

Java Programming

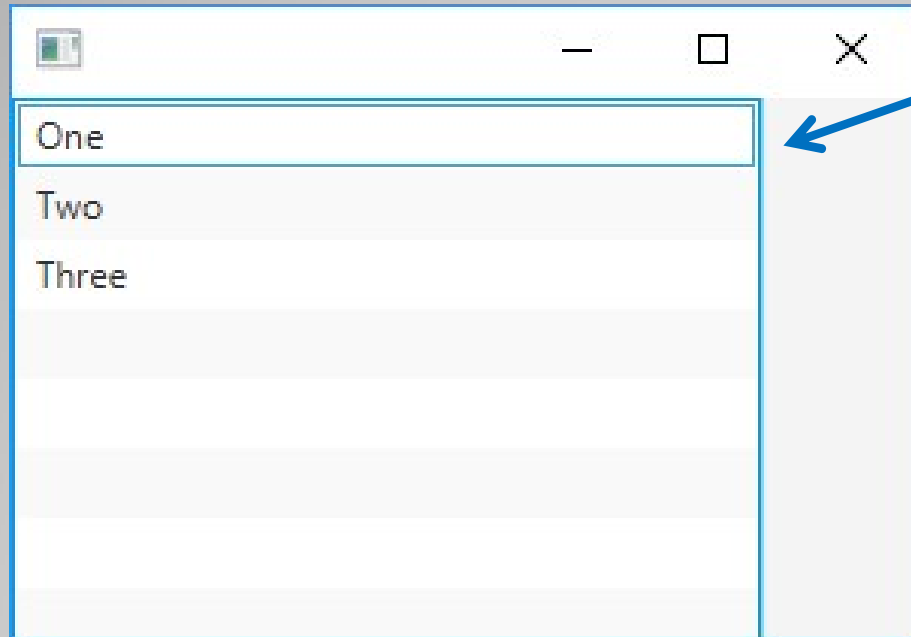
Arthur Hoskey, Ph.D.
Farmingdale State College
Computer Systems Department

Written by Arthur Hoskey, Ph.D.

- JavaFX
- Various control descriptions
 - ListView

Today's Lecture

- Display a collection of data.
- Users can select item(s).



ListView

ListView

ListView

- Component used to display data.
- Does not inherently hold data itself.
- Uses another class to actually hold its data.

ListView

Does not hold data on
its own

ListView

ObservableList

- Used to store data.
- Just a collection of data.
- Does not display data on its own.
- Used by ListView to store data.

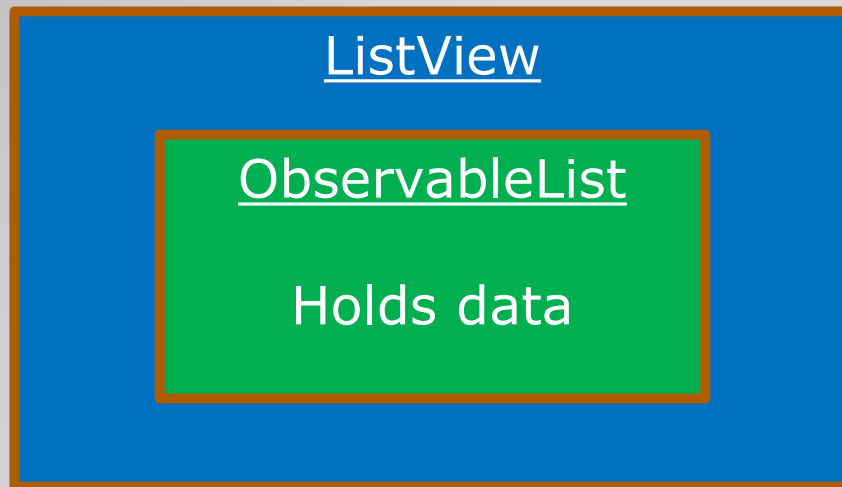


ObservableList

Holds data

ObservableList

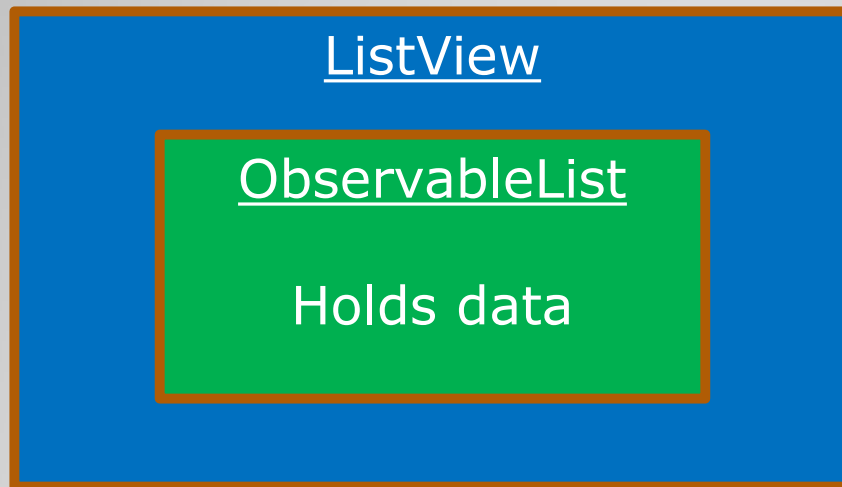
- ListView needs to be associated with an ObservableList.
- The ObservableList will hold the data for the ListView.
- ListView "has an" ObservableList(aggregation relationship).



**How do we
associate a
ObservableList
with a ListView?**

ListView "has a" ObservableList

- There is an Items member inside of the ListView.
- This Items member stores data that the ListView displays.
- For example:



**The
ObservableList
has the
ListView's data**

ListView "has an" ObservableList

- You must add data to the ListView's background collection to have it displayed in the ListView.
- First, get the background item collection from the ListView (an ObservableList).
- Second, add data to the background item collection.

@FXML


private ListView lv;

Must have a ListView member
variable that is associated with
the ListView in the FXML file



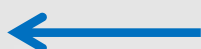
ObservableList<String> items = lv.getItems();

The getItems method
will return the
ListView's
background item
collection



items.add("I love Java");

Add the string
"I love Java" to
the ListView
background
item collection



Add Data to a ListView

- Handle ListView Item Selection (controller code)

@FXML

private ListView<String> listViewItems;  **ListView FXML Id**

@FXML

protected void handleListViewItemsMouseClicked(MouseEvent event) {

ObservableList<String> observableList =

(ObservableList<String>) listViewItems.getItems();

**Get the background
collection**


**Get the selected item
index**


int selectedIndex = **listViewItems.getSelectionModel().getSelectedIndex();**

**Get the selected item
from the collection**


if (selectedIndex >= 0 && selectedIndex < observableList.size()) {

System.out.println("Selected Item: " + **observableList.get(selectedIndex)**);

}

}

ListView Selected Item

- Handle ListView Item Selection (FXML code)

FXML Id



ListView selection
event handler
method



```
<ListView fx:id="listViewItems" onMouseClicked="#handleListViewItemsMouseClick">  
</ListView>
```

ListView Selected Item

End of Slides

Written by Arthur Hoskey, Ph.D.