All right guys.

So now that all of the tutorial parts of this module have been covered, it's time for the boss level challenge.

And in this challenge, we're going to be using what we learned in previous modules to build out the functionality of our app so that we can actually get real time data for the price of Bitcoin, Ethereum and Lite coins to give our app its full functionality.

And we're going to be using the API provided by coinapi.io

So if you head over to this web address and take a look at their API docs, you'll see that they can provide a whole bunch of data on a lot of different coins.

But what we're mostly interested in is the exchange rates.

So get into REST API, exchange rates, you can see that the way that you would be able to get the price of Bitcoin or any other cryptocurrency that they provide has a URL that looks something like this.

So you have the base URL up to here and then you have the cryptocurrency identifier.

And then after a forward flash you have the fiat currencies such as US dollars or pounds sterling or euros.

And this will give you back a piece of JSON data that look something like this where you can tap into this rate object and get hold of the current value, say for example in this case the price of Bitcoins in US dollars.

But that's not it.

We also have to provide a way of authenticating ourselves, so an API key, just like what we did in the Clima app when we worked with the Open Weather Map API.

So in order to get hold of an API key, you have to head over to coinapi.io/pricing and we're just gonna go for the free one which limits us to 100 daily requests, but that's more than enough to complete our challenge.

So now if you click on get an API key fill in your email and your name, the title you can leave as student and company size leave as one to 10. And then click on get a free API key. And then go into the email that you typed in and you should find an email from coinapi.io giving you access to your API key.

So then the final URL that you're looking at will look something like this.

So it's rest.coinapi.io/, version 1, v1/ exchange rate / the cryptocurrency and then

/ the fiat currency and all of these symbols are already listed in the starting projects so you don't have to worry about that.

And then at the end of the URL, we can tag on the API key just like what we did with the parameters in the Open Weather Map API. And then we can set it equal to the API that they sent us through email. Like this.

And now when I go ahead and hit enter, you can see it gives me back that data and the current price of Bitcoin in U.S. dollars. And this works for of course any other currency. So say if we wanted to know it in euros or if we wanted to know the price of Ethereum,so this is going to be the URL that you're going to be working with in order to complete this challenge.

Now the challenge is split into three parts and it's labeled bronze, silver and gold.

So the idea is that you would go through each of the levels of the challenge and depending on where you get up to without having to look at the solution code,well that's the medal you're going to get. But each of the levels have to happen sequentially.

So we first start with the bronze level where you're simply going to fetch the current price of bitcoins in US dollars.

So that's all the app is going to be able to do, just fetch one price for one cryptocurrency.

Now if you manage to do that without much issue and you're able to level up to the silver level, then in this case you're going to be able to use that scroll wheel that we implemented previously, or on Android it will be the dropdown, and select a currency or any currency and be able to get the value of bitcoin in that currency on the go. And if you want to challenge yourself even further then aim for the gold level where we implement all of the functionality for our app and we add in prices for bitcoins, ethereum and lite coin. And you can scroll through or pick various currencies from the dropdown to see the prices of all of these crypto currencies in the selected fiat currency.

So it's a really fun challenge and it's going to test you a lot on things that you've learned in previous modules and previous lessons.

And remember that if you get stuck, your first protocol should be Stack Overflow,

Google, Flutter documentation and it's only if you're really really stuck and you really can't move forward, then take a look at the solution code which is thoroughly commented and will take you line by line through the solution.

So I hope you're ready to take on this challenge. Head over to the next lesson and get started.