# Kotlin Android Tutorial

## Kotlin Android

Kotlin is a programming language that can run on JVM. Google has announced Kotlin as one of its officially supported programming languages in Android Studio; and the Android community is migrating at a pace from Java to Kotlin. So, you may see Kotlin code snippets in the forums or online discussions here after.

Learning Android development is very easy, given that you know the right direction and correct steps. Of Course Official Android Developer provides a rich documentation and examples which are helpful in easing the Android App Development. We here help you and guide you in taking those first little steps and master in developing your own Android Applications.

Lets get started!

## Kotlin Android Tutorial

These Kotlin Android Tutorials are targeted for beginners who are enthusiastic and about to write their first Android Application or just playing around the basics of Android using Kotlin language. We shall also present you the capabilities and features provided by Android with examples and sample projects to make your Android Application Development easy and fun.

### Prerequisites

We should know Kotlin programming language, have expertise to use an Android Phone, Windows/Ubuntu/Mac to follow the articles and examples for Android App Development using Kotlin language. If you would like to get a quick overview of Kotlin, refer Kotlin Tutorial

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## Getting Started

To get started with Android Application Development, we have to setup the development environment. Download Android Studio[https://developer.android.com/studio/index.html] for your Operating System and follow the below topics to create an Android application with Kotlin Support. If you already know Java and started building Android Applications with it, you may convert them to Kotlin using Android Studio. Also, we put forth some differences between Java and Kotlin with development.

- Basic Walk Through Android Studio
- Example Android Application with Kotlin Support
- Convert Java Files to Kotlin Files
- Kotlin vs Java for Android Development
- Using Java8 features for Android Development

## Understanding the Android Terminology

Understanding the terms and widgets used in an application is like learning a new spoken language in a new geographical area. During the start, you may find some difficulty with the terms, Android community is speaking. We shall take you through a step by step process, with the help of many examples and sections created under Kotlin Android Tutorial.

# Android Widgets

## Android TextView

Android TextView is a basic user interface element that helps you display text to the user. Following Kotlin Android Tutorials take you through : Implementation of a simple TextView to display Hello World; To create TextView dynamically through programming and set a listener to it to respond for a click on the TextView; To get acquainted with some of the properties of TextView like color, font size, background, layout options, etc.

- Android TextView
    - Basic Android TextView Example
    - Create TextView programmatically in Android
    - Set OnClickListener for TextView in Android
    - TextView – Text Color
    - TextView – Italic Text
    - TextView – Bold Text
    - Text View – Justify Text
    - TextView – Selectable Text
    - TextView – Shadow Effect
    - TextView – Center Align Text

- TextView – Left Align Text
- TextView – Right Align Text
- Rotate TextView 90, 180, 270 or another angle

## Android Button

Buttons are present in most of the User Interface applications. Android provides Button as a User Interface element wherein a user can tap on it or click for triggering an action. Following Kotlin Android Tutorials help to get started with Android Button, create a Button dynamically through programming and add it to the user interface layout, set an action listener to it to listen for clicks, change some of the default properties like text color, text size, background, etc.

- Kotlin Android – Create Button programmatically
- Kotlin Android Button – Text
- Kotlin Android Button – Text Size
- Kotlin Android Button – Text Color
- Kotlin Android Button – Text Font Weight
- Kotlin Android Button – Lowercase
- Kotlin Android Button – Height and Width
- Kotlin Android Button – Maximum Width
- Kotlin Android Button – Maximum Height
- Kotlin Android Button – Text Shadow
- Kotlin Android Button – Background Color
- Kotlin Android Button – Disable/Enable
- Kotlin Android Button – Padding
- Kotlin Android Button – Rotation
- Kotlin Android Button – Tool Tip Text
- Kotlin Android Button – Shadow
- Kotlin Android – Dynamically change Button Background
- Kotlin Android – Custom Design for Button Background
- Kotlin Android Button – OnClickListener

## Android Toast

Toasts are helpful in showing some information about the operation the user has done or so for a moment and disappear. There are two timing options Toast provides : SHORT and LONG. It does not obstruct the current activity and wraps around the message being displayed as Toast. The current activity remains interactive and visible.

- Android Toast Example
- Change Toast text color and background

## Android EditText

Android EditText is the user interface element through which you may request user to provide text input.

- Create EditText programatically in Android

## Android ImageView

Android ImageView is a View object that displays an image in Android Application.

- Andriod ImageView Example
- Android ImageView – Set Specific Height
- Android ImageView – Set Specific Width
- Android ImageView – Set Tint Color & Tint Mode
- Android Set OnClickListener for ImageView

## Android LinearLayout

Android LinearLayout displays a group of children one after another vertically or horizontally.

- Android LinearLayout
- Android LinearLayout – Vertical Orientation
- Android LinearLayout – Horizontal Orientation
- Android LinearLayout – Center Align

## Android RadioButtons

- Create new Android Radio Buttons pragmatically

## Android SeekBar

- Android SeekBar Example
- Android SeekBar Set Custom Range

## Android Snackbar

Android Snackbar is similar to Toast. In addition to displaying a message, an action could be set to Snackbar.

- Android Snackbar – Example
- Android Snackbar – Set Action
- Android Snackbar – Change Text Color, Background Color

## Android ListView

- Android ListView Example
- Android ListView – Refresh

## Android RecyclerView

- Android RecyclerView Tutorial

## Android ActionBar

- Android ActionBar – Set Background Color

## Android Programming – Other

- Access View programmatically using findViewById
- Android runOnUiThread()

## Android – Text To Speech

- Android Text To Speech Example

## Android Game Development

- Getting Started with Android Game Development
- Detect Collisions between two Sprites

## Android – Fix Errors

- Android Gradle Error : Minimum supported Gradle version

## Android Example Applications

- Android Login Form Example

## Android Styling

- Change background color of Application bar or Toolbar in Android Application
- Change background color of Status bar in Android Application
- Preview an Android Activity in Landscape and Portrait mode using Android Studio

## Android Fix Issues

- Kotlin plugin should be enabled before 'kotlin-kapt'

## Conclusion

Many examples and tutorials have been provided to learn Android Application Development using Kotlin programming language. You might have many ideas in mind or problems that you would like to solve using an

Android Application. With the understanding of all the tutorials provided, you are good to start with the development of a nice Android Application of your own.

## Getting Started with Android

- **Kotlin Android Tutorial**
- Create Android Application with Kotlin Support
- Walk Through Android Studio
- Convert Java Files to Kotlin Files
- Kotlin vs Java
- Use Java 8 in Android
- Add External Jar to Android Dependencies

## Android TextView

- Android TextView
- Android TextView - Basic Example
- Android TextView - Create programmatically
- Android TextView - OnClickListener
- Android TextView - Justify Text
- Android TextView - Italic
- Android TextView - Bold

## Android Button

- Android - New Button programmatically
- Android Button - OnClickListener
- Android Button - Disable All Caps
- Android Button - Custom Background
- Android Button - Change background programatically

## Android Toast

- Android Toast - Example

## Android EditText

- Android EditText - Create programmatically

- Android EditText - Create programmatically
- Android EditText - On Text Change - Listener
- Android TextInputLayout - Floating Label in EditText
- Android EditText - Keyboard with only Numbers
- Android EditText - Show/Hide Password

### Android ImageView

- Android ImageView - OnClickListener

### Android Radio Buttons

- Android RadioGroup - RadioButtons Create programmatically

### Android SeekBar

- Android SeekBar - Example
- Android SeekBar Set Custom Range

### Android Intent

- Android - Start Another Activity
- Android - Open URL in Browser Activity

### Android AlertDialog

- Android AlertDialog - Example

### Android WebView

- Android WebView - Example

### Android ProgressBar

- Kotlin Android - Inderterminate ProgressBar

### Android Snackbar

- Android Snackbar - Example
- Android Snackbar - Set Action
- Android Snackbar - Change Text Color, Background Color

### Android ListView

- Android ListView Example

- Android ListView Example
- Android Refresh ListView

### Android Device Parameters

- Android Get Screen Width and Height Programatically

### Android Canvas

- Draw Rect / Oval to Canvas
- Android Draw Circle Border
- Android Draw SVG to Canvas

### Android Programming - Other

- Android - Access View Programmatically using findViewById
- Android runOnUiThread

### Android Game Development

- Android Game Development
- Detect Collisions between two Sprites (Bitmaps)

### Android Text To Speech

- Android Text To Speech - Kotlin Example

### Fix Errors

- Android - Minimum supported Gradle version
- Android - All support libraries must use the exact same version specification

### Example Applications

- Android - Login Form
- Android - Color Picker
- Kotlin Android Game Development

### Kotlin - Java

- Kotlin Tutorial

### Useful Resources

- How to Learn Programming

▼ How to Learn Programming