

# Making the Custom View Accessible

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# What to Expect from This Module



**Custom View Accessibility Considerations**

**ExploreByTouchHelper Class**

**Expose Custom Content as Virtual Views**

**Handle Accessibility Actions**

# Custom View Accessibility Support

## Custom view needs to be focusable

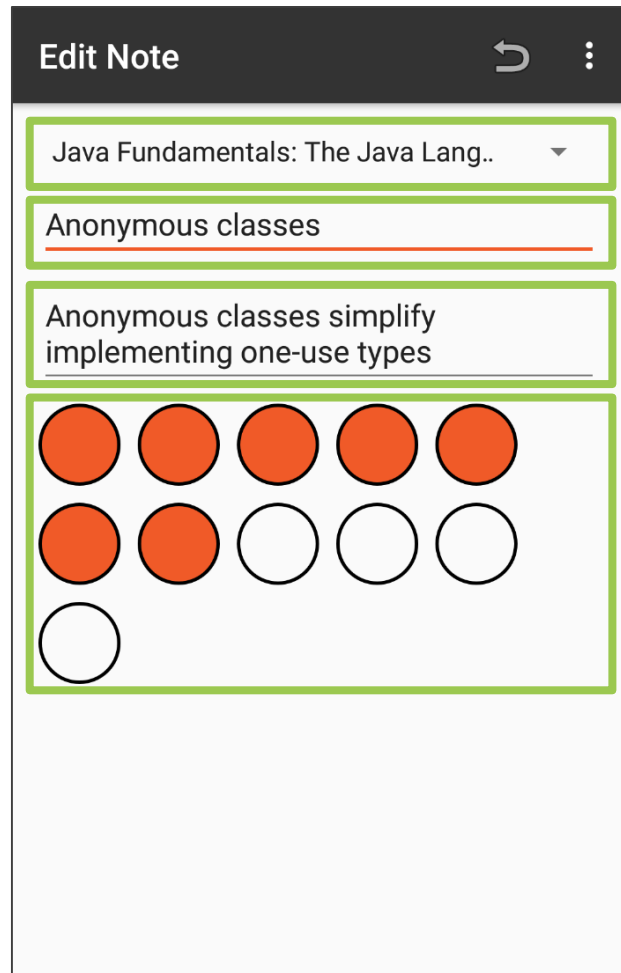
- Use setFocusable method

## Need to describe items within custom view

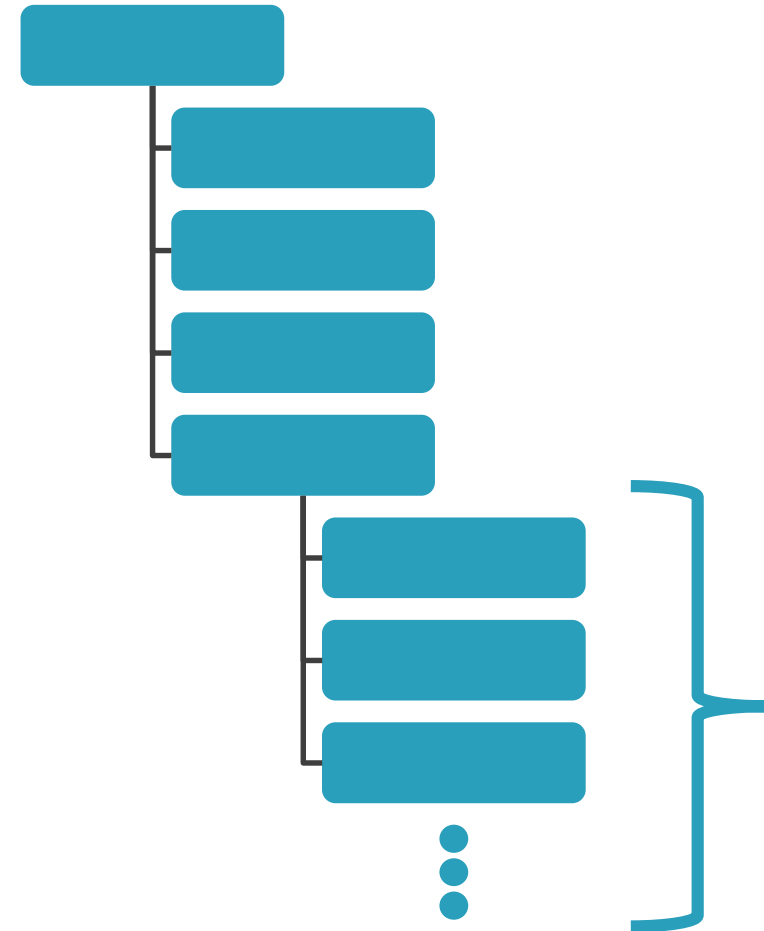
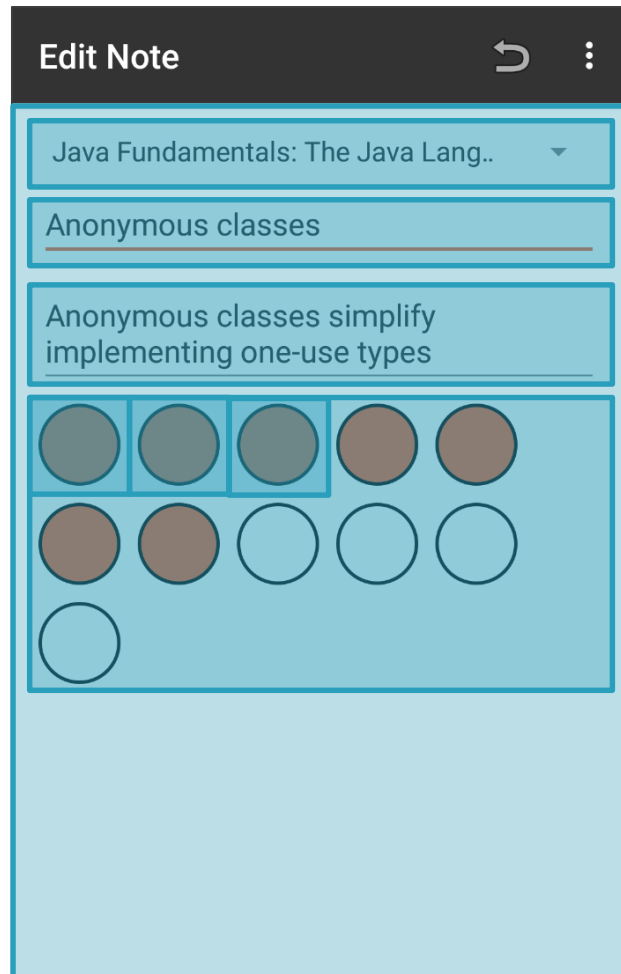
- Items treated like virtual views
- Describe each item's characteristics
- Provide each item's interactive features



# Custom View Accessibility Support



# Custom View Accessibility Support



# Custom View Accessibility Support

## ExploreByTouchHelper

- Provides core accessibility support
- Extend to specialize
- Commonly nested within view class
- Provide virtual view info and interaction features



# Custom View Accessibility Support

## **Associate helper class with custom view**

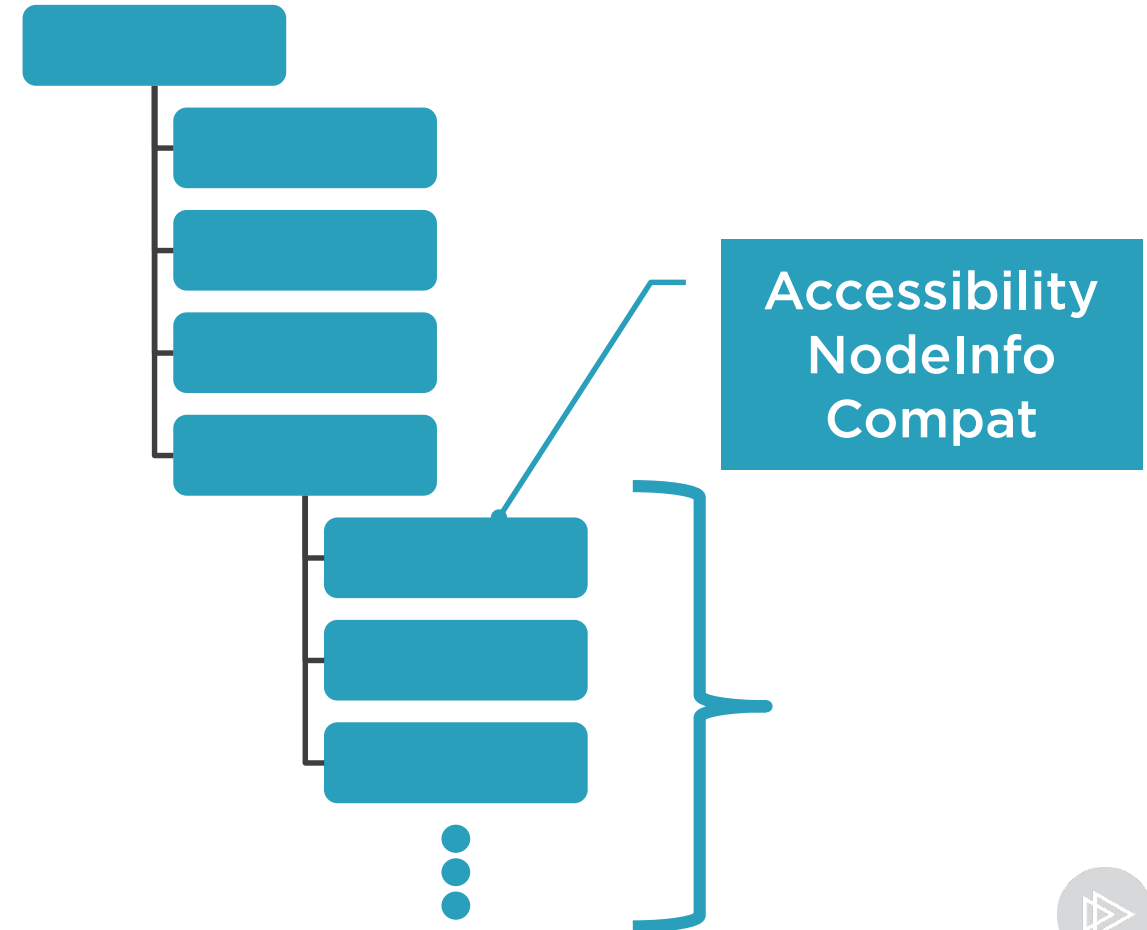
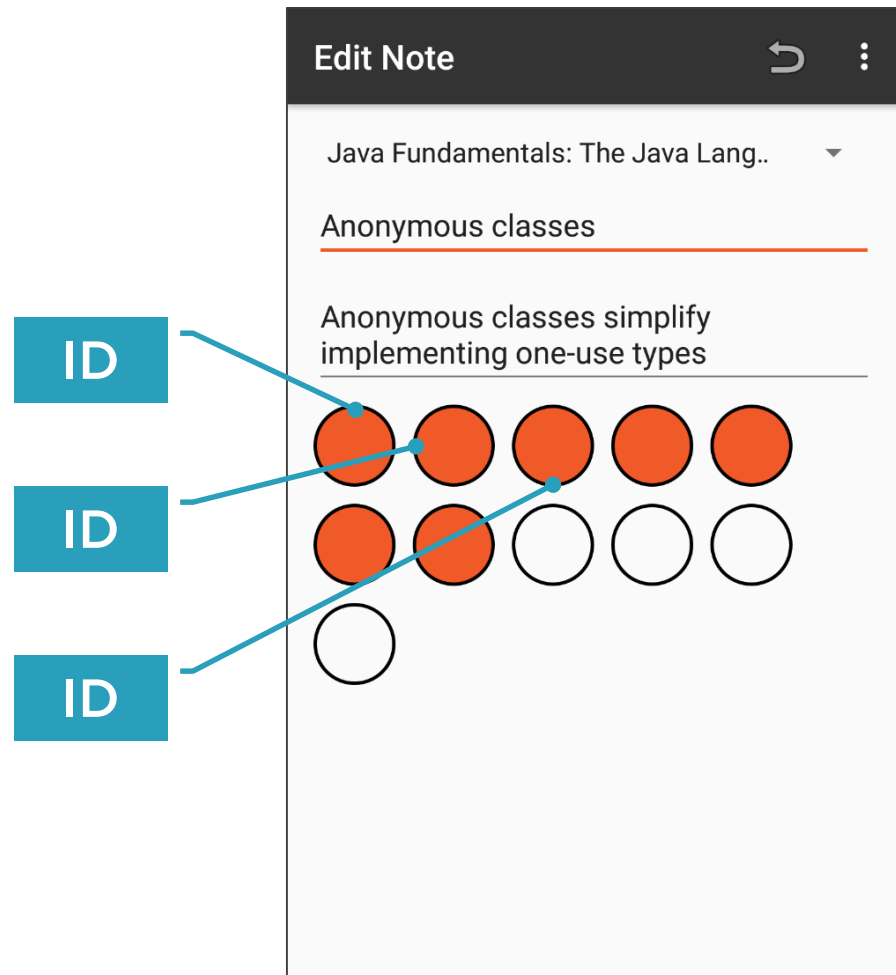
- `ViewCompat.setAccessibilityDelegate`
- Designates helper class as provider of view class' accessibility support

## **Forward some view callback methods**

- `dispatchHoverEvent`
- `dispatchKeyEvent`
- `onFocusChanged`



# Custom View Item Accessibility





# Custom View Item Accessibility

## Helper class handles item accessibility

- Assigns IDs
- Describes characteristics
- Handles interaction



# Custom View Item Accessibility

## **getVisibleVirtualViews method**

- Returns item IDs
- Often use item index

## **onPopulateNodeForVirtualView method**

- Receives an item ID
- Receives an AccessibilityNodeInfoCompat
- Set properties to describe characteristics of item at that ID



# Custom View Item Accessibility

## **getVirtualViewAt method**

- Receives X & Y coordinates
- Return ID of item at coordinates

## **onPerformActionForVirtualView method**

- Receives item ID
- Receives action constant
- Performs appropriate behavior for that action on that item



# Summary



## Custom view accessibility

- Needs to be focusable
- Needs to describe contained items
- Items represented as virtual views

## ExploreByTouchHelper class

- Provides core accessibility support
- Extend to specialize

# Summary



## **Associate helper class with custom view**

- Designate as accessibility provider
- Forward appropriate callback methods



Congratulations!!



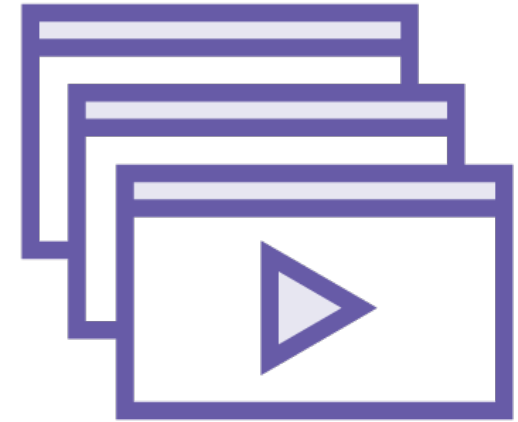
# Where to Go from Here



**Learning Checks/Skill IQ**  
Test your knowledge of  
the topics we've  
discussed



**Code**  
Work through course  
exercises and build  
apps of your own



**Review Course Videos**  
Re-watch clips and/or  
courses to reinforce  
learning







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