

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project

Resource Manager

Build Variants

Layout Captures

2: Favorites

Layout

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp > app > src > main > res > layout > activity_main.xml

Android

1:Project

app

manifests

java

edu.udayton.myscrollingapp

MainActivity

edu.udayton.myscrollingapp (androidTest)

edu.udayton.myscrollingapp (test)

generatedJava

res

Gradle Scripts

activity_main.xml

MainActivity.java

Attributes

Palette

Common

Text

Buttons

Widgets

Layouts

Containers

Google

Legacy

Ab TextView

Button

ImageView

RecyclerView

<> <fragment>

ScrollView

Switch

Pixel 28 AppTheme Default (en-us) 32% 8dp Attributes

No component selected.

Select a component in the Component Tree or on the Design Surface.

Let's first switch the layout from the default ConstraintLayout to a vertical LinearLayout.

Switch to the layout's text view

Design Text

Component Tree

Hello World!

Hello World!

Device File Explorer

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (a minute ago)

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

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MyScrollingApp app src main res layout activity_main.xml

Android

Project

Resource Manager

Build Variants

Favorites

Layout Captures

1:MainActivity

2:GeneratedJava

3:Res

Gradle Scripts

activity_main.xml

MainActivity.java

Preview

Palette

Gradle

Preview

XML code:

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</android.support.constraint.ConstraintLayout>
```

Text tab selected.

Preview window shows "Hello World!"

A yellow callout box with the text "Select the ConstraintLayout's full path, type 'Linear' ..." has an arrow pointing to the opening tag of the ConstraintLayout element in the XML code.

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1: Project 1: Resource Manager

Android

app manifests java edu.udayton.myscrollingapp MainActivity edu.udayton.myscrollingapp (androidTest) edu.udayton.myscrollingapp (test) generatedJava res Gradle Scripts

activity_main.xml MainActivity.java

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="match_parent"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    android:layout_constraintBottom_toBottomOf="parent"
    android:layout_constraintLeft_toLeftOf="parent"
    android:layout_constraintRight_toRightOf="parent"
    android:layout_constraintTop_toTopOf="parent" />
```

... and select the LinearLayout from this code completion menu

Press Ctrl+Space to view tags from other namespaces

Preview Pixel 28 AppTheme 35% Preview

Linear

Design Text

Layout Variants Build Variants I: Structure

2: Favorites 2: Layout Captures

Event Log

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MyScrollingApp app src main res layout activity_main.xml

Android

Project

Resource Manager

Build Variants

Favorites

Layout Captures

1:MainActivity

2:MainActivity

3:MainActivity

4:MainActivity

5:MainActivity

6:MainActivity

7:MainActivity

8:MainActivity

9:MainActivity

10:MainActivity

11:MainActivity

12:MainActivity

13:MainActivity

14:MainActivity

15:MainActivity

16:MainActivity

17:MainActivity

18:MainActivity

Preview

Palette

Hello World!

Switch back to the layout's design view

LinearLayout

Design Text

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (a minute ago)

2:14 CRLF UTF-8 4 spaces

Gradle

Preview

Device File Explorer

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</LinearLayout>
```

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project Resource Manager Build Variants I:Structure 2: Favorites Layout Captures

Android

app manifests java edu.udayton.myscrollingapp MainActivity edu.udayton.myscrollingapp (androidTest) edu.udayton.myscrollingapp (test) generatedJava res Gradle Scripts

activity_main.xml MainActivity.java

Palette Attributes

Common Ab TextView

Text Button

Buttons ImageView

Widgets RecyclerView

Layouts <> <fragment>

Containers ScrollView

Google Switch

Layouts

Containers

Google

Legacy

Component Tree

LinearLayout(horizontal)

Select the LinearLayout in the Component Tree

Hello World!

Hello World!

Attributes

<unnamed> LinearLayout

id

Declared Attributes

Layout

layout_width match_parent

layout_height match_parent

visibility

visibility

Common Attributes

orientation

gravity

All Attributes

actionBarNavMode

addStatesFromChild

alpha

alwaysDrawnWithCa

animateLayoutChani

animationCache

background

baselineAligned

baselineAlignedChil

clickable

clipChildren

clipToPadding

contentDescription

context .MainActivity

descendantFocusab

divider

dividerPadding

drawingCacheQualit

duplicateParentState

Design Text

TODO Terminal Build Logcat Event Log

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MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

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MyScrollingApp app src main res layout activity_main.xml

1:Project Resource Manager Build Variants I:Structure 2:Favorites Layout Captures

Android

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activity_main.xml MainActivity.java

Palette Attributes

Common Ab TextView

Text Button

Buttons ImageView

Widgets RecyclerView

Layouts <> <fragment>

Containers ScrollView

Google Switch

Layouts

Containers

Google

Legacy

Component Tree

LinearLayout(horizontal)

Ab TextView- "Hello World!"

Pixel 28 AppTheme Default (en-us)

32% 32%

Hello World!

Hello World!

Use the pulldown menu to change its orientation to vertical

orientation horizontal vertical

All Attributes actionBarNavMode addStatesFromChild alpha alwaysDrawnWithCa animateLayoutChang animationCache background baselineAligned baselineAlignedChil clickable clipChildren clipToPadding contentDescription context descendantFocusab divider dividerPadding drawingCacheQualit duplicateParentState

Device File Explorer

Design Text

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (a minute ago)

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project

Resource Manager

Build Variants

2:Structure

Layout Captures

2:Favorites

Layout Tree

Design Text

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (a minute ago)

Android

MyScrollingApp > app > src > main > res > layout > activity_main.xml

activity_main.xml MainActivity.java

Attributes

<unnamed>

id

Declared Attributes

Layout

layout_width match_parent

layout_height match_parent

visibility

visibility

Common

Text

Buttons

Widgets

Layouts

Containers

ViewPager

RecyclerView

ScrollView

HorizontalScrollView

NestedScrollView

AppBarLayout

NavigationView

BottomNavigationView

Toolbar

TabLayout

TabItem

ViewStub

<include>

<> <fragment>

NavHostFragment

<view>

<requestFocus>

Component Tree

LinearLayout(vertical)

Ab TextView- "Hello World!"

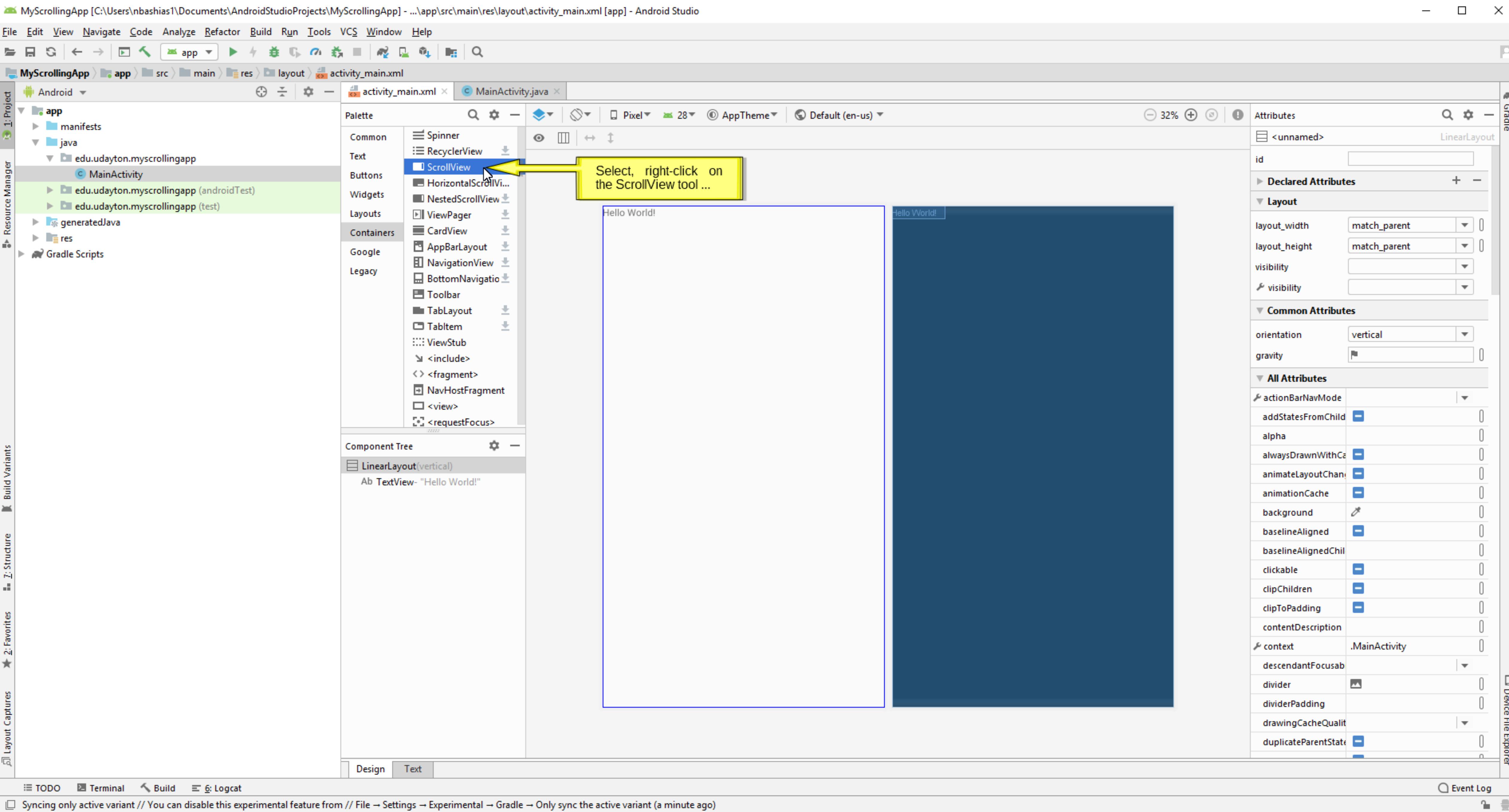
Pixel 28 AppTheme Default (en-us) 32% 32% 32%

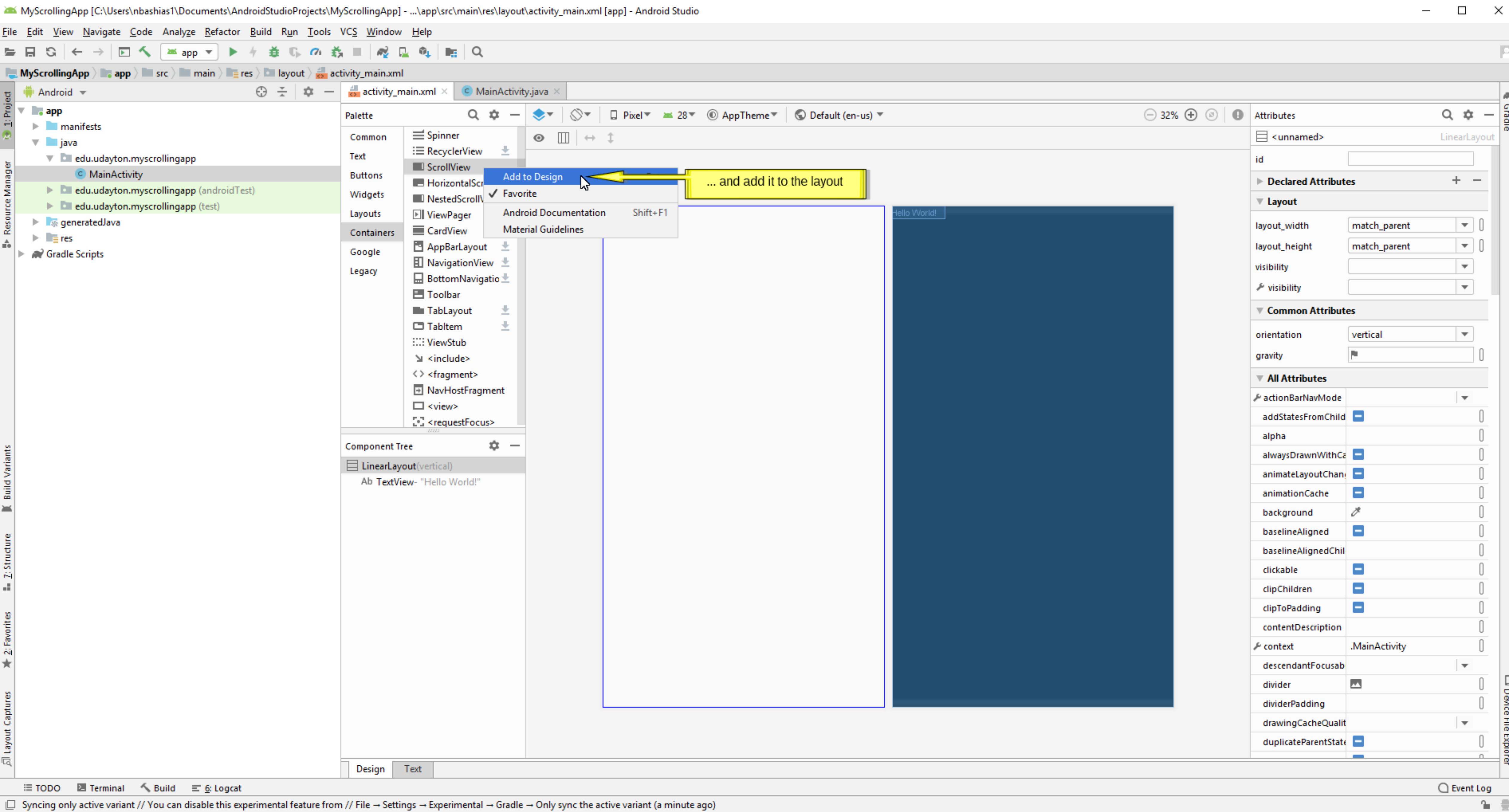
To add a ScrollView, first switch to the Containers category in the Palette

Gradle

Device File Explorer

The screenshot shows the Android Studio interface with the 'Layout' tab selected. In the center is the layout editor window displaying a single `TextView` with the text "Hello World!". To the left is the 'Palette' panel, which contains categories like Common, Text, Buttons, Widgets, Layouts, and Containers. The 'Containers' category is currently selected, as indicated by a yellow arrow pointing to it. A yellow callout box with the text "To add a ScrollView, first switch to the Containers category in the Palette" is positioned over the palette. On the right side of the screen is the 'Attributes' panel, showing various properties for the selected view. The bottom navigation bar includes tabs for 'Design' and 'Text', with 'Design' being the active tab.





MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project

Resource Manager

Build Variants

2:Structure

Layout Captures

2:Favorites

3:Logcat

Design Text

Attributes

ScrollView

id

Declared Attributes

Layout

layout_width

layout_height

layout_weight

visibility

visibility

Common Attributes

scrollbarStyle

style

fillViewport

clipToPadding

All Attributes

addStatesFromChild

alpha

alwaysDrawnWithCa

animateLayoutChang

animationCache

background

clickable

clipChildren

clipToPadding

contentDescription

descendantFocusab

drawingCacheQualit

duplicateParentState

fadeScrollbars

fadingEdge

fadingEdgeLength

Gradle

Palette

Common

Text

Buttons

Widgets

Layouts

Containers

Google

Legacy

Spinner

RecyclerView

ScrollView

HorizontalScrollView

NestedScrollView

ViewPager

CardView

AppBarLayout

NavigationView

BottomNavigation

Toolbar

TabLayout

TabItem

ViewStub

<include>

<> <fragment>

NavHostFragment

<view>

<requestFocus>

Component Tree

LinearLayout(vertical)

TextView- "Hello World!"

ScrollView

As usual, the ScrollView has been added below the TextView in the layout.
However, for the text in the TextView to be scrollable, it must be inside the ScrollView.

Expand the ScrollView in the Component Tree

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MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project Resource Manager Build Variants Structure Favorites Layout Captures 2: Favorites

Android

app manifests java edu.udayton.myscrollingapp MainActivity edu.udayton.myscrollingapp (androidTest) edu.udayton.myscrollingapp (test) generatedJava res Gradle Scripts

activity_main.xml MainActivity.java

Palette Attributes

Common Text Buttons Widgets Layouts Containers Google Legacy

Spinner RecyclerView ScrollView HorizontalScrollView NestedScrollView ViewPager CardView AppBarLayout NavigationView BottomNavigationView Toolbar TabLayout TabItem ViewStub <include> <fragment> NavHostFragment <view> <requestFocus>

Pixel 28 AppTheme Default (en-us)

32% 32% 32%

Hello World

Hello World!

Component Tree

LinearLayout(vertical) Ab TextView ScrollView LinearLayout(vertical)

Click-and-drag the TextView from the main LinearLayout ...

Design Text

Attributes

Ab <unnamed> TextView

id

Declared Attributes

Layout

layout_width wrap_content

layout_height wrap_content

layout_weight

visibility

visibility

Common Attributes

text Hello World! text contentDescription

textAppearance @android:style/TextAp fontFamily

typeface

textSize 14sp lineSpacingExtra

textColor @android:color/secondary textStyle

B I Tr

All Attributes

alpha autoLink autoSizeMaxTextSize

autoSizeMinTextSize autoSizePresetSizes

autoSizeStepGranularity autoSizeTextType

autoText background bufferType

Device File Explorer

TODO Terminal Build Logcat Event Log

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MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...app\src\main\res\layout\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project Resource Manager Build Variants I:Structure 2:Favorites Layout Captures

Android

app manifests java edu.udayton.myscrollingapp MainActivity edu.udayton.myscrollingapp (androidTest) edu.udayton.myscrollingapp (test) generatedJava res Gradle Scripts

activity_main.xml MainActivity.java

Palette Attributes

Common Text Buttons Widgets Layouts Containers Google Legacy

Spinner RecyclerView ScrollView HorizontalScrollView NestedScrollView ViewPager CardView AppBarLayout NavigationView BottomNavigationView Toolbar TabLayout TabItem ViewStub <include> <fragment> NavHostFragment <view> <requestFocus>

Pixel 28 AppTheme Default (en-us)

32% 32% 32%

Hello World! Hello World!

Component Tree

LinearLayout(vertical)
Ab TextView: "Hello World!"
ScrollView
LinearLayout(vertical)
... to the ScrollView's LinearLayout

Design Text

Attributes

Ab <unnamed> TextView

id

Declared Attributes

Layout

layout_width wrap_content

layout_height wrap_content

layout_weight

visibility

visibility

Common Attributes

text Hello World!

text

contentDescription

textAppearance @android:style/TextAp

fontFamily

typeface

textSize 14sp

lineSpacingExtra

textColor @android:color/secondary

textStyle B I Tr

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranularity

autoSizeTextType

autoText

background

bufferType

Device File Explorer

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (2 minutes ago)

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project Resource Manager Build Variants I:Structure 2:Favorites Layout Captures

Android

app manifests java edu.udayton.myscrollingapp MainActivity edu.udayton.myscrollingapp (androidTest) edu.udayton.myscrollingapp (test) generatedJava res Gradle Scripts

activity_main.xml MainActivity.java

Palette Attributes

Common Text Buttons Widgets Layouts Containers Google Legacy

Spinner RecyclerView ScrollView HorizontalScrollView NestedScrollView ViewPager CardView AppBarLayout NavigationView BottomNavigationView Toolbar TabLayout TabItem ViewStub <include> <fragment> NavHostFragment <view> <requestFocus>

Component Tree

- LinearLayout(vertical)
 - ScrollView
 - LinearLayout(vertical)

Ab TextView "Hello World!"

The TextView is now in the ScrollView's layout

Design Text

Attributes

Ab <unnamed> TextView

id

Declared Attributes

Layout

layout_width wrap_content

layout_height wrap_content

layout_weight

visibility

visibility

Common Attributes

text Hello World!

text

contentDescription

textAppearance @android:style/TextAp

fontFamily

typeface

textSize 14sp

lineSpacingExtra

textColor @android:color/secondary

textStyle B I Tr

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranularity

autoSizeTextType

autoText

background

bufferType

Device File Explorer

TODO Terminal Build Logcat Event Log

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MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project Resource Manager Build Variants I:Structure 2: Favorites Layout Captures

Expand the app/res folder

Let's add a string resource with the text to be displayed in the TextView

Android

app manifests java edu.udayton.myscrollingapp MainActivity edu.udayton.myscrollingapp (androidTest) edu.udayton.myscrollingapp (test) generatedJava Gradle Scripts

activity_main.xml MainActivity.java

Palette Attributes

Common Text Buttons Widgets Layouts Containers Google Legacy

Spinner RecyclerView ScrollView HorizontalScrollView NestedScrollView ViewPager CardView AppBarLayout NavigationView BottomNavigationView Toolbar TabLayout TabItem ViewStub <include> <fragment> NavHostFragment <view> <requestFocus>

Component Tree

LinearLayout(vertical) ScrollView LinearLayout(vertical) Ab TextView- "Hello World!"

Design Text

Pixel 28 AppTheme Default (en-us)

32% Attributes

Ab <unnamed> TextView id Declared Attributes Layout layout_width wrap_content layout_height wrap_content layout_weight visibility visibility Common Attributes text Hello World! text contentDescription textAppearance @android:style/TextAp fontFamily typeface textSize 14sp lineSpacingExtra textColor @android:color/secondary textStyle All Attributes alpha autoLink autoSizeMaxTextSize autoSizeMinTextSize autoSizePresetSizes autoSizeStepGranularity autoSizeTextType autoText background bufferType

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (2 minutes ago)

Event Log

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main java edu udayton myscrollingapp MainActivity

Android

Project

Resource Manager

Build Variants

Layout Captures

2: Favorites

Layout

1: Project

activity_main.xml

MainActivity.java

Palette

Common Text Buttons Widgets Layouts Containers Google Legacy

Spinner RecyclerView ScrollView HorizontalScrollView NestedScrollView ViewPager CardView AppBarLayout NavigationView BottomNavigationView Toolbar ViewStub <include> <fragment> NavHostFragment <view> <requestFocus>

Component Tree

LinearLayout(vertical) ScrollView LinearLayout(vertical) Ab TextView- "Hello World!"

Design Text

Attributes

Ab <unnamed> TextView

id

Declared Attributes

Layout

layout_width wrap_content

layout_height wrap_content

layout_weight

visibility

visibility

Common Attributes

text Hello World!

text

contentDescription

textAppearance @android:style/TextAp

fontFamily

typeface

textSize 14sp

lineSpacingExtra

textColor @android:color/secondary

textStyle B I Tr

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranularity

autoSizeTextType

autoText

background

bufferType

Gradle

Device File Explorer

Now expand the app/res/values folder

Todo Terminal Build Logcat

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (2 minutes ago)

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main java edu udayton myscrollingapp MainActivity

Android

1:Project

Resource Manager

Gradle

MyScrollingApp

app

manifests

java

edu.udayton.myscrollingapp

MainActivity

edu.udayton.myscrollingapp (androidTest)

edu.udayton.myscrollingapp (test)

generatedJava

res

drawable

layout

mipmap

values

colors.xml

strings.xml

styles.xml

Gradle Scripts

Build Variants

2:Structure

Layout Captures

2:Favorites

3:Captures

Design Text

Palette

Common

Text

Buttons

Widgets

Layouts

Containers

Google

Legacy

Pixel 28 AppTheme Default (en-us) 32% Attributes

Spinner

RecyclerView

ScrollView

HorizontalScrollView

NestedScrollView

ViewPager

CardView

AppBarLayout

NavigationView

BottomNavigationView

Toolbar

TabLayout

TabItem

ViewStub

<include>

<> <fragment>

NavHostFragment

<view>

<requestFocus>

Component Tree

LinearLayout(vertical)

ScrollView

LinearLayout(vertical)

Ab TextView- "Hello World!"

Hello World!

Hello World!

Attributes

id

Declared Attributes

Layout

layout_width

layout_height

layout_weight

visibility

visibility

Common Attributes

text

text

contentDescription

textAppearance

@android:style/TextAp

fontFamily

typeface

textSize

14sp

lineSpacingExtra

textColor

@android:color/secondary

textStyle

B I Tr

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranul

autoSizeTextType

autoText

background

bufferType

Device File Explorer

Open the strings.xml file

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (2 minutes ago)

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\values\\strings.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res values strings.xml

Android

1:Project

Resource Manager

Gradle

MyScrollingApp > app > src > main > res > values > strings.xml

Edit translations for all locales in the translations editor.

1 <resources>
2 <string name="app_name">My Scrolling App</string>
3 </resources>
4

Place the cursor at the end of this string tag, and add a new line (hit the Enter key)

Since the text to be displayed will have line breaks, we'll add the string resource directly to the strings.xml file, without using the Translations Editor.

This text has been copied from the open source book "How to Think Like a Computer Scientist: C Version" by Allen B. Downey (C-Version by Thomas Scheffler), Version 1.05 (copylefted April 11th, 2010)

resources

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (2 minutes ago) 2:54 CRLF UTF-8 4 spaces

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\values\\strings.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res values strings.xml

Android

1:Project

Resource Manager

Gradle

1:Project

app

- manifests
- java
 - edu.udayton.myscrollingapp
 - MainActivity
 - edu.udayton.myscrollingapp (androidTest)
 - edu.udayton.myscrollingapp (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - strings.xml
 - styles.xml

Gradle Scripts

Edit translations for all locales in the translations editor.

... and select this string tag from this code completion menu

Type '<string>' here ...

resources

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (2 minutes ago)

3:12 CRLF UTF-8 4 spaces

The screenshot shows the Android Studio interface with the project 'MyScrollingApp' open. The code editor displays the file 'strings.xml' with the following content:

```
<resources>
    <string name="app_name">My Scrolling App</string>
    <string>
```

A code completion tooltip is displayed over the second 'string' tag, containing the text "... and select this string tag from this code completion menu". A yellow callout box contains the instruction "Type '<string>' here ...". A yellow arrow points from the start of the second 'string' tag to the tooltip. The 'values' folder in the Project Navigators panel is highlighted with a green glow.

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\values\\strings.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res values strings.xml

Android

1:Project

Resource Manager

Gradle

Edit translations for all locales in the translations editor.

1 <resources>
2 <string name="app_name">My Scrolling App</string>
3 <string name="bookText">
4 </resources>

Open editor Hide notification

Tag start is not closed

1. Add the string "bookText" as the value of the name attribute

2. Close the string start tag by typing > at the end of this line

resources > string

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (3 minutes ago)

3:27 CRLF UTF-8 4 spaces

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\values\\strings.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res values strings.xml

Android

1:Project

Resource Manager

Gradle

With the cursor inside the new string tag ...

```
<resources>
    <string name="app_name">My Scrolling App</string>
    <string name="bookText"></string>
```

Open editor Hide notification

resources > string

TODO Terminal Build Logcat

XML tag has empty body

3:29 CRLF UTF-8 4 spaces

Event Log



MyScrollingApp > app > src > main > res > values > strings.xml

Android

1:Project

Resource Manager

2: Favorites

Layout Captures

2: Favorites

Layout Captures

1:Structure

Build Variants

Gradle Scripts

res

drawable

layout

mipmap

values

colors.xml

strings.xml

styles.xml

app

manifests

java

edu.udayton.myscrollingapp

MainActivity

edu.udayton.myscrollingapp (androidTest)

edu.udayton.myscrollingapp (test)

generatedJava

activity_main.xml

strings.xml

MainActivity.java

Edit translations for all locales in the translations editor.

-level languages. Thus, programs written in a high-level language have to be translated before they can run. This translation takes some time, which is a small disadvantage of high-level languages.</s>

... type the string

Here is the complete text:

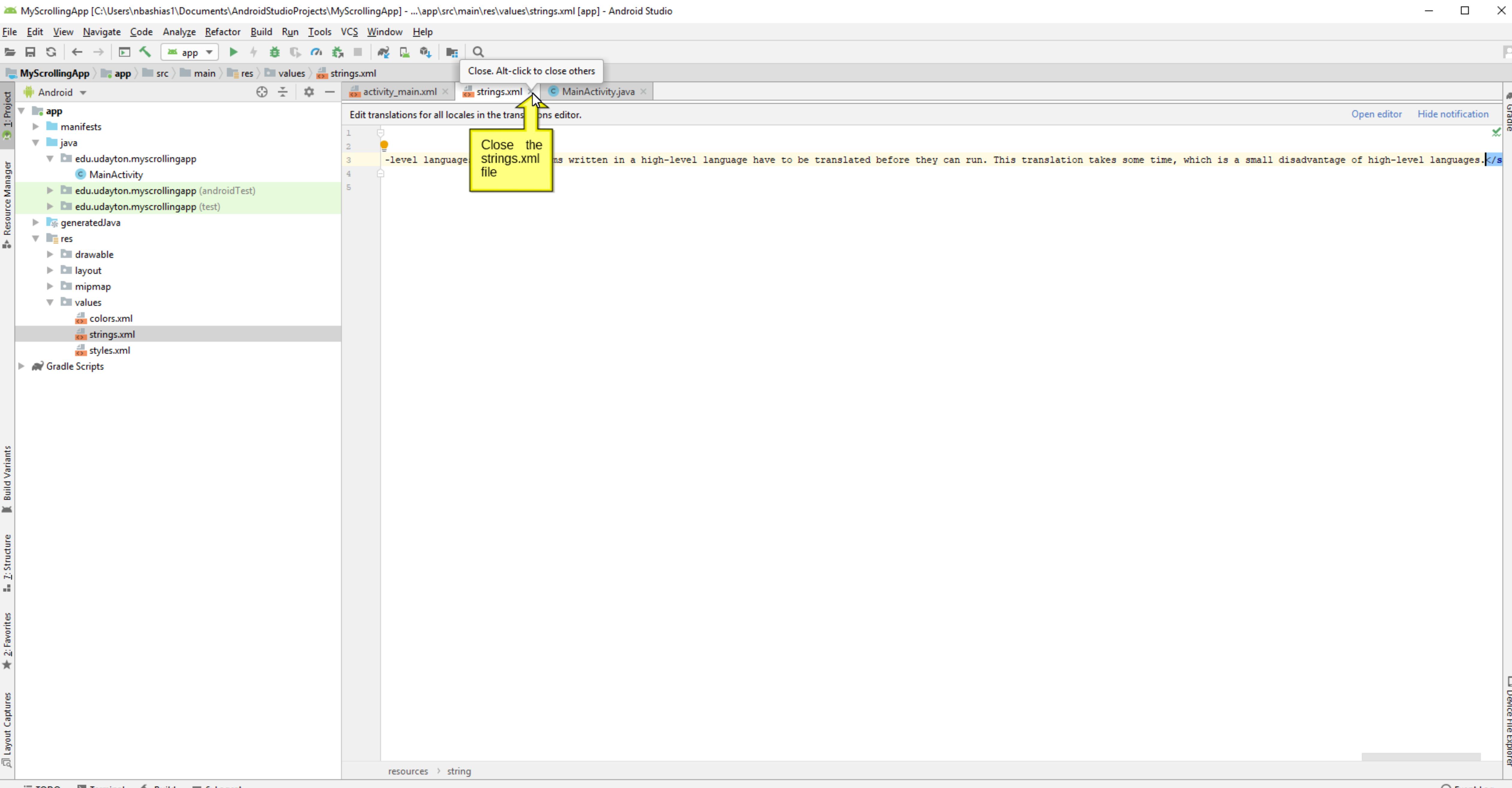
The goal of this book, and this class, is to teach you to think like a computer scientist. I like the way computer scientists think because they combine some of the best features of Mathematics, Engineering, and Natural Science. Like mathematicians, computer scientists use formal languages to denote ideas (specifically computations). Like engineers, they design things, assembling components into systems and evaluating tradeoffs among alternatives. Like scientists, they observe the behavior of complex systems, form hypotheses, and test predictions. In the single most important skill for a computer scientist is problem-solving. By that I mean the ability to formulate problems, think creatively about solutions, and express a solution clearly and accurately. As it turns out, the process of learning to program is an excellent opportunity to practice problem-solving skills. That's why this chapter is called "The way of the program." On one level, you will be learning to program, which is a useful skill by itself. On another level you will use programming as a means to an end. As we go along, that end will become clearer. In the programming language you will be learning is C, which was developed in the early 1970s by Dennis M. Ritchie at the Bell Laboratories. C is an example of a high-level language; other high-level languages you might have heard of are Pascal, C++ and Java. As you might infer from the name "high-level language," there are also low-level languages, sometimes referred to as machine language or assembly language. Loosely-speaking, computers can only execute programs written in low-level languages. Thus, programs written in a high-level language have to be translated before they can run. This translation takes some time, which is a small disadvantage of high-level languages.

resources > string

TODO Terminal Build Logcat

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (3 minutes ago)

3:1840 CRLF UTF-8 4 spaces



MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...\\app\\src\\main\\res\\layout\\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrollingApp app src main res layout activity_main.xml

1:Project

Resource Manager

Gradle

MyScrollingApp > app > src > main > res > layout > activity_main.xml

Android

1:Project

app

- manifests
- java
 - edu.udayton.myscrollingapp
 - MainActivity
 - edu.udayton.myscrollingapp (androidTest)
 - edu.udayton.myscrollingapp (test)
- generatedJava
- res
 - drawable
 - layout
 - mipmap
 - values
 - colors.xml
 - strings.xml
 - styles.xml
- Gradle Scripts

Resource Manager

Palette

Common

- Spinner
- RecyclerView
- ScrollView**
- HorizontalScrollView
- NestedScrollView

Text

Buttons

Widgets

Layouts

Containers

- ViewPager
- CardView
- AppBarLayout
- NavigationView
- BottomNavigationView
- Toolbar
- TabLayout
- TabItem
- ViewStub
- <include>
- <> <fragment>
- NavHostFragment
- <view>
- <requestFocus>

Google

Legacy

Component Tree

- LinearLayout(vertical)
 - ScrollView
 - LinearLayout(vertical)
 - Ab TextView- "Hello World!"

Design Text

Attributes

Ab <unnamed>

id

Declared Attributes

Layout

layout_width

layout_height

layout_weight

visibility

visibility

Common Attributes

text

text

contentDescription

textAppearance

@android:style

fontFamily

typeface

textSize

14sp

lineSpacingExtra

textColor

@android:color/secondary

textStyle

B I Tr

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranularity

autoSizeTextType

autoText

background

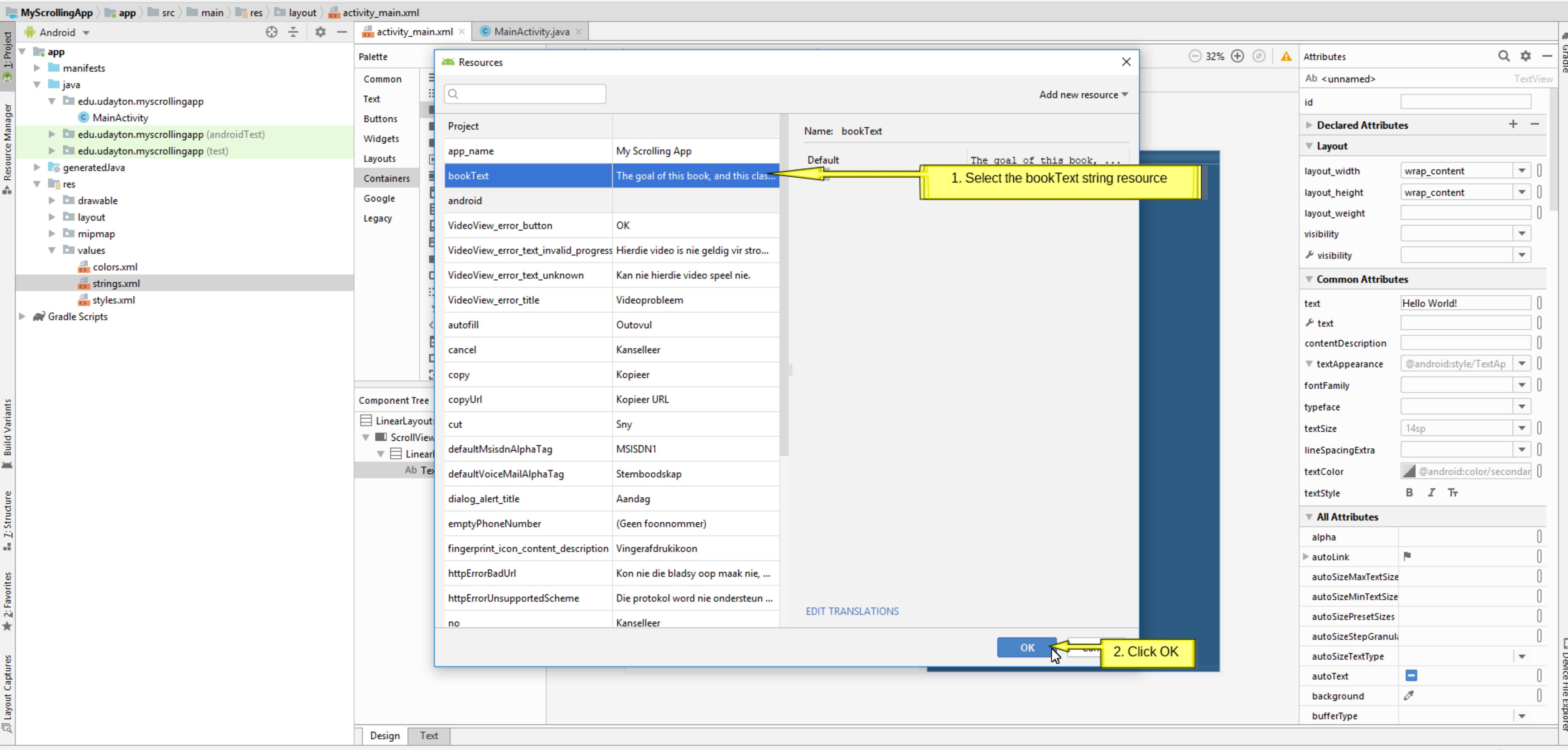
bufferType

Set the TextView to display this text using the Resources manager

Device File Explorer

TODO Terminal Build Logcat Event Log

Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (3 minutes ago)

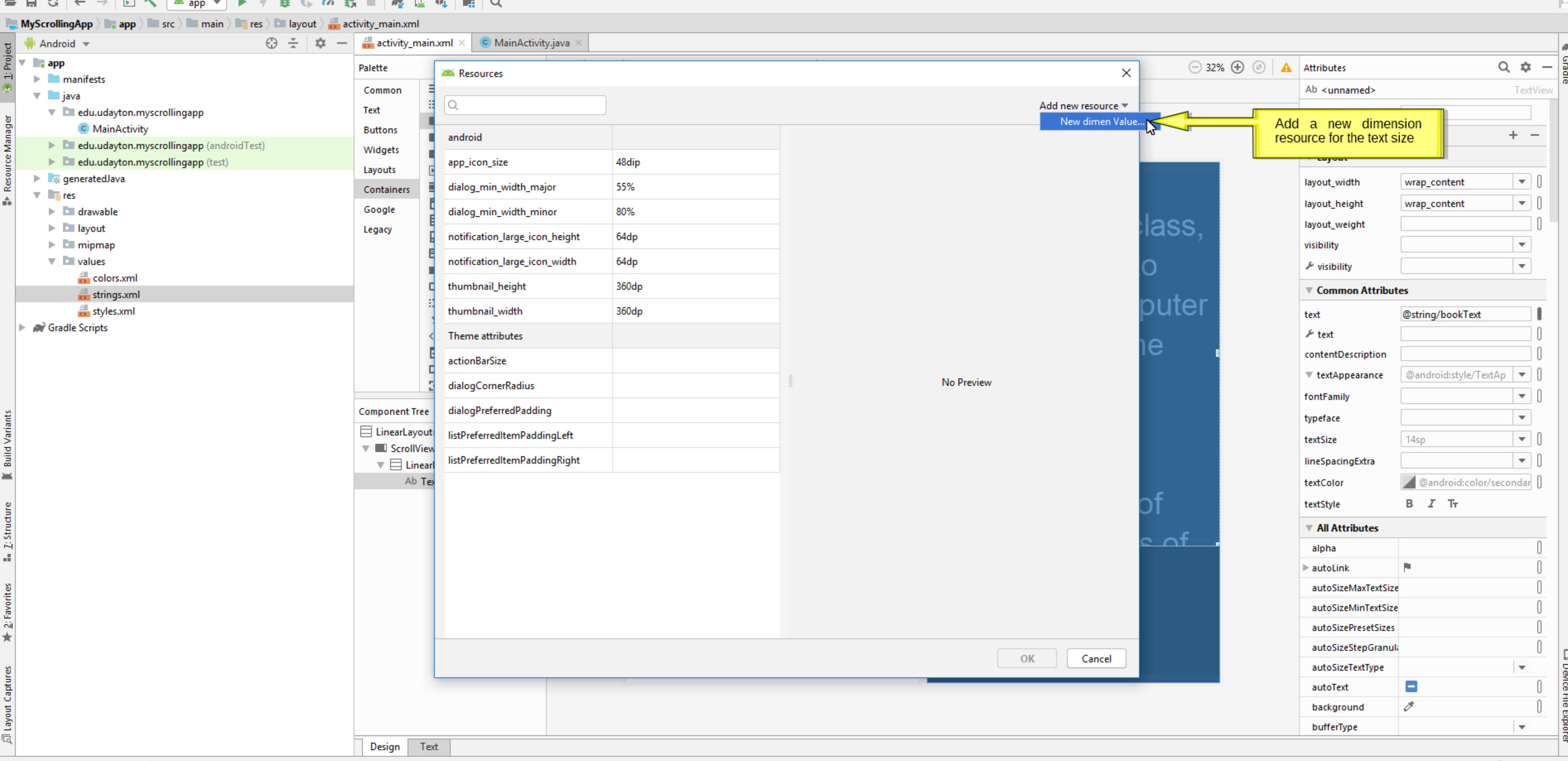


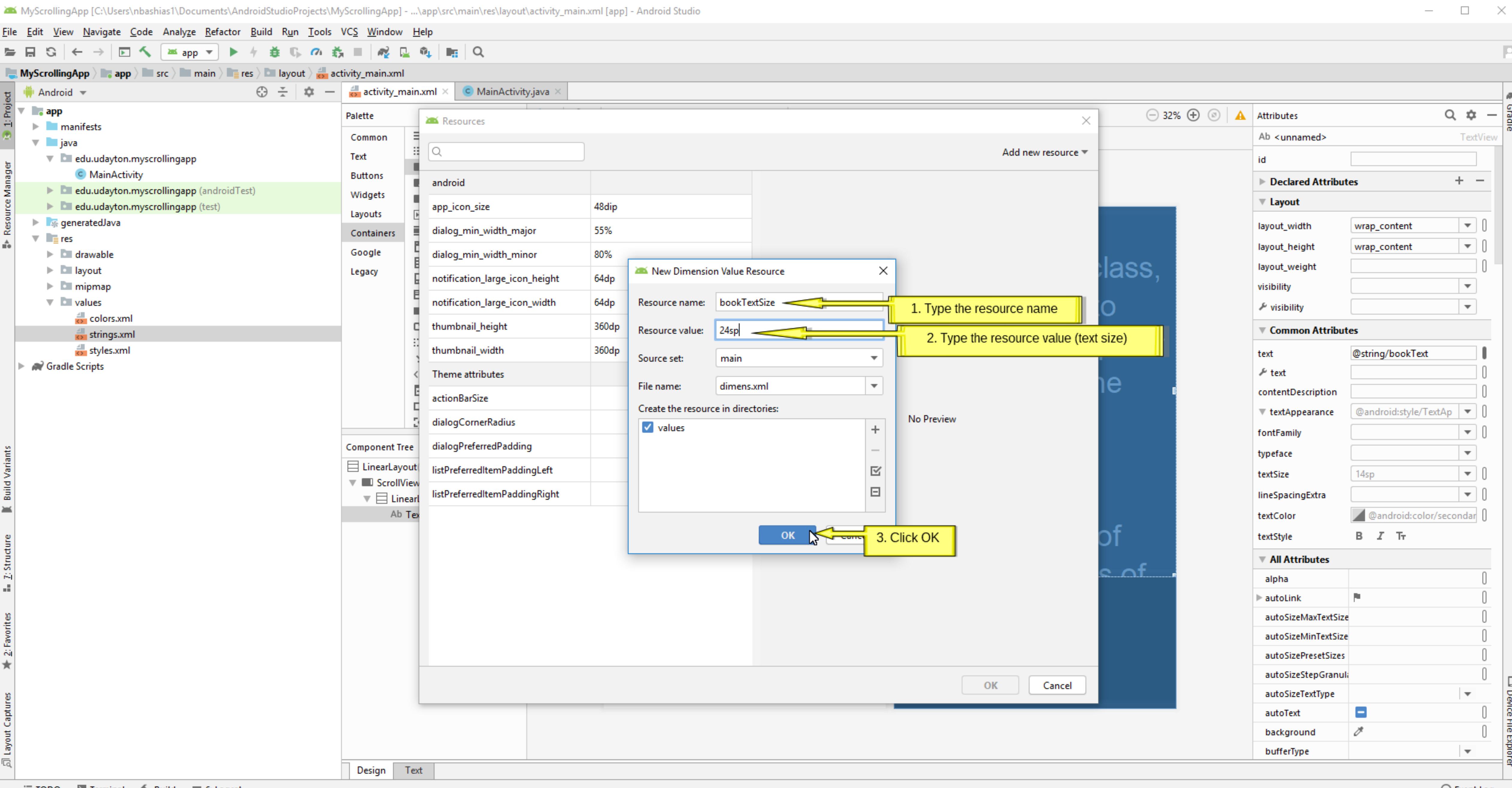
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MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...app\src\main\res\layout\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

Build the project

MyScrollingApp Make Project (Ctrl+F9)

activity_main.xml

MainActivity.java

Android

Project

Resource Manager

1:Project

app

manifests

java

edu.udayton.myscrollingapp

MainActivity

edu.udayton.myscrollingapp (androidTest)

edu.udayton.myscrollingapp (test)

generatedJava

res

drawable

layout

mipmap

values

colors.xml

dimens.xml

strings.xml

styles.xml

Gradle Scripts

Build Variants

Structure

Favorites

Layout Captures

2: Favorites

3: Structure

4: Layout Captures

5: Component Tree

LinearLayout(vertical)

ScrollView

LinearLayout(vertical)

Ab TextView- "@string/bo..."

Palette

Common

Text

Buttons

Widgets

Layouts

Containers

Google

Legacy

Spinner

RecyclerView

ScrollView

HorizontalScrollView

NestedScrollView

ViewPager

CardView

AppBarLayout

NavigationView

BottomNavigationView

Toolbar

TabLayout

TabItem

ViewStub

<include>

<> <fragment>

NavHostFragment

<view>

<requestFocus>

Component Tree

Design Text

Attributes

Ab <unnamed>

id

Declared Attributes

Layout

layout_width

layout_height

layout_weight

visibility

visibility

Common Attributes

text

text

contentDescription

textAppearance

fontFamily

typeface

textSize

lineSpacingExtra

textColor

textStyle

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranularity

autoSizeTextType

autoText

background

bufferType

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Syncing only active variant // You can disable this experimental feature from // File -> Settings -> Experimental -> Gradle -> Only sync the active variant (4 minutes ago)

Event Log

Open the AVD Manager

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scientist. I like
the wav

Attributes

Ab <unnamed>

id

Declared Attributes

Layout

layout_width wrap_content

layout_height wrap_content

layout_weight

visibility

visibility

Common Attributes

text @string/bookText

text

contentDescription

textAppearance

fontFamily

typeface

textSize @dimen/bookTextSize

lineSpacingExtra

textColor @android:color/secondary

textStyle B I Tr

All Attributes

alpha

autoLink

autoSizeMaxTextSize

autoSizeMinTextSize

autoSizePresetSizes

autoSizeStepGranularity

autoSizeTextType

autoText

background

bufferType

Design Text

MyScrollingApp [C:\Users\nbashias1\Documents\AndroidStudioProjects\MyScrollingApp] - ...app\src\main\res\layout\activity_main.xml [app] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MyScrolling 1: Project

Resource Manager

Gradle

Layout Variants

Favorites

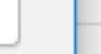
Layout Captures

Android Virtual Device Manager

Your Virtual Devices

Android Studio

Type	Name	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
Emulator	Nexus 5 Pie	▶	1080 × 1920: xxhdpi	28	Android 9.0 (Google Play)	x86	9.2 GB	 

+ Create Virtual Device...  ? 

Design Text

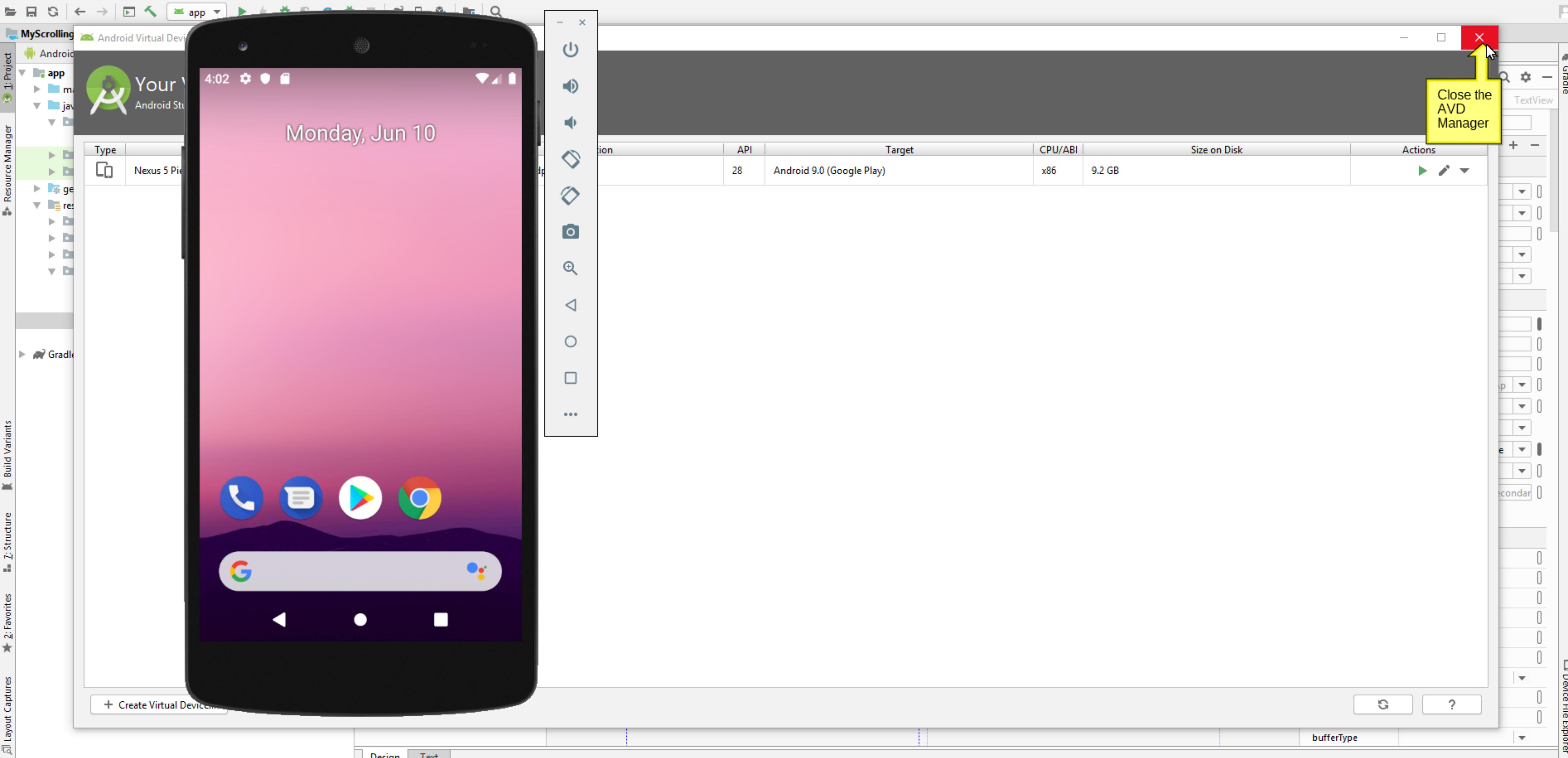
bufferType

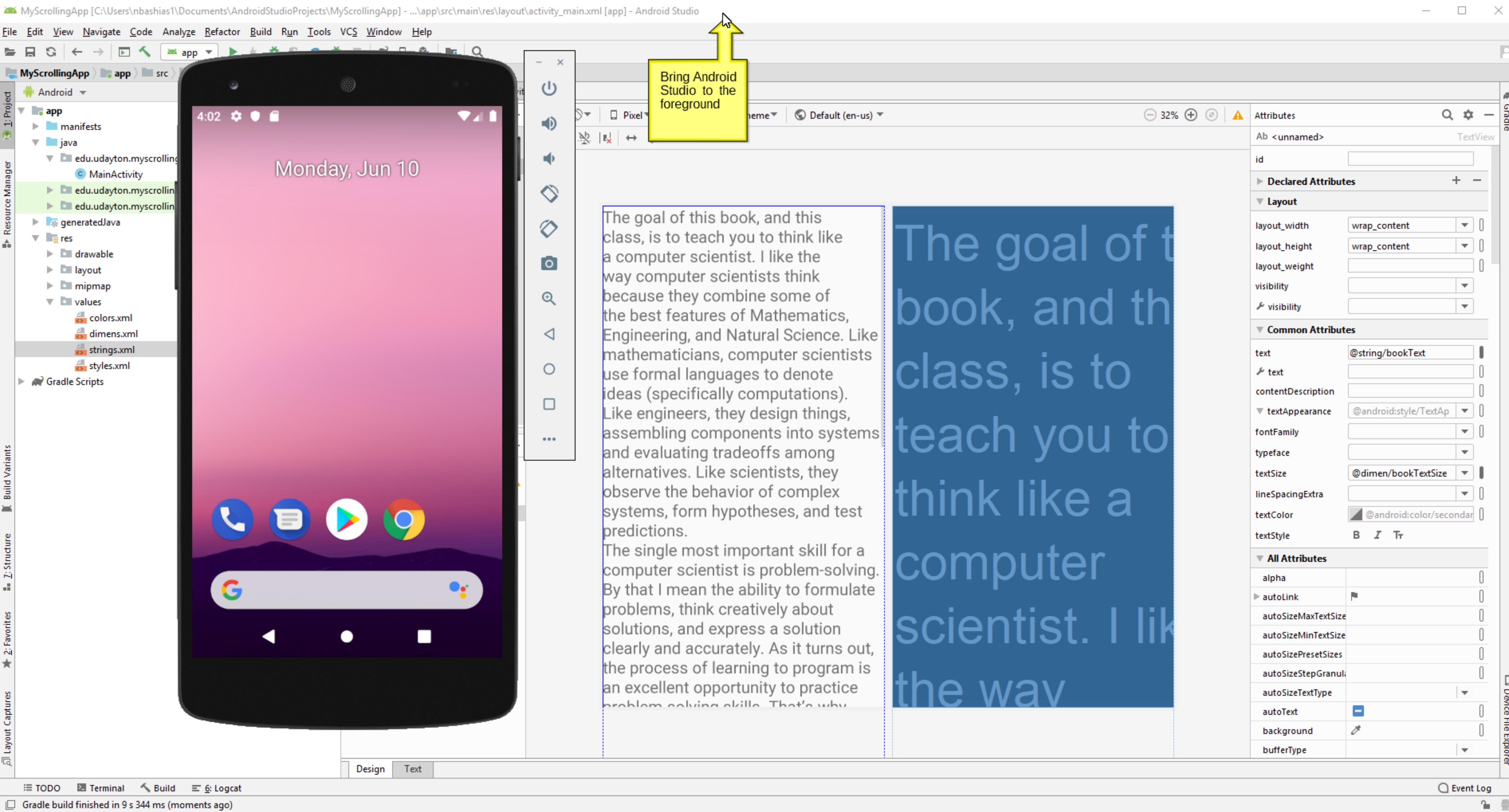
TODO Terminal Build Logcat Event Log

Gradle build finished in 9 s 344 ms (moments ago)

Start the emulator with the Nexus 5 system image

Device File Explorer





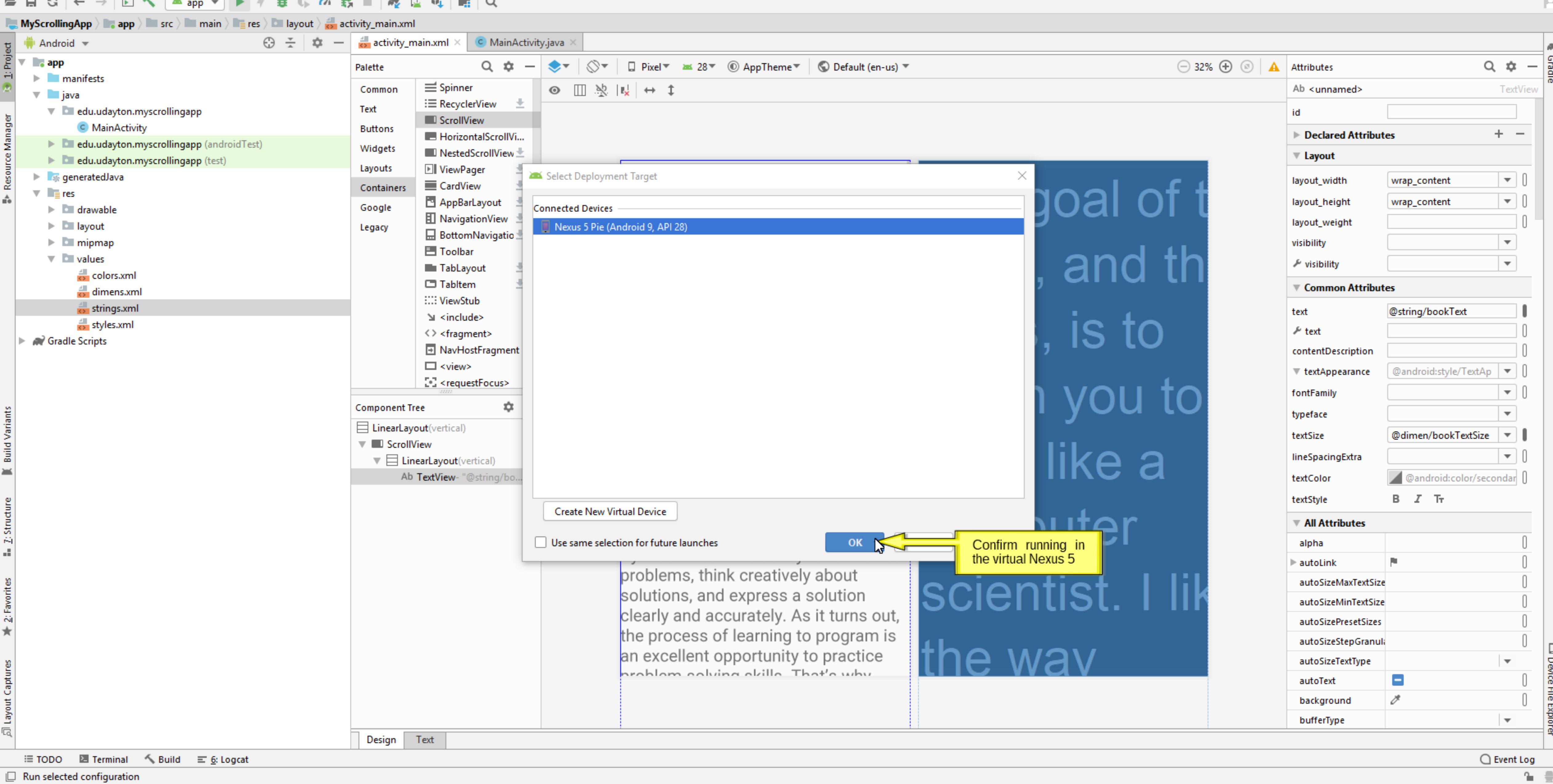
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think like a
computer
scientist. I like
the wav

Run the app

Design Text



The screenshot shows an Android application titled "My Scrolling App". The main content area displays a large block of text:

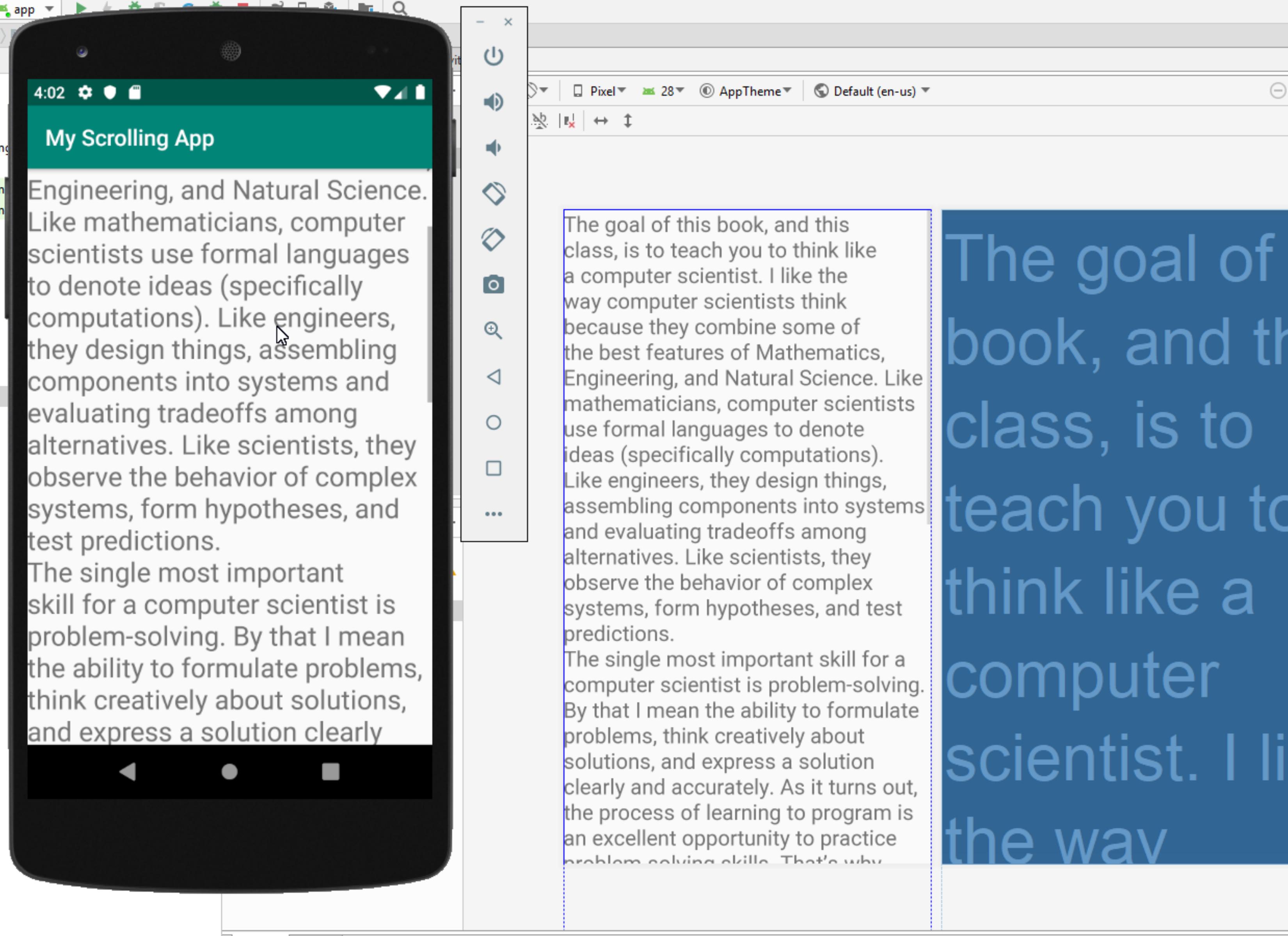
The goal of this book, and this class, is to teach you to think like a computer scientist. I like the way computer scientists think because they combine some of the best features of Mathematics, Engineering, and Natural Science. Like mathematicians, computer scientists use formal languages to denote ideas (specifically computations). Like engineers, they design things, assembling components into systems and evaluating tradeoffs among alternatives. Like scientists, they observe the behavior of complex systems, form hypotheses, and test predictions.

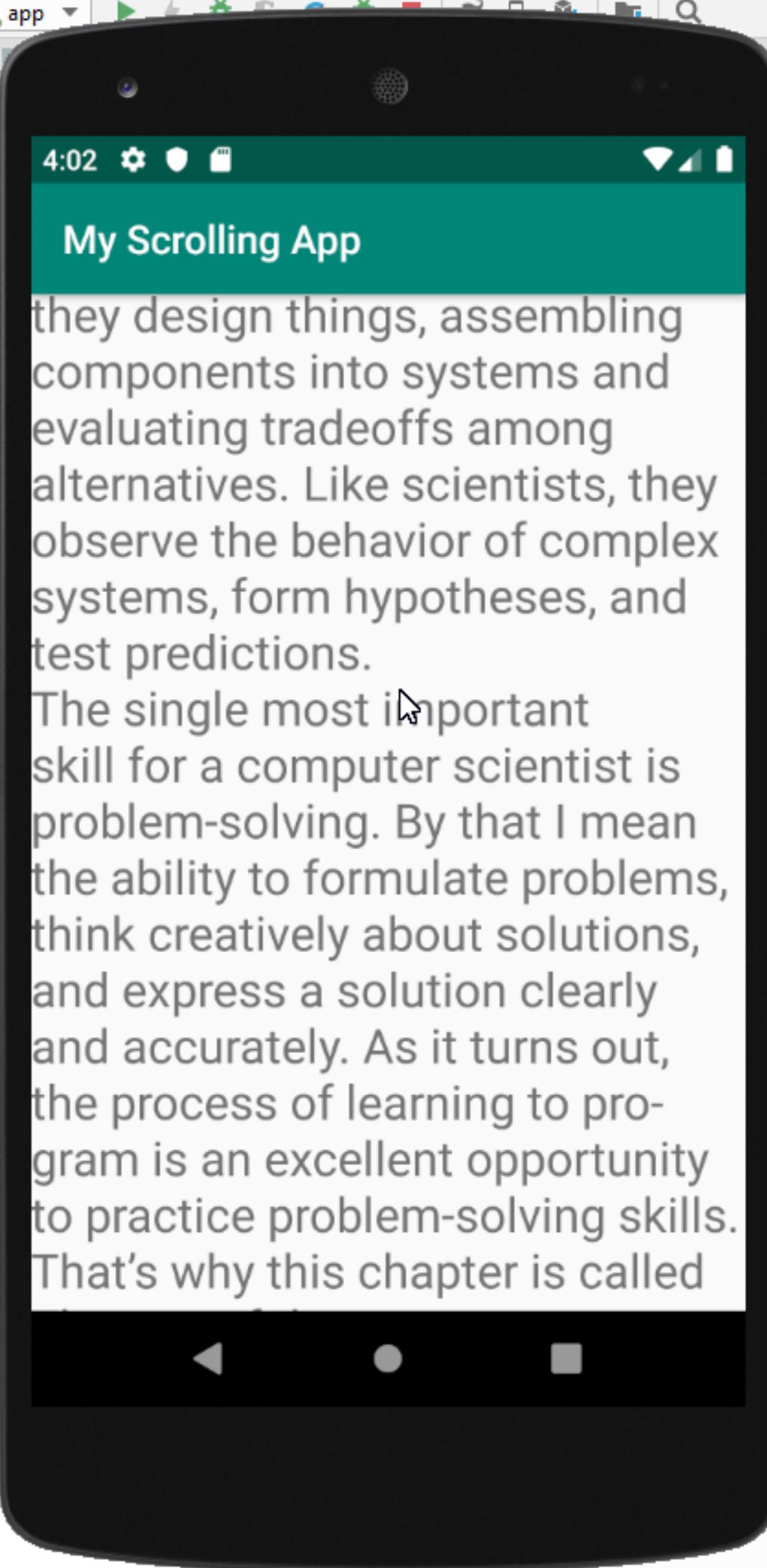
A yellow callout box with a black border and a yellow arrow points from the text in the app to the explanatory text below. The explanatory text reads:

We can now click-and drag (tap-and-swipe) up to scroll and view more of the text

The Android Studio interface is visible on the right, showing the XML code for the TextView component:

```
<TextView  
    android:id="@+id/textView"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/bookText"/>  
    <!-- Declared Attributes -->  
    <!-- Layout -->  
    <!-- Common Attributes -->  
    <!-- All Attributes -->
```





The screenshot shows an Android application titled "My Scrolling App". The main content area displays two large blocks of text. The top block reads:

they design things, assembling components into systems and evaluating tradeoffs among alternatives. Like scientists, they observe the behavior of complex systems, form hypotheses, and test predictions.

The single most important skill for a computer scientist is problem-solving. By that I mean the ability to formulate problems, think creatively about solutions, and express a solution clearly and accurately. As it turns out, the process of learning to program is an excellent opportunity to practice problem-solving skills. That's why this chapter is called

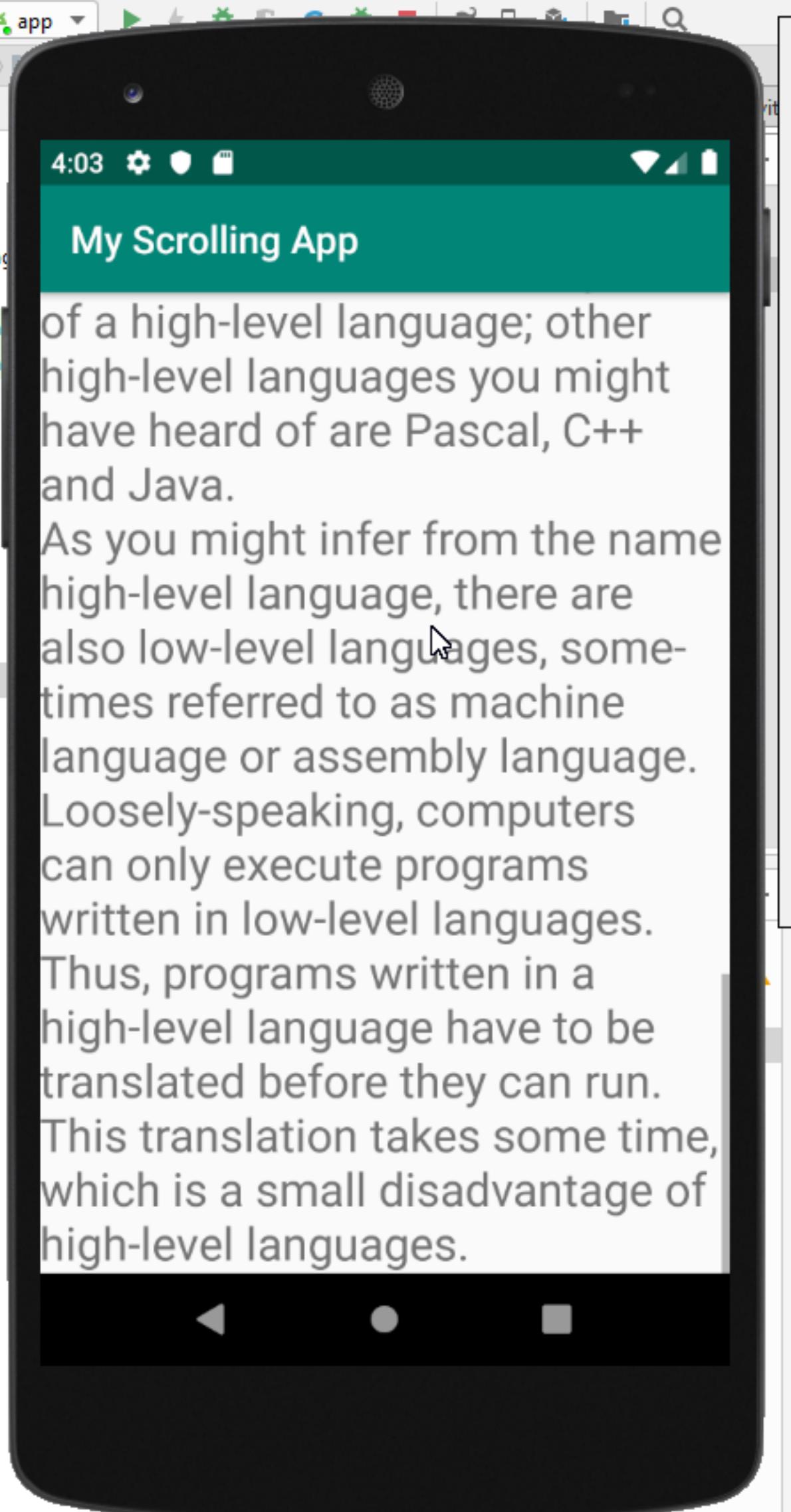
The bottom block of text is partially visible at the bottom of the screen:

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The right side of the interface shows the "Text" tab of the Android Studio Layout Editor. The text is contained within a `TextView` component. The "Attributes" panel on the right shows the following configuration for the `TextView`:

- Ab <unnamed>**: TextView
- id**: (empty)
- Declared Attributes**:
 - Layout**
 - layout_width**: wrap_content
 - layout_height**: wrap_content
 - layout_weight**: (empty)
 - visibility**: (empty)
 - visibility**: (empty)
- Common Attributes**:
 - text**: @string/bookText
 - text**: (empty)
 - contentDescription**: (empty)
 - textAppearance**: @android:style/TextAp
 - fontFamily**: (empty)
 - typeface**: (empty)
 - textSize**: @dimen/bookTextSize
 - lineSpacingExtra**: (empty)
 - textColor**: @android:color/secondary
 - textStyle**: B I Tr
- All Attributes**:
 - alpha**: (empty)
 - autoLink**: (empty)
 - autoSizeMaxTextSize**: (empty)
 - autoSizeMinTextSize**: (empty)
 - autoSizePresetSizes**: (empty)
 - autoSizeStepGranul**: (empty)
 - autoSizeTextType**: (empty)
 - autoText**: (empty)
 - background**: (empty)
 - bufferType**: (empty)



The screenshot shows an Android application titled "My Scrolling App". The main content area displays a large block of text about high-level languages and the role of computer scientists. A portion of this text is highlighted with a blue selection bar, indicating it is being edited in the XML editor.

My Scrolling App

of a high-level language; other high-level languages you might have heard of are Pascal, C++ and Java. As you might infer from the name high-level language, there are also low-level languages, sometimes referred to as machine language or assembly language. Loosely-speaking, computers can only execute programs written in low-level languages. Thus, programs written in a high-level language have to be translated before they can run. This translation takes some time, which is a small disadvantage of high-level languages.

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Attributes

Ab <unnamed> TextView

Declared Attributes

Layout

layout_width wrap_content
layout_height wrap_content
layout_weight
visibility
✓ visibility

Common Attributes

text @string/bookText
✓ text
contentDescription
✓ textAppearance @android:style/TextAp
fontFamily
typeface
textSize @dimen/bookTextSize
lineSpacingExtra
textColor @android:color/secondar
textStyle B I Tr

All Attributes

alpha
✓ autoLink
autoSizeMaxTextSize
autoSizeMinTextSize
autoSizePresetSizes
autoSizeStepGranul
autoSizeTextType
autoText
background
bufferType

