

PSoC Academy: How to Create a PSoC BLE Android App

Lesson 1: Getting Started

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Hello. My name is Alan Hawse. I'm Vice President of Technical Staff for Solutions and Software here at Cypress. Welcome to Cypress Academy. I've released a bunch of PSoC Creator and PSoC 4 BLE videos, which you can find in the video library on cypress.com/training. The previous set of videos I released was how to create a robot and an iOS app to connect to a Cypress BLE project. This set of videos is similar to that, in fact it's the same topic, but instead of doing iOS this time, I'm going to do the Android operating system. So I'm going to take you through all of the steps of creating your own Android app that will work with the Cypress PSoC 4 BLE.

If you've already gone through the iOS videos, you don't need to repeat the PSoC portion of these videos. The PSoC project is exactly the same. You can skip directly to video 5 to see the Android version of CySmart in action, or to video 6 if you want to get right into the Android app development.

In the first video I'll give you a tutorial on creating PSoC 4 BLE firmware applications. Next, I'll show you how to debug your firmware using the Android version of CySmart as well as the PC version of CySmart.

Then I'll give you the introduction to the Android Bluetooth framework. After we have the fundamentals all in place I'll help you through the steps of building the app to connect your PSoC 4 BLE project.

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When I started working on these lessons my 12 year old son Nicklaus, who is totally into Maker, said I should build a robot to show in the videos. Imagine that - a 12 year old who is into robots. So I agreed. In the last section of videos I'll show you how to build a robot and write the BLE firmware to run it and then how to build an Android app to be a remote control for your robot.

In order to build the Android apps I'm going to use Android studio 2.1. If you don't have basic knowledge of Android studio, Java, and XML then I highly recommend that you watch the excellent videos on Udacity.com entitled "Android Development for Beginners". There's additional videos there that will focus specifically on Java programming and developing more complex Android applications. But you should not be afraid because building the Android app that will work with PSoC 4 is not that hard.

To follow me in implementing these examples you will need a CY8CKIT-042BLE, and a PC running Creator 3.2 or later, as well as Android studio. Both Creator and Android Studio are free and you can download them off of the internet.

As always you're welcome to email me at alan_hawse@cypress.com with your comments, suggestions criticisms and questions.