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| Giulia Karanxha 2207809 | 13.03.2024 |
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| Labwork-3: Mobile App with Ionic Framework and API call | |
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# Learning Reflection Do not delete this Section Break.

I watched all the videos required for module 3, followed the official documentation and video tutorials. Initially, following the video “Ionic React Beginners Guide | Navigation, Components & HTTP Calls” by Simon Grimm felt a bit frustrating, as I felt like the creator went too fast in explaining the steps, but after some time spent experimenting and rewatching certain parts (and other tutorials), I began to grasp the concepts better. Additionally, I encountered an execution error while trying to run the Ionic serve command. The error message indicated that PowerShell script execution was disabled on my system, preventing the Ionic script from running. After researching and understanding the issue, I successfully resolved it by adjusting the PowerShell execution policy. The combination of watching videos, reading documentation, and hands-on experimentation proved to be an effective learning approach for mastering the concepts covered in the module. Creating the simple mobile app took a bit more time, the trickiest part was the input handling and storage, but I am now much more confident in creating my own app!

# Ionic-React API Call

Code: <https://github.com/karanxhagiulia/Labwork3>

A screenshot of a computer

Description automatically generatedI followed the video step-by-step. Unfortunately, I encountered some errors. It took some time to debug them, but eventually, I made the app work exactly as it did in the video.

I opened the app on VS Code.

A screenshot of a computer

Description automatically generated

Here I encountered the first error:

A screenshot of a computer

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The solution was actually easy though: because I use a school account (not administrator), I had to open PowerShell as an Administrator and update the execution policy to “YES”. Once I finished creating the app, I reverted the settings to [N] (as shown in a later screenshot).

A screenshot of a computer program

Description automatically generated

A screen shot of a computer

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A screenshot of a computer

Description automatically generatedThen I created the app:

A close-up of a computer screen

Description automatically generatedI activated the API key:

And I switched to Chrome because I prefer the UI and the developer console on Chrome (the screenshots before were on FireFox).

A screenshot of a computer

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The video was straightforward to follow, I struggled a bit with the fact that sometimes I forgot to import what was not imported automatically, spending quite some time to understand why the code wasn’t working properly, when everything looked correct.

A screenshot of a computer

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A screenshot of a computer

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A screen shot of a computer

Description automatically generatedIn the end I reverted the execution policy settings:

I used an emulator with a Pixel 8 after running ionic capacitor to build both iOS and Android:

A screenshot of a computer program

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A screenshot of a computer

Description automatically generatedAndroid Studio slowed my laptop, but the app ran smoothly as expected!

A screen shot of a cell phone

Description automatically generated

A screen shot of a cell phone

Description automatically generated

# Creating a Simple Mobile App

Repository link: <https://github.com/karanxhagiulia/Crypto_Tracker_Mobile_App/tree/main/CryptoTrackerApp>

I created a “Crypto tracker app”; the Crypto tracker app tracks which cryptocurrencies you own, how many, and their value. I created it because you can buy cryptocurrencies in multiple platforms, and in this way you can have a centralized tracker (I use an excel file at the moment).

I used the same structure as the previous Labwork, where I have a “Service” tab for the menu, I also took inspiration from the movie app previously created by following the YouTube tutorial, and created the following pages:

* Home
* MyCryptoList: the user can input, update, and delete the cryptocurrency list
* Watchlist: the user can write the cryptocurrency name and a comment to keep in mind (for example: “BTC, “to buy at 60000€”)

I decided to create a Crypto Price Tracker app so that in the future, I can integrate the API <https://docs.coingecko.com/v3.0.1/reference/setting-up-your-api-key> (I already created the API page and activated my key) and see the price in real time.

A screenshot of a computer program

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A screenshot of a computer

Description automatically generatedI realized I made a small mistake, I first created the repository, and then the app. Since I opened the repository folder in VS Code, I was trying to run Ionic Serve in the wrong folder.

Selecting the icons for the app:

A screenshot of a computer

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I decided to use the “outline” icons for my app:

A screen shot of a computer

Description automatically generated

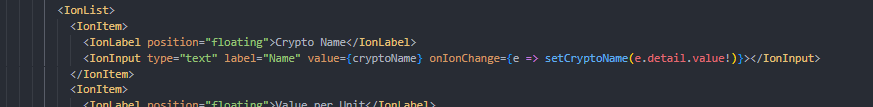
A screenshot of a computer

Description automatically generated

The initial Home of the app. I then removed the second row.

A screenshot of a computer program

Description automatically generated



I received this warning in the console. I initially added the “label” property as suggested, and wrongly kept the IonLabel attribute too, it was writing (of course) two words in the Item attribute (for example, “Crypto Name” , and Name”) so I removed completely the label attribute, left the label property in the IonInput attribute, and fixed the css for the IonInput attribute.

A screenshot of a computer

Description automatically generated

At the current state, the app is composed by:

A screenshot of a computer

Description automatically generatedThe Home page, which I intend to fix in the future with a “Total” of the crypto list value, has a separate Home.css page as well <https://github.com/karanxhagiulia/Crypto_Tracker_Mobile_App/blob/main/CryptoTrackerApp/src/pages/Home.tsx>

The MyCryptoList page, which has a css as well, and allows you to input (or delete a whole row) the crypto name, value and total units, and will automatically write the total value: https://github.com/karanxhagiulia/Crypto\_Tracker\_Mobile\_App/blob/main/CryptoTrackerApp/src/pages/MyCryptoList.tsx

A screenshot of a computer

Description automatically generatedThe user can insert the cryptocurrency name, value, total units:

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

* The Watchlist page works very similarly as the MyCryptoList pageA screenshot of a computer

  Description automatically generated

https://github.com/karanxhagiulia/Crypto\_Tracker\_Mobile\_App/blob/main/CryptoTrackerApp/src/pages/Watchlist.tsx

This app took me quite some time to create, mostly because of the local storage and input handling. I still have a few “bugs” and tweaks I want to fix, such as the fact that when I input the fields, if I click “add crypto” before clicking outside the last field, it doesn’t save the input and the alert appears, as I haven’t filled all the fields.

For example, this one is the expected behaviour: A screenshot of a computer

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This one, is not:

A screenshot of a computer

Description automatically generated

References

Electronic sources

Grimm, S. (2023). Ionic React Beginners Guide | Navigation, Components & HTTP Calls 🔥 [YouTube video]. [Accessed 05.03.2024]. Available: https://www.youtube.com/watch?v=xn-qpnT2n3Q

Academind (2021). Ionic + React - Tutorial for Beginners [YouTube video]. [Accessed 02.03.2024]. Available: https://www.youtube.com/watch?v=\_03VKmdrxV8

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Ionic official documentation. [Accessed 06.03.2024]. Available: https://ionicframework.com/docs/api/input

Ionic Start. Storing Data with local storage. [Accessed 06.03.2024]. Available: https://ionicstart.com/modules/ionic-vs-angular/4/?r=true