

# Programming Setup

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Dirk Riehle, FAU Erlangen

**ADAP A02**

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# Agenda

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1. git
2. GitHub
3. Node
4. npm
5. Typescript
6. ADAP Examples
7. VS Code
8. Vitest

# git

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git is

- A version control system

Installation

- Through your operating system

Example

- `apt install git`
- `git config --global user.name "Friedrich Alexander"`
- `git config --global user.email friedalexuni@gmail.com`

# GitHub

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GitHub is

- A software forge [1] based on git

Installation

- None, but you need an account

# Node (Node.js)

Node is

- A framework and toolset for developing Javascript applications

Installation

- <https://nodejs.org/en/learn/getting-started/how-to-install-nodejs>
- Through your operating system

Example

- `apt install curl`
- `curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.40.0/install.sh | bash`
- `nvm install 20`

# npm (npmjs)

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npm is

- A package manager for managing dependencies in Javascript applications

Installation

- Comes with Node

# TypeScript

TypeScript is

- A more type-safe Javascript

Installation

- <https://www.typescriptlang.org/download/>
- Through npm

Example

- `npm install typescript --save-dev # local install`
- `npm install @types/node --save-dev # install types`

# ADAP Examples and Homework

riehlegroup/adap-names contains

- Our running example code; use as you see fit

Installation

- <https://github.com/riehlegroup/adap-names>

Example

- Fork the repository on GitHub # using example user friedalexuni
- git clone <https://github.com/friedalexuni/adap-names>
- npm install # installs project dependencies
- npm run build # compiles and builds
- npm run test # runs tests



# Visual Studio Code

Visual Studio Code (VS Code) is

- A flexible integrated development environment (IDE)
- Strong on Javascript and Typescript

Installation

- <https://code.visualstudio.com/docs>
- Through your operating system

Example

- Download from <https://code.visualstudio.com/Download>
- Install as your operating system sees fit

# GitHub in VS Code

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## GitHub Pull Requests and Issues extension

- A VS Code extension to nicely integrate with GitHub

## Installation

- <https://code.visualstudio.com/docs/sourcecontrol/github>
- Through VS Code Extensions

# Vitest

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Vitest is

- A Javascript/Typescript testing framework

Installation

- Will be automatically pulled in by npm as a dependency
- You may find the VS Code plugin helpful

Example

- Install Vitest plugin through VS Code Extensions
- You may want to create a VS code launch.json configuration for Vitest

# Summary

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1. git
2. GitHub
3. Node
4. npm
5. Typescript
6. ADAP Examples
7. VS Code
8. Vitest

# Thank you! Any questions?

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[dirk.riehle@fau.de](mailto:dirk.riehle@fau.de) – <https://oss.cs.fau.de>

[dirk@riehle.org](mailto:dirk@riehle.org) – <https://dirkriehle.com> – [@dirkriehle](#)

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