

Recitation 1: GitHub, Dev Containers, and TypeScript

By: Almiqdad Elzein



Goal of Recitations

- Be an opportunity for you to get started with the upcoming project
 - P1 has been released!

- Be slow-paced and low risk
 - You have until the end of day to complete it

- Don't think of it as an assessment!

Project 1A: Build Checkpoint

📅 Released Sun Aug 23

📅 Due Sun Aug 30th @ 11:59pm

 Handout

- Writing code is only part of software engineering
- We need to track changes
- We need to share code with others
- We need consistent development environments
- Goal: code that others can get and run

Git & GitHub

Git = version control

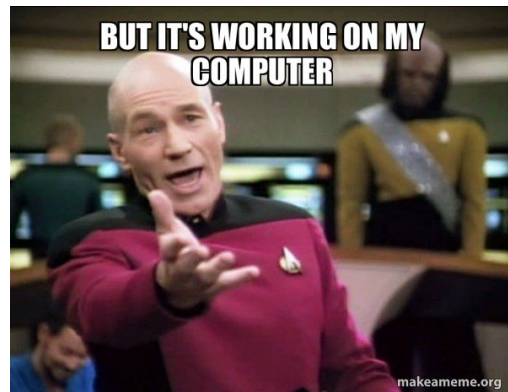
- Track what changed and when
- Revisit previous versions
- Work safely on projects
- GitHub = hosting + collaboration
- git clone → git add → git commit → git push

TypeScript

- Types make code easier to understand
- Builds on JavaScript by adding types
- You will learn it as you go

The problem: “It works on my machine”

- Different package versions
- Missing dependencies
- Different configurations
- Debugging the environment instead of the code



Docker

- Environment is part of the application
- Makes development more consistent
- 100 laptops can mean 100 *slightly* different environments!

Dev Containers

- VS Code can develop directly inside a Docker container
- Your editor connects to the container
- The project environment is defined by configuration: node:24-slim

Today

- Create a GitHub repository
- Clone it locally with Git
- Open it in VS Code
- Set up a Dev Container
- Create a .ts (TypeScript) file and run it inside your container
- Update your remote GitHub repository
- Submit a link to you repository
- **Due at the end of day (no rush)**