

# Swing and JOptionPane

Using Graphical User Interface (GUI) Components

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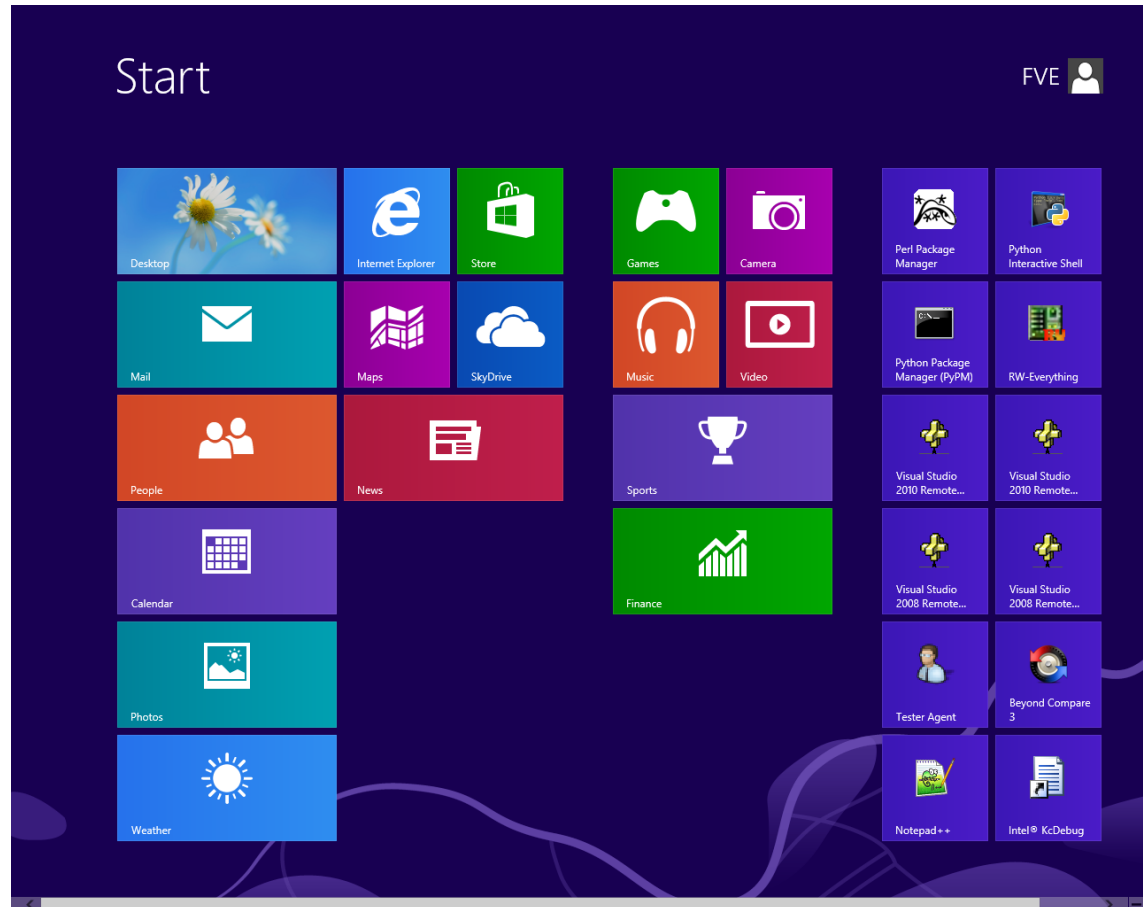
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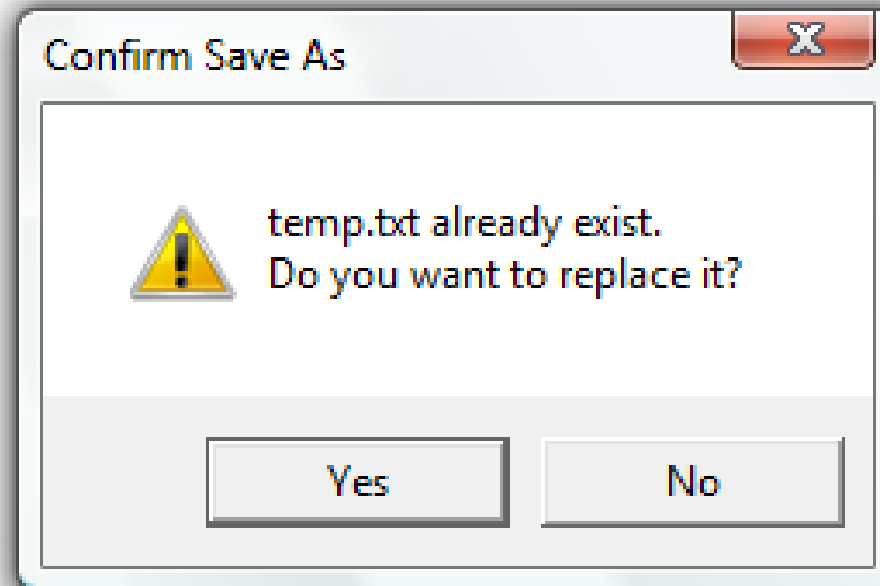
# Graphical User Interface (GUI)



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## Graphical User Interface (GUI)



# Topics list

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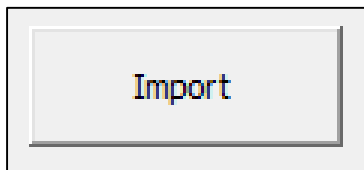
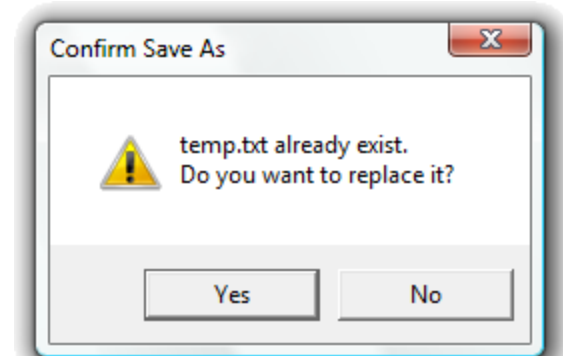
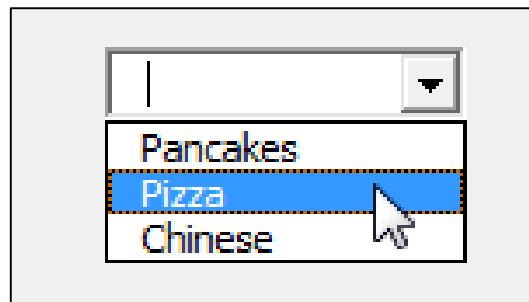
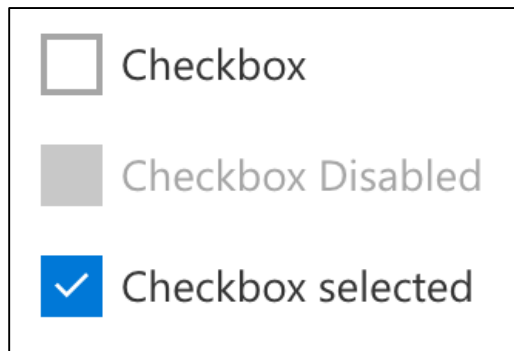
## Swing

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

# What is Swing?

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



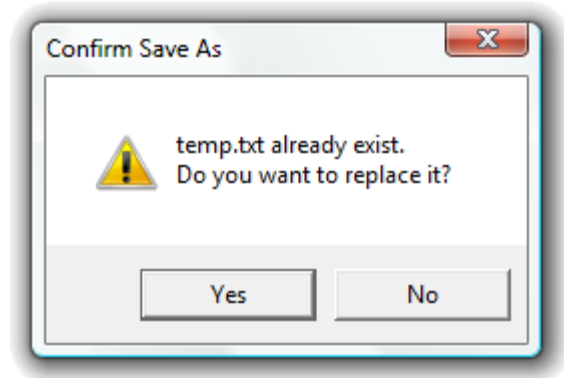
# What is Swing?

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

This module:

dialog /message boxes only

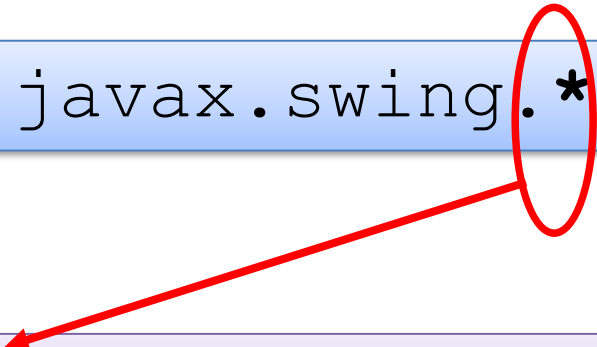


# Using Swing – **import** the **library**

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- We make **Swing** components available to us by **importing** 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

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



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

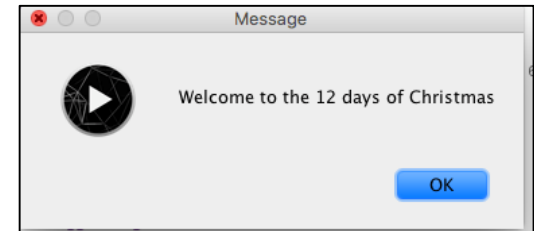
# Using JOptionPane with Swing

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

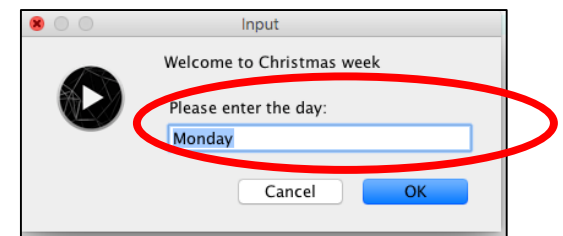
**showMessageDialog()**

- Simple message output



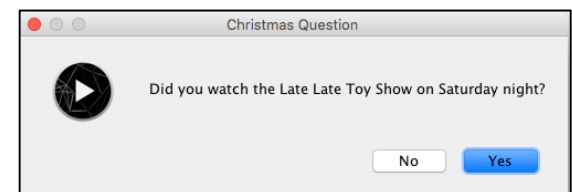
**showInputDialog()**

- Allows user to type in (string) input



**showConfirmDialog()**

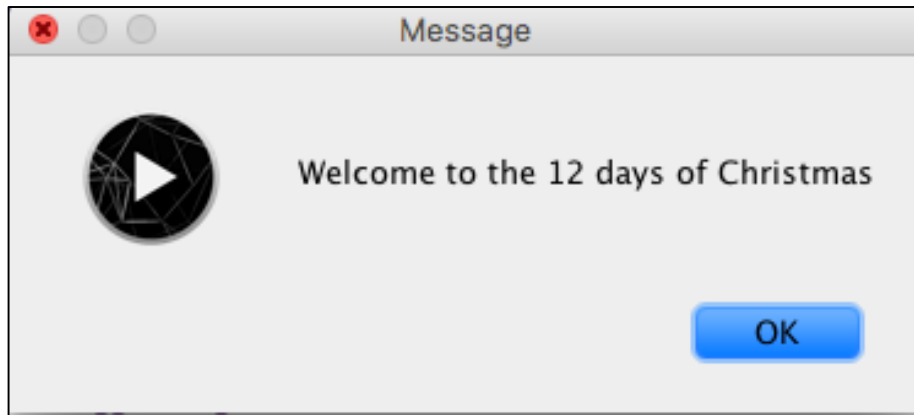
- Allow the user to choose an option



# show**MessageDialog** - Simple Message output

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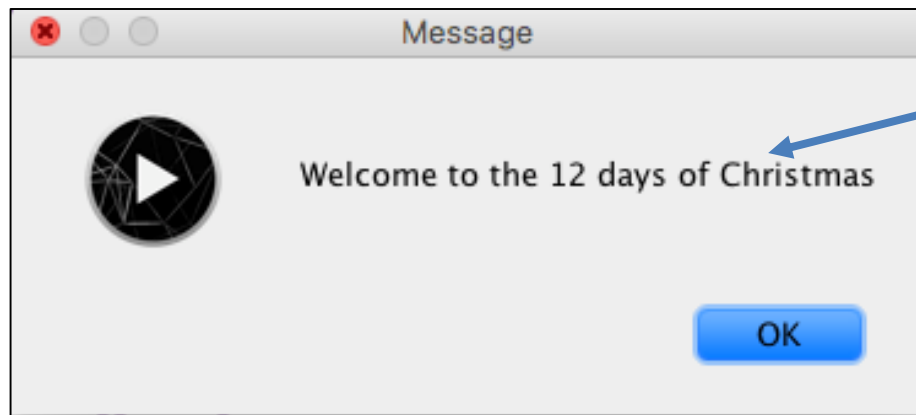
```
JOptionPane.showMessageDialog (  
    null,  
    "Welcome to the 12 days of Christmas"  
);
```



# show**MessageDialog** - Simple Message output

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

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

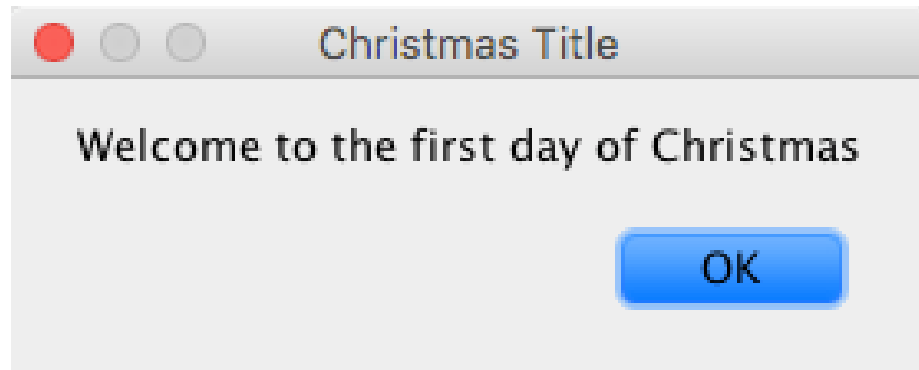


Text in Dialog box

## show**MessageDialog** - Message output with **label**

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



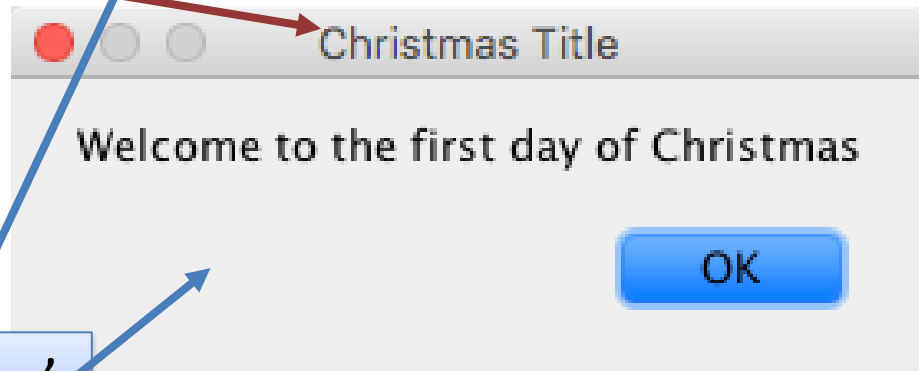
# showMessageDialog - Message output with label

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

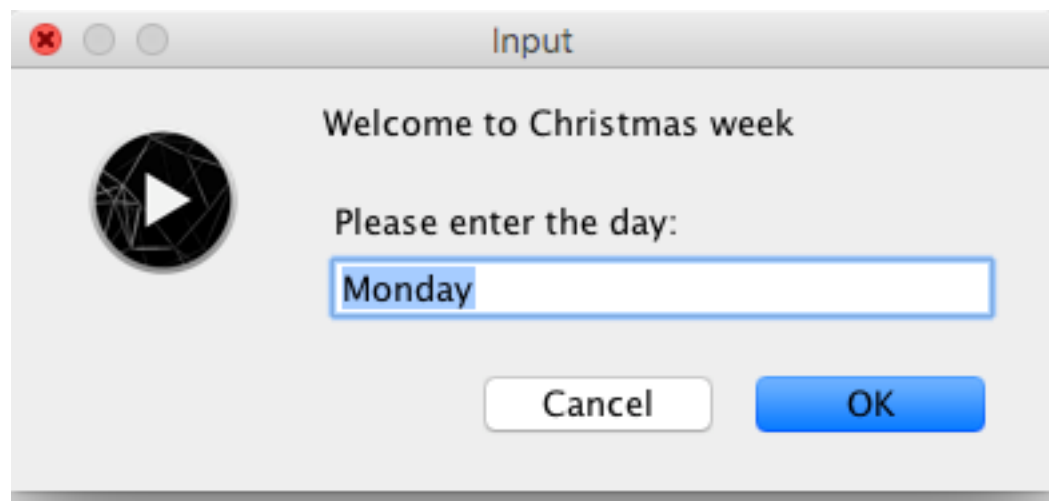
Text for **title** of box

This means 'no icon'



## showInputDialog - Message input

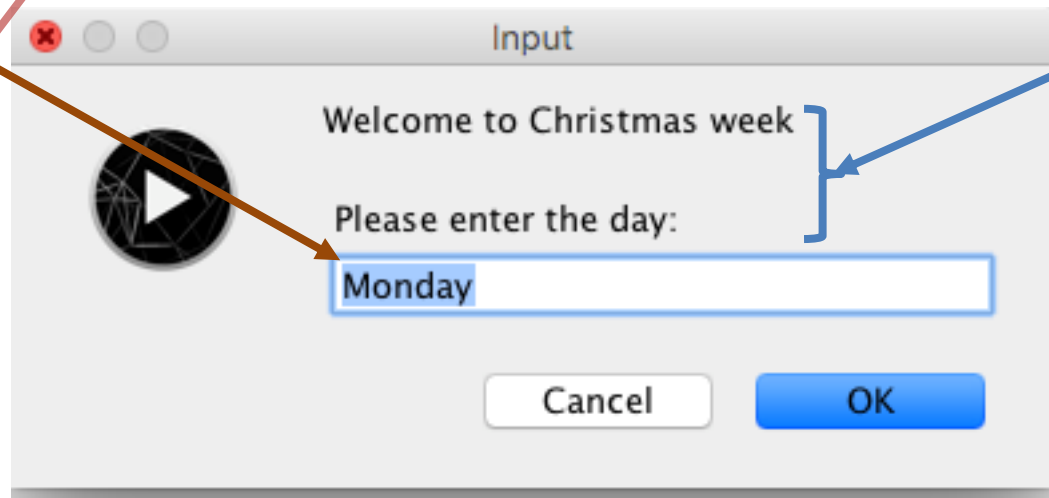
```
String day = JOptionPane.showInputDialog(  
    "Welcome to Christmas week\n\n " +  
    "Please enter the day: ",  
    "Monday");
```



## showInputDialog - Message input

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

Default value



Prompt text



# Reading in numbers via JOptionPane

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- **Problem:**

- show**InputDialog**() 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.

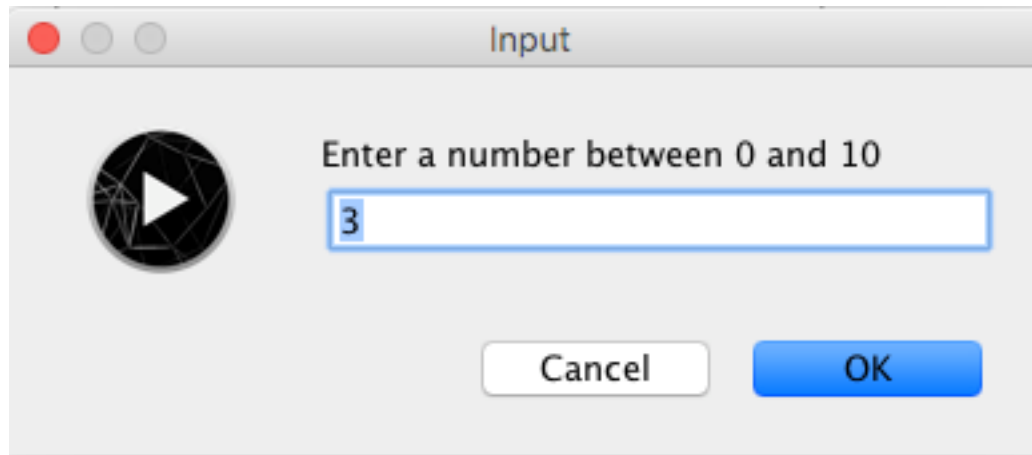
```
int number = Integer.parseInt ("22");  
println (number + 3);
```



prints the number 25.

# Using `parseInt` with input

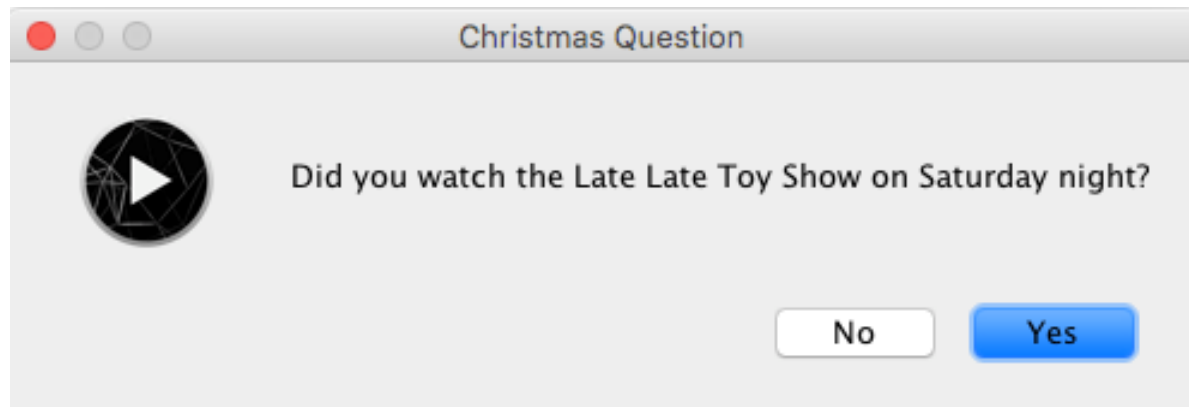
```
int num = Integer.parseInt(  
    JOptionPane.showInputDialog(  
        "Enter a number between 0 and 10", "3" )  
    );
```



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

## 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*)

# Summary

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## Swing

- JOptionPane

- `import javax.swing.JOptionPane;`

- JOptionPane methods

- `showMessageDialog()`

- `showInputDialog()`

- `parseInt()`

- `showConfirmDialog()`

- `JOptionPane.YES_NO_OPTION`

- `JOptionPane.YES_OPTION`

- `JOptionPane.NO_OPTION`

# Questions?

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