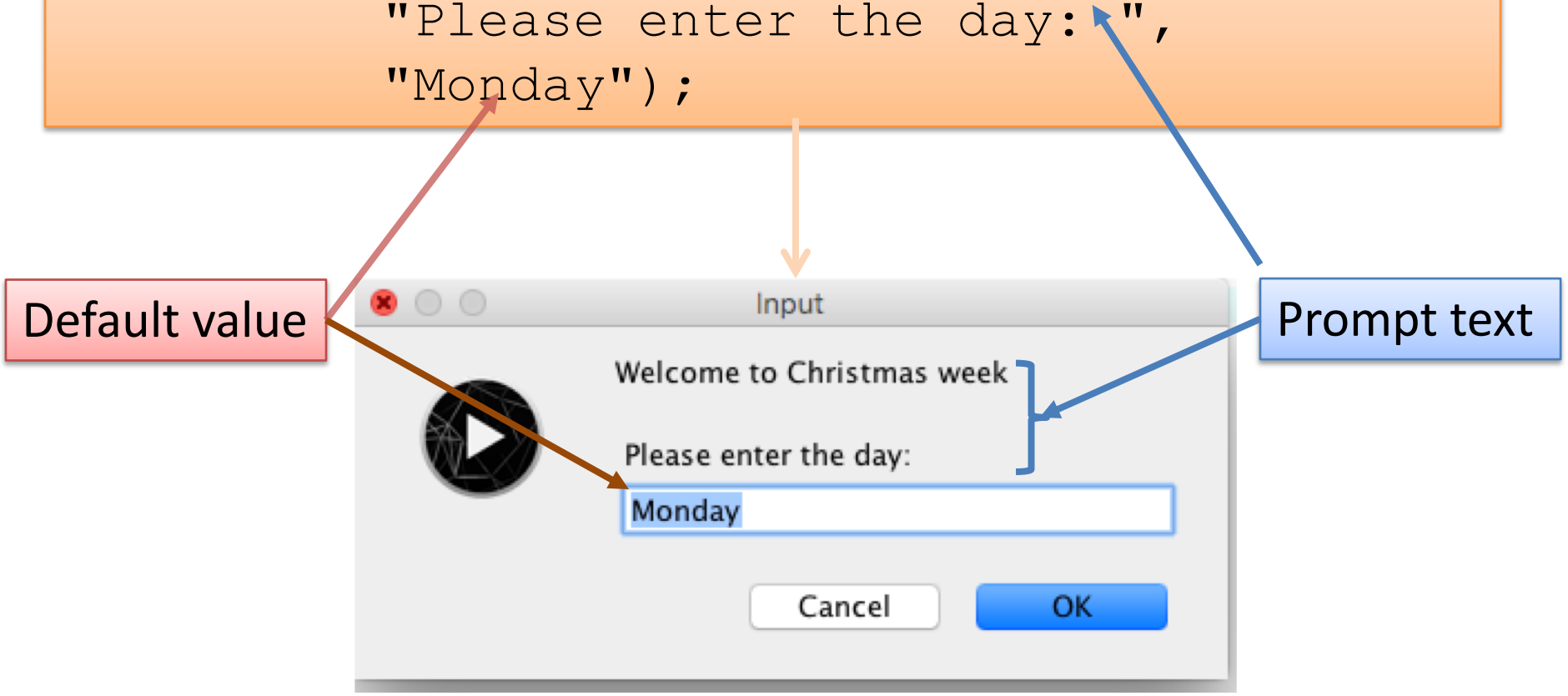


This means 'no icon'

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

show**Input**Dialog - Message **input**

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



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Reading in numbers via JOptionPane

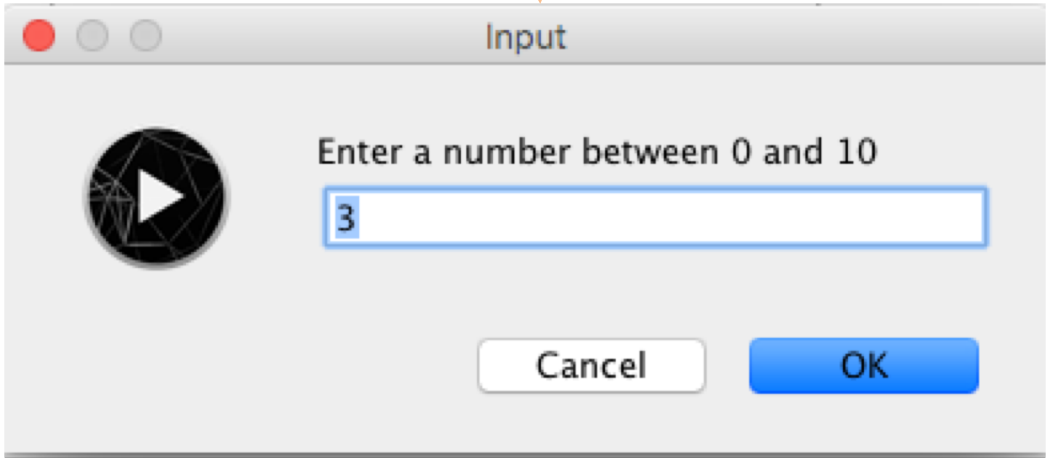
- Problem:
  - `show`**`Input`**`Dialog()` returns a **String**
  - So if you type 22,
    it is the string “22”,
    this can’t be used as number
- Solution
  - Use a predefined method
    to convert to a number.

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

prints the number 25.

Using **parseInt** with input

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

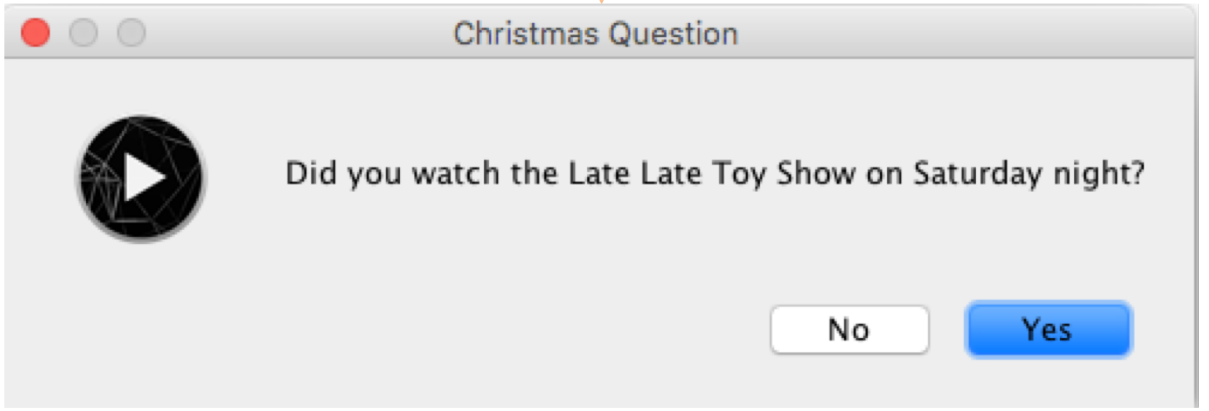


This converts the input String to an Integer and stores it in **num.**

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

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 );
```



JOptionPane.YES_OPTION is returned if you press 'Yes'.
JOptionPane.NO_OPTION is returned otherwise.
(*reply will be assigned this value)*

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

Summary

Swing

- JOptionPane
  - `import javax.swing.JOptionPane;`
  - JOptionPane methods
    - show**Message**Dialog()
    - show**Input**Dialog()
      - **parseInt()**
    - show**Confirm**Dialog()
      - **`JOptionPane.YES_NO_OPTION`**
      - **`JOptionPane.YES_OPTION`**
      - **`JOptionPane.NO_OPTION`**

Questions?