

# CPS 251 - Android Programming Using Java

In this course, students create programs written in Java to run on an Android smart phone or tablet. Students taking this class should have a very good knowledge of Java. Topics include Graphical User Interfaces, data storage, audio, databases, GPS and Google Maps.

## **Module 1: Java Fundamentals**

Android Software Set Up (17:30)

[https://www.youtube.com/watch?v=xsFG4nxDX5s&index=59&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=xsFG4nxDX5s&index=59&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Android Environment Fundamentals1 - (17:30)

[https://www.youtube.com/watch?v=eI9Y5QfIWWs&index=60&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=eI9Y5QfIWWs&index=60&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Android Environment Fundamentals 2- (25:56)

[https://www.youtube.com/watch?v=5V2ODZn7IJ0&index=58&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=5V2ODZn7IJ0&index=58&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Key Concepts – (22:54)

[https://www.youtube.com/watch?v=fKMbap9x1x8&index=61&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=fKMbap9x1x8&index=61&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

## **Module 2: GUI-Simple Buttons**

Interfaces: Java Tutorial - (16:50)

[https://www.youtube.com/watch?v=VaZpp2H-uYM&index=57&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=VaZpp2H-uYM&index=57&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Starting Examples - (20:39)

[https://www.youtube.com/watch?v=TSUen-qLaI8&index=50&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=TSUen-qLaI8&index=50&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Button Examples - (21:28)

[https://www.youtube.com/watch?v=wQEmWQ-XGh8&index=52&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=wQEmWQ-XGh8&index=52&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

XML Crash Course - (29:26)

[https://www.youtube.com/watch?v=aE2GaxEo-I&index=55&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=aE2GaxEo-I&index=55&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Jing - (7:53)

<https://www.youtube.com/watch?v=YvIxOOMMO5A>

Resource Example - (42:59)

[https://www.youtube.com/watch?v=ShbaFUdezR4&index=54&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=ShbaFUdezR4&index=54&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

## **Module 3: More Buttons, Menus**

Android Tic Tac Toe- (21:50)

[https://www.youtube.com/watch?v=Ghs2\\_yZF8h4&index=49&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=Ghs2_yZF8h4&index=49&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Android Tic Tac Toe Add On- (45:00)

[https://www.youtube.com/watch?v=uUkwRgeRmM4&index=12&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=uUkwRgeRmM4&index=12&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Menu Button And Activity Bar- (39:02)

[https://www.youtube.com/watch?v=MOCjzT0TI2M&index=46&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=MOCjzT0TI2M&index=46&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Essential Debugging Skills- (25:12)

[https://www.youtube.com/watch?v=z-5H1VWWjDI&index=48&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=z-5H1VWWjDI&index=48&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Miscellaneous Android Studio Issues- (20:40)

[https://www.youtube.com/watch?v=e\\_vpq9erTHM&index=47&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=e_vpq9erTHM&index=47&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Running On a Real Android- (10:44)

[https://www.youtube.com/watch?v=QZiJ5cgXVHs&index=45&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=QZiJ5cgXVHs&index=45&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Drawing Fundamentals- (39:02)

[https://www.youtube.com/watch?v=cvEmGd7-784&index=13&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=cvEmGd7-784&index=13&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

## **Module 4: GUI Drawing, Adapters**

Drawing Hangman Hints- (43:50)

[https://www.youtube.com/watch?v=x4KQUaOUpvl&index=44&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=x4KQUaOUpvl&index=44&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Screen Touch Sensing- (28:59)

[https://www.youtube.com/watch?v=eK2bnJMuiMA&index=43&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=eK2bnJMuiMA&index=43&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Edit Text and Enhanced TextView –(36:50)

[https://www.youtube.com/watch?v=o\\_1tlqUeSdQ&index=42&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=o_1tlqUeSdQ&index=42&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Adapter Fundamentals- (46:07)

[https://www.youtube.com/watch?v=Y84xigg6ldw&index=41&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=Y84xigg6ldw&index=41&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Programming Philosophy- (2:21)

[https://www.youtube.com/watch?v=z4YaJ\\_6\\_2nM&index=40&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=z4YaJ_6_2nM&index=40&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

## **Module 5: GUI Context Menus, Dialogs**

Context Menues-(20:52)

[https://www.youtube.com/watch?v=PZRENZTcrYs&index=37&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=PZRENZTcrYs&index=37&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Dialogs-(43:58)

[https://www.youtube.com/watch?v=2yggzLNJFOk&index=36&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=2yggzLNJFOk&index=36&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

List View Next Steps- (49:17)

[https://www.youtube.com/watch?v=h0sdsO1lyZ0&index=39&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=h0sdsO1lyZ0&index=39&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Preference Files- (36:40)

[https://www.youtube.com/watch?v=Fi\\_jiQ5pxL4&index=38&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=Fi_jiQ5pxL4&index=38&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

## **Module 6: Data**

File Input/Output Basics- (43:24)

[https://www.youtube.com/watch?v=4zS0CpStiAk&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=34](https://www.youtube.com/watch?v=4zS0CpStiAk&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=34)

My Drawing Program-(37:02)

[https://www.youtube.com/watch?v=YydWApj3kp0&index=71&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=YydWApj3kp0&index=71&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

Simple Intent Calls(Explicit)-(35:00)

[https://www.youtube.com/watch?v=1pwJYGI0ulQ&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=70](https://www.youtube.com/watch?v=1pwJYGI0ulQ&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=70)

Implicit Intent For Joke Rater- (21:00)

[https://www.youtube.com/watch?v=D1AYun5O48Q&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=33](https://www.youtube.com/watch?v=D1AYun5O48Q&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=33)

Advanced Web Features- (8:48)

[https://www.youtube.com/watch?v=8cA0wa7UXP8&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=35](https://www.youtube.com/watch?v=8cA0wa7UXP8&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=35)

## **Module 7: Intents and Activity States**

System Intent Calls -(30:00)

[https://www.youtube.com/watch?v=eMMrPW5TuhM&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=31](https://www.youtube.com/watch?v=eMMrPW5TuhM&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=31)

One Liner Implicit Calls- (27:28)

[https://www.youtube.com/watch?v=SPgrXoQRN0c&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=30](https://www.youtube.com/watch?v=SPgrXoQRN0c&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=30)

Activity States- (35:00)

[https://www.youtube.com/watch?v=2BR5WHHznzg&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=29](https://www.youtube.com/watch?v=2BR5WHHznzg&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=29)

Java: Web and Threads- (23:27)

[https://www.youtube.com/watch?v=6KUoe0vL\\_Yw&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=32](https://www.youtube.com/watch?v=6KUoe0vL_Yw&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=32)

Handler Approach- (39:16)

[https://www.youtube.com/watch?v=Zk-idhYKrVA&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=28](https://www.youtube.com/watch?v=Zk-idhYKrVA&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=28)

## **Module 8: Threads, Web**

Web Downloads Using Handlers- (19:13)

[https://www.youtube.com/watch?v=KTggI52IY1c&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=26](https://www.youtube.com/watch?v=KTggI52IY1c&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=26)

Java: New Features- (9:41)

[https://www.youtube.com/watch?v=UNe-LaEp-uo&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=27](https://www.youtube.com/watch?v=UNe-LaEp-uo&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=27)

Android Threads: Async Task Approach- (39:59)

[https://www.youtube.com/watch?v=ixjTBdEmuno&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=22](https://www.youtube.com/watch?v=ixjTBdEmuno&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=22)

## **Module 9: Databases**

SQL and SQLite- (47:13)

[https://www.youtube.com/watch?v=12Eo3G1I9z0&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=68](https://www.youtube.com/watch?v=12Eo3G1I9z0&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=68)

Raw SQL on Android- (26:01)

[https://www.youtube.com/watch?v=kXkjdtFLJG4&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=69](https://www.youtube.com/watch?v=kXkjdtFLJG4&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=69)

People Database Version 1 and 2- (35:00)

[https://www.youtube.com/watch?v=ehUls71lCoM&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=66](https://www.youtube.com/watch?v=ehUls71lCoM&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=66)

Content Provider First Version- (25:27)

[https://www.youtube.com/watch?v=wpZQfRwcXu8&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=67](https://www.youtube.com/watch?v=wpZQfRwcXu8&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=67)

## **Module 10: Databases continued**

Content Provider List view Issues- (24:00)

[https://www.youtube.com/watch?v=Lr5BrYrkEgE&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=20](https://www.youtube.com/watch?v=Lr5BrYrkEgE&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=20)

Snooping Content URI's- (32:00)

[https://www.youtube.com/watch?v=47ttOWkzYs8&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=19](https://www.youtube.com/watch?v=47ttOWkzYs8&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=19)

Notification Line- (39:59)

[https://www.youtube.com/watch?v=jn3LMCR\\_3xA&index=18&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A](https://www.youtube.com/watch?v=jn3LMCR_3xA&index=18&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A)

## **Module 11: Notification Broadcast Receivers Services**

Alarm Manager Broadcast Receiver- (25:52)

[https://www.youtube.com/watch?v=r26EOxEwDVA&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=17](https://www.youtube.com/watch?v=r26EOxEwDVA&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=17)

Alarm Manager Scheduler- (25:00)

[https://www.youtube.com/watch?v=ZbzCM23aCqg&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=16](https://www.youtube.com/watch?v=ZbzCM23aCqg&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=16)

Simple Audio- (11:00)

<https://www.youtube.com/watch?v=EUtGIYeh3AI>

Audio Service Using Resources- (37:08)

[https://www.youtube.com/watch?v=5a8-e00bRnl&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=23](https://www.youtube.com/watch?v=5a8-e00bRnl&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=23)

Audio Service Using DB Media- (29:45)

[https://www.youtube.com/watch?v=l-nrQqu7cZ8&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=21](https://www.youtube.com/watch?v=l-nrQqu7cZ8&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=21)

## **Module 12: Location Services**

Where am I Location Application- (29:05)

[https://www.youtube.com/watch?v=GZZub-AFRTs&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=7](https://www.youtube.com/watch?v=GZZub-AFRTs&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=7)

Geocoder- (23:59)

[https://www.youtube.com/watch?v=A9QZ4wXiPgA&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=6](https://www.youtube.com/watch?v=A9QZ4wXiPgA&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=6)

Service: Where Am I- (27:00)

[https://www.youtube.com/watch?v=R5sFYRBanj8&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=5](https://www.youtube.com/watch?v=R5sFYRBanj8&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=5)

Fragments- WebView Application- (52:05)

[https://www.youtube.com/watch?v=ycNLxusHAz4&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=9](https://www.youtube.com/watch?v=ycNLxusHAz4&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=9)

Fragments: Word Manager- (9:58)

[https://www.youtube.com/watch?v=COrjHSEbbv0&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=8](https://www.youtube.com/watch?v=COrjHSEbbv0&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=8)

## **Module 13: Maps and Widgets**

Hello World With Android Studio-(15:07)

[https://www.youtube.com/watch?v=WyeXsEcXqFc&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=64](https://www.youtube.com/watch?v=WyeXsEcXqFc&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=64)

Obtaining Maps API Key- (14:43)

[https://www.youtube.com/watch?v=glKDUTpNQ-E&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=62](https://www.youtube.com/watch?v=glKDUTpNQ-E&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=62)

Eclipse Google Play Services Dependencies- (7:32)

[https://www.youtube.com/watch?v=xAVmgH\\_602E&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=63](https://www.youtube.com/watch?v=xAVmgH_602E&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=63)

Map Control Software- (39:00)

[https://www.youtube.com/watch?v=wTOykXAinI0&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=4](https://www.youtube.com/watch?v=wTOykXAinI0&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=4)

Simple Widget- (23:50)

[https://www.youtube.com/watch?v=VIL2Sv9Qzn0&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=3](https://www.youtube.com/watch?v=VIL2Sv9Qzn0&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=3)

Phone Widget- (23:50)

[https://www.youtube.com/watch?v=JmAJPfEId\\_k&list=PLYCnr23oAKDnINT2L\\_V0B4uO-WOKViv3A&index=1](https://www.youtube.com/watch?v=JmAJPfEId_k&list=PLYCnr23oAKDnINT2L_V0B4uO-WOKViv3A&index=1)

