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Labwork-1: Setting up Ionic Framework and Developing First App

Giulia Karanxha 2207809   **Report**
                                                R0334/3011/Rathod

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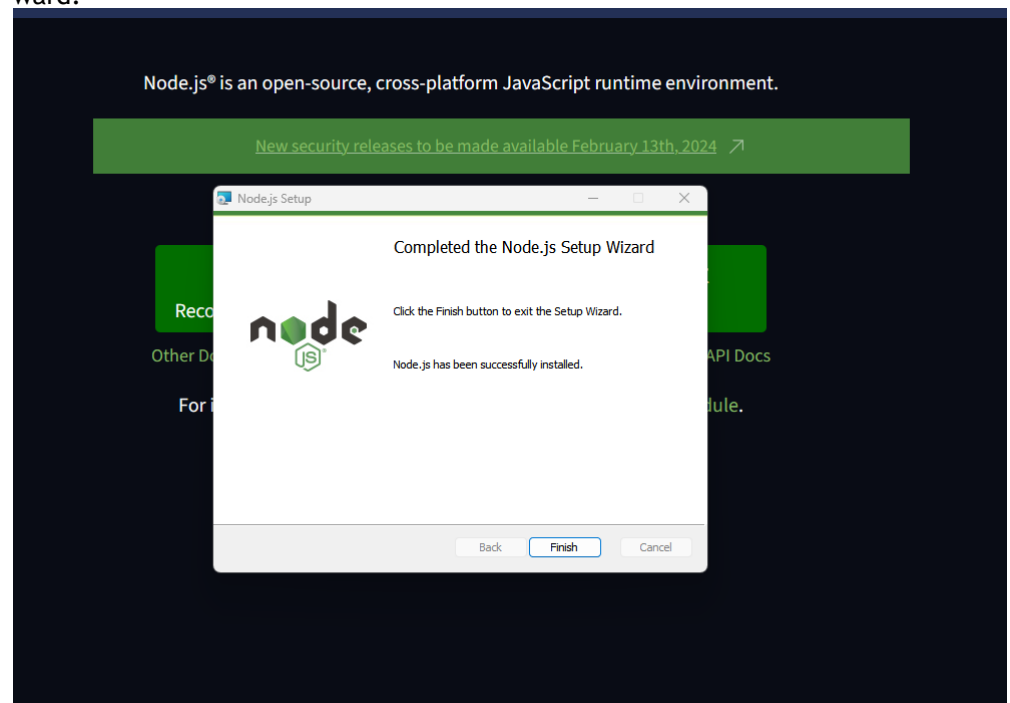
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1   Learning Reflection

I watched all the videos required for module 1. One of the videos compared the following frameworks: Flutter, React Native, Ionic and NativeScrips and their best use. The comparison was between parameters such as ecosystem/third-party libraries, popularity, performance, real-world usage, and features. I am definitely more of a practical learner, and I like to learn by doing (and by making mistakes!). I like to keep step-by-step screenshots and tutorials, and I think I could repeat this Lab Work without problems. I have been interested in UX and UI design for quite some time, as I enjoy the intersection of graphic design/web development and psychology, but I never pursued this topic professionally as I feel the space seems quite competitive. Nevertheless, I enjoy this topic so much that I followed some courses on Coursera and EdX, and now also the videos on Udacity required for this module, which are made targeting UX for mobile development. It was very interesting to learn that Ionic is a "hybrid" framework for creating an app on multiple platforms (iOS, Android, Web) with one source code. Since I started learning and studying coding, I see it as a sort of magic that enables me to create what I imagine, just like painting or drawing. Learning how to create my own app would allow me to actually build some of the ideas I got in recent months: a personal finance application to use with my husband for our finances, an application about stolen bicycles, etc.

Following the instructions for the Lab Work was pretty easy and clear; I had to go a bit more in-depth regarding the environment and the Ionic app creation. Using VS Code, which is an IDE I know well, was also great. I did not encounter specific errors or difficulties, but this is only the first module.

2   Installing NodeJS

To install NodeJS, I visited the website https://nodejs.org/en/, which is provided in the guide, and downloaded the latest version. This process was quite straightforward.

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After ensuring I installed NodeJS correctly, I checked the version using the "cmd" (the Command Prompt) from the search bar. Since I already have git installed, I updated my version. I also already have VS Code installed and up-to-date.

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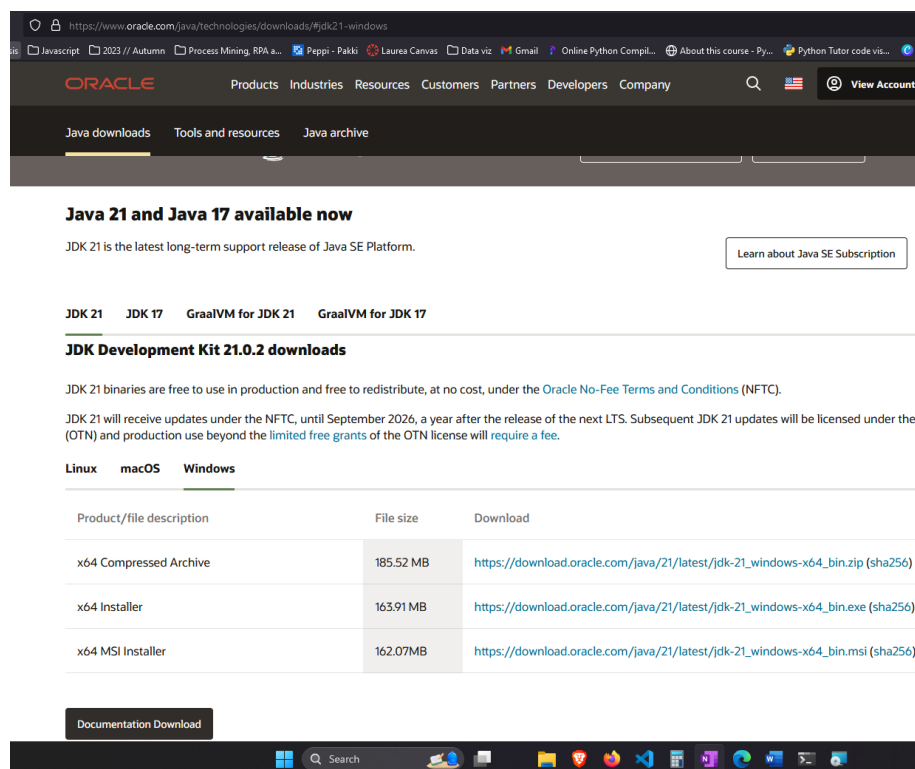
3 Installing Java

I installed the newest JAVA version, which is the 21.0.2:

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4   Setting JDK Environment Variables

This process was something I have never done before, but it was quite easy to fol-
low.

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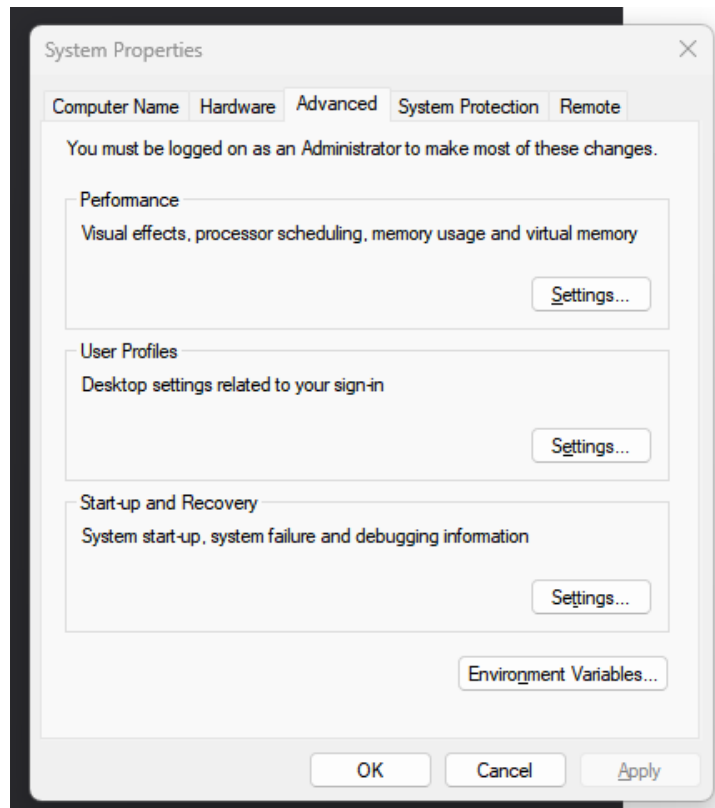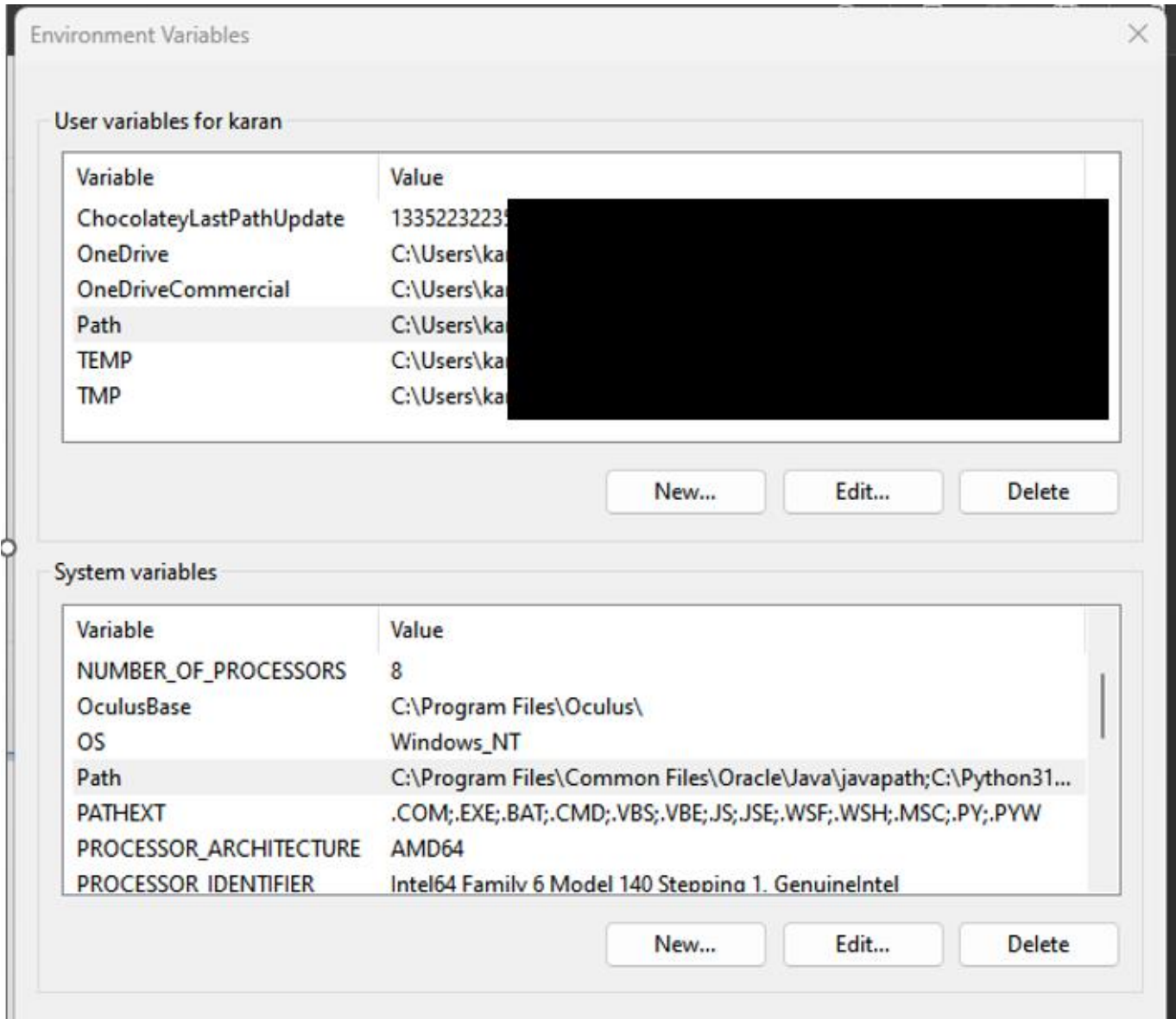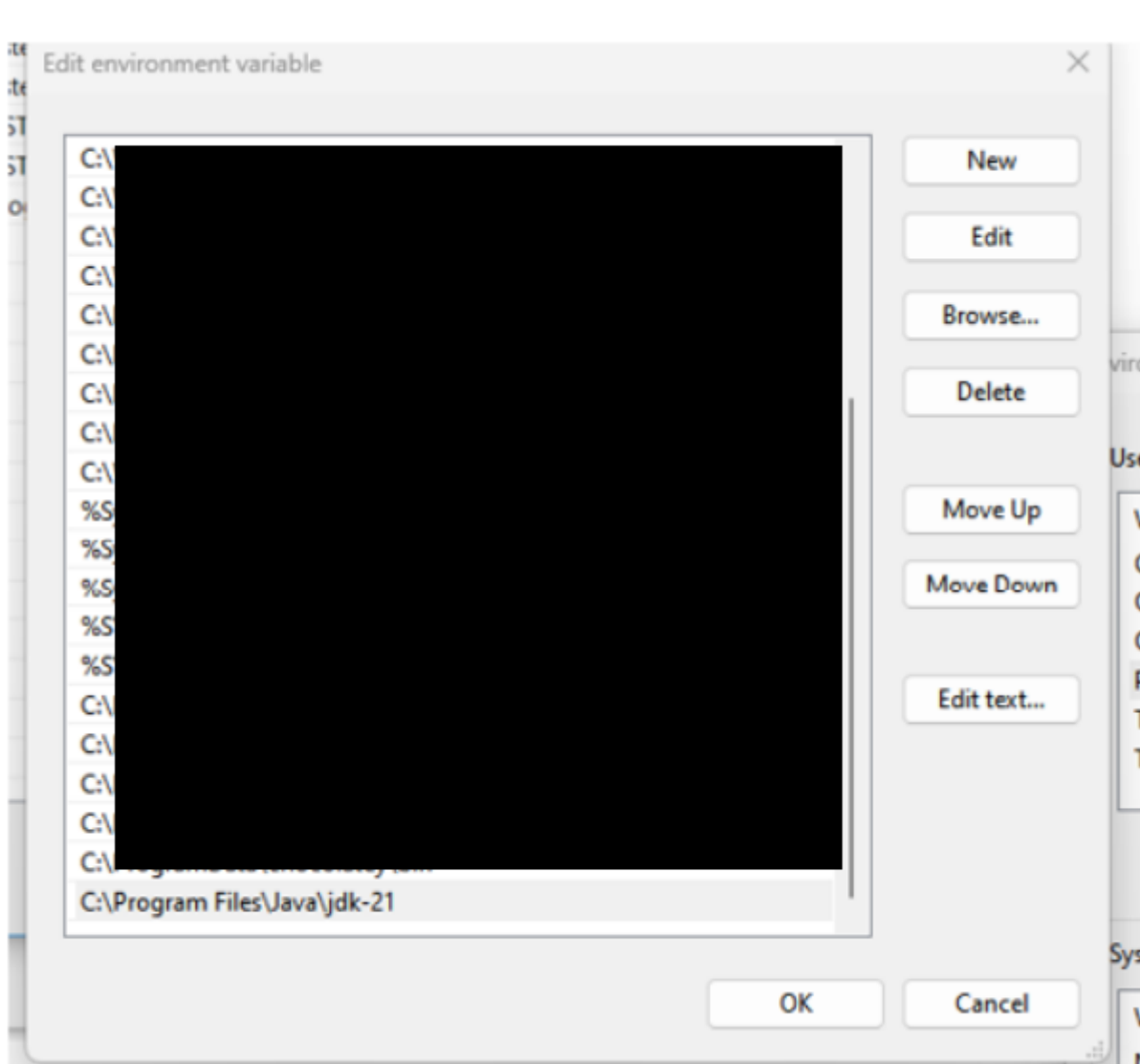
5   Creating a simple Ionic Mobile App

The guide, website and videos on how to install and use Ionic were comprehensive and easy to follow. I am familiar with using the Command Prompt to install programs, so I did not encounter any difficulties.

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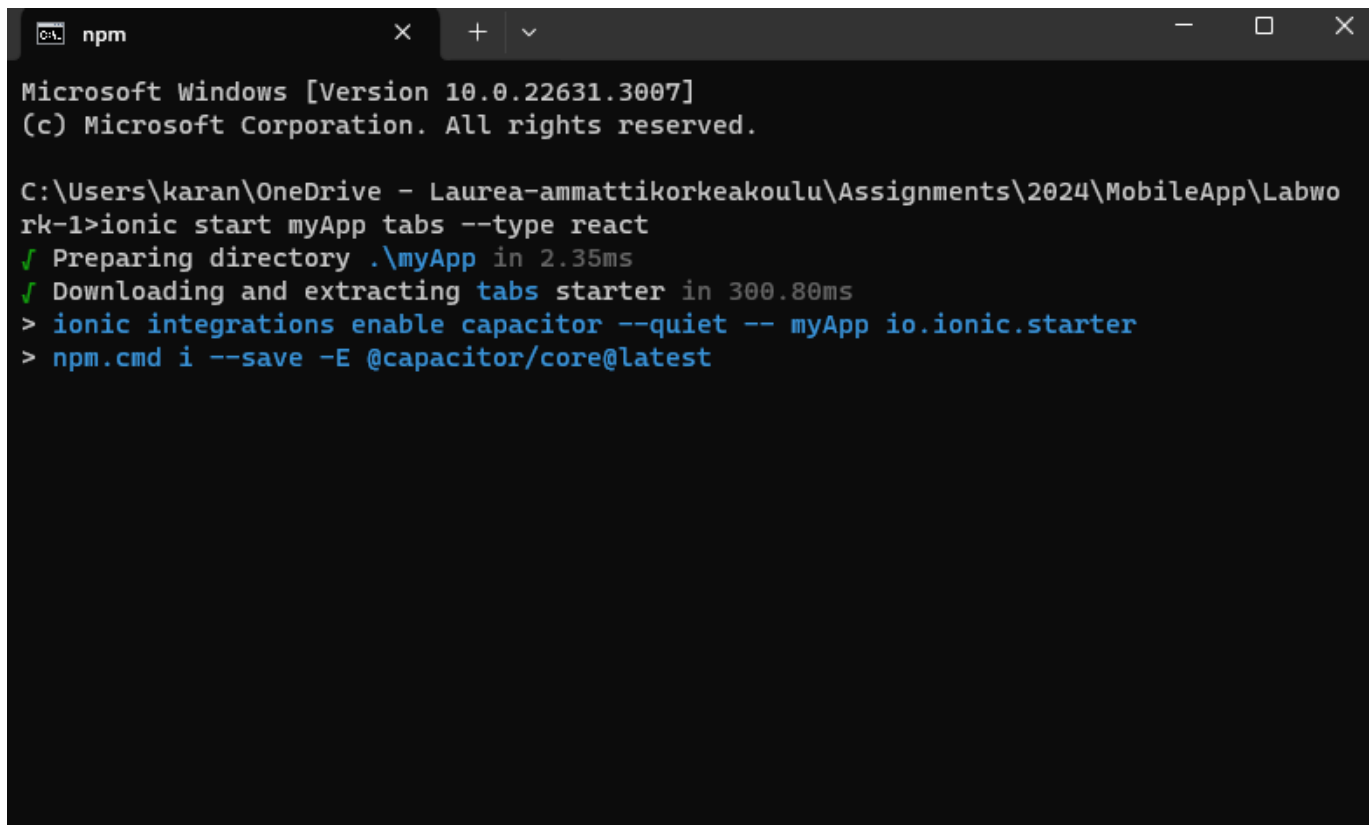
Start an App

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```
npm i                                    ×    +   ∨                       —   □   ×

found 0 vulnerabilities
> npm.cmd i --save -E @capacitor/haptics @capacitor/app @capacitor/keyboard @capacit
or/status-bar

added 4 packages, and audited 756 packages in 5s

155 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
> capacitor.cmd init myApp io.ionic.starter --web-dir dist
√ Creating capacitor.config.ts in C:\Users\karan\OneDrive - Laurea-ammattikorkeakoul
u\Assignments\2024\MobileApp\Labwork-1\myApp in 4.23ms
[success] capacitor.config.ts created!

Next steps:
https://capacitorjs.com/docs/getting-started#where-to-go-next
[OK] Integration capacitor added!

Installing dependencies may take several minutes.

    _____


         Ionic Enterprise, platform and solutions for teams by Ionic

                     Powerful library of native APIs
                    A supercharged platform for teams

            Learn more: https://ion.link/enterprise


    _____


> npm.cmd i

up to date, audited 756 packages in 2s

155 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
> git.exe init
Initialized empty Git repository in C:/Users/karan/OneDrive - Laurea-ammattikorkeako
ulu/Assignments/2024/MobileApp/Labwork-1/myApp/.git/

Join the Ionic Community! 💙

Connect with millions of developers on the Ionic Forum and get access to live
events, news updates, and more.

? Create free Ionic account? (y/N) cc
```
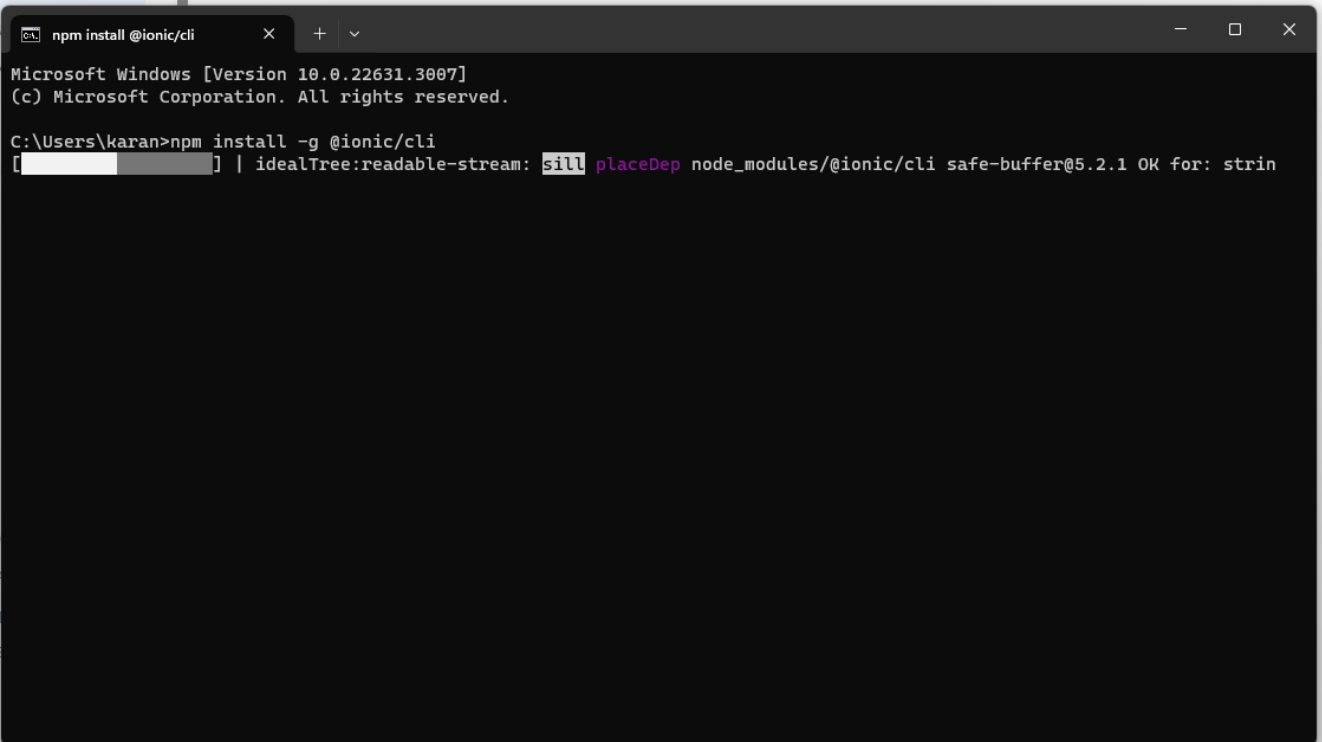
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```
create mode 100644 ionic.config.json
create mode 100644 package-lock.json
create mode 100644 package.json
create mode 100644 public/favicon.png
create mode 100644 public/manifest.json
create mode 100644 src/App.test.tsx
create mode 100644 src/App.tsx
create mode 100644 src/components/ExploreContainer.css
create mode 100644 src/components/ExploreContainer.tsx
create mode 100644 src/main.tsx
create mode 100644 src/pages/Tab1.css
create mode 100644 src/pages/Tab1.tsx
create mode 100644 src/pages/Tab2.css
create mode 100644 src/pages/Tab2.tsx
create mode 100644 src/pages/Tab3.css
create mode 100644 src/pages/Tab3.tsx
create mode 100644 src/setupTests.ts
create mode 100644 src/theme/variables.css
create mode 100644 src/vite-env.d.ts
create mode 100644 tsconfig.json
create mode 100644 tsconfig.node.json
create mode 100644 vite.config.ts


Your Ionic app is ready! Follow these next steps:

- Go to your new project: cd .\myApp
- Run ionic serve within the app directory to see your app in the browser
- Run ionic capacitor add to add a native iOS or Android project using Capacitor
- Generate your app icon and splash screens using cordova-res --skip-config --copy
- Explore the Ionic docs for components, tutorials, and more: https://ion.link/docs
- Building an enterprise app? Ionic has Enterprise Support and Features:
https://ion.link/enterprise-edition

C:\Users\karan\OneDrive - Laurea-ammattikorkeakoulu\Assignments\2024\MobileApp\Labwo
rk-1>cd .\myApp

C:\Users\karan\OneDrive - Laurea-ammattikorkeakoulu\Assignments\2024\MobileApp\Labwo
rk-1\myApp>ionic serve
> vite.cmd --host=localhost --port=8100
[vite]    →  Local:   http://localhost:8100/
[vite]    →  press h + enter to show help

[INFO] Development server running!

      Local: http://localhost:8100

      Use Ctrl+C to quit this process

[INFO] Browser window opened to http://localhost:8100!
```
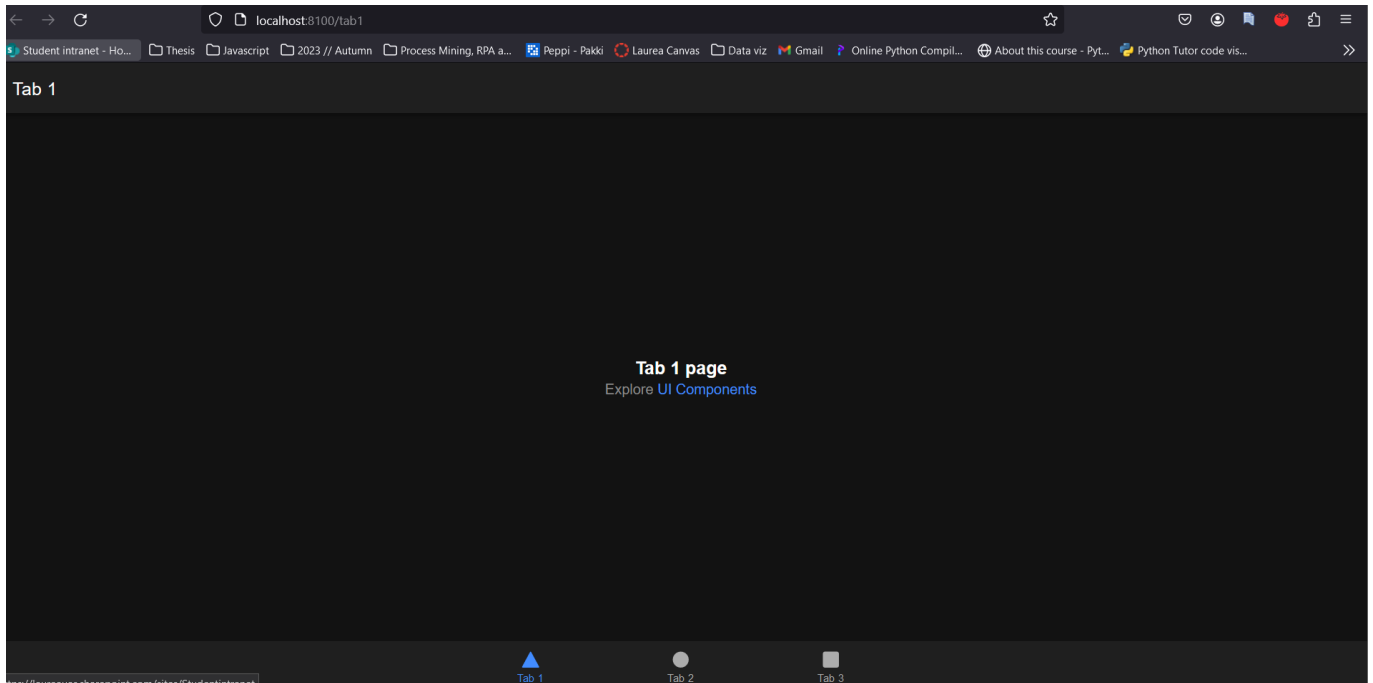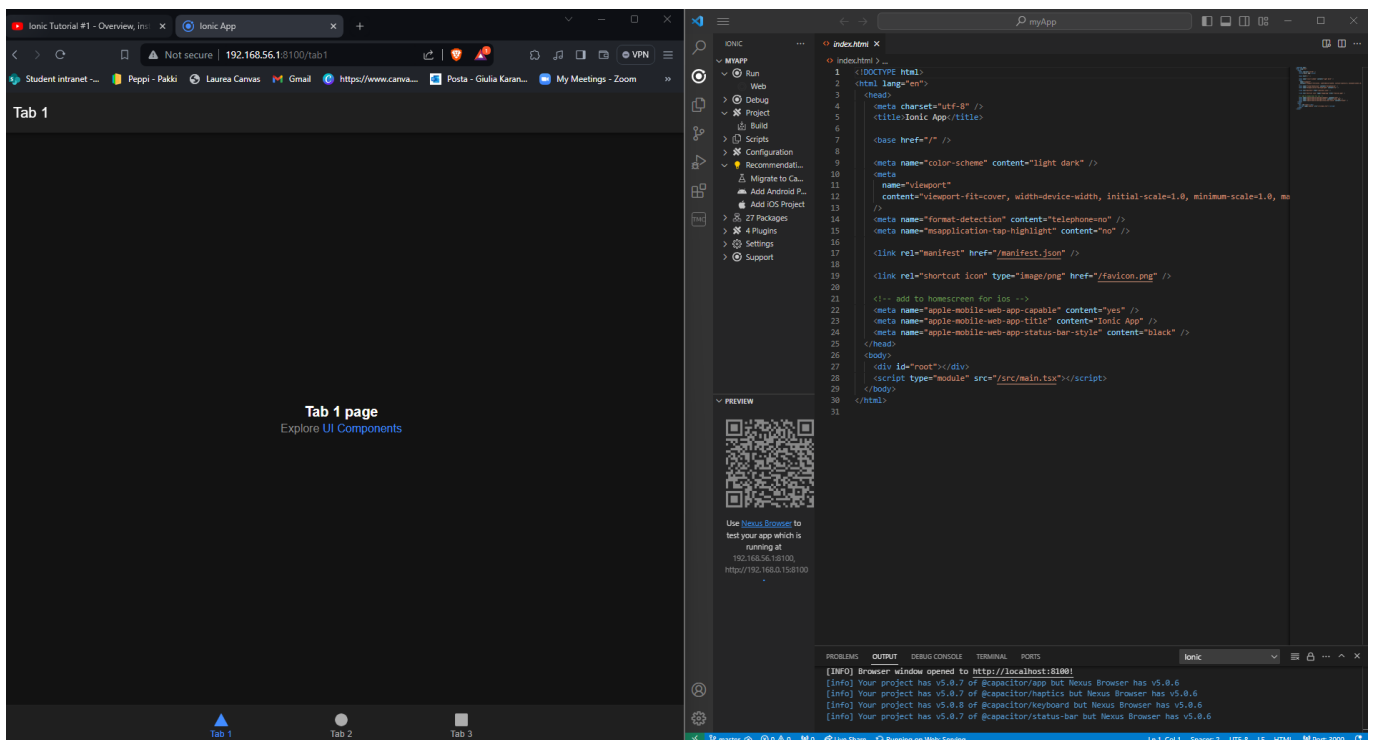
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After creating the app with the "Tab" layout, and after following the video on YouTube "Ionic Tutorial 1", I opened VS Code, and downloaded the Ionic extension for the IDE.

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References

Electronic sources

Academind (2019). Which one is best for you? Flutter, React Native, Ionic or Na-tiveScript? [YouTube video]. [Accessed 07.2.2024]. Available: https://www.youtube.com/watch?v=PKRXbLnfXXk

Rathod, P. (2024). Configure Mobile App Development Environment. HANDS-ON LAB-WORK-1. [pdf document]. [Accessed 07.2.2024].

Alves, P. (2021). Ionic Tutorial #1 - Overview, installation and creating the project. [YouTube video]. [Accessed 12.2.2024]. Available: https://youtu.be/5Gj4Y8zvl-s