

# Week 01: Introduction to Seminars

Welcome to the course!

# Agenda

- Tutor introduction
- Checking Docker & WSL
- Course info
- Git Basics
- Gitflow
- Setup Gitlab & IDE

# Who (am/are) (I/we)?

Let me (us) introduce myself (ourselves)

## Course info: Basics

- Seminars are compulsory (max. 4 unexcused seminars)
- Source of truth: [Syllabus](#) and [Gitlab](#)
- Communication: [Discord](#)
  - Help support almost 24/7
  - We ❤️ to help you

# Web development and markup languages

We will focus on different technologies one must master to become a full-stack developer.

**Frontend:** JavaScript-based frontend library of choice (React.js & other React complementary libraries), with correct markup and styles (understanding HTML & CSS)

**Backend:** Creating a fully functioning REST API (with Node.js) with persistence (Prisma + PostgreSQL) & auth

**CI/CD:** Dockerizing the application, basics of deployment, creating pipelines for your projects

All of these areas could be separate courses.

## Deadlines

For iterations: Three weeks after the iteration is published. Your tutor might give you more time depending on the circumstances (public holidays and so on)

For team projects: Three days before your presentation (more information later during the semester)

# Course info: Evaluation

- Up to **40 points from iterations** (for completing assignments of the semestral project with the best effort and clean code). **Minimal number of points from iterations to get a passing grade is 20.**
- Up to **40 points for your team project** (for creating a complex solution, dividing work, and collaborating with others).
- Up to **20 points for exams** (the final ROPOT contains all the topics from the semester)

Grade	Points
A	100-94
B	93-88
C	87-82
D	81-76
E	75-70
F	69-0
Z	100-60
N	59-0

# Let's check your development environment (student devices only)

- We will check whether your Docker works with this command. Alternatively, open Docker Desktop app and try to run the `hello-world` container from there.

```
docker run hello-world
```

- If you use Windows, we will check whether your WSL works. We also recommend you use a full-fledged Linux distribution, such as Ubuntu

```
# You can use a distro of your choice, but we recommend sticking with Ubuntu  
# Please, if you haven't already, install it from home or somewhere else than the faculty WiFi  
wsl.exe --install -d Ubuntu
```



# Git: Setup

## 1. Install git (Depends on your OS)

Using a package manager:

```
apt install git      # ubuntu/debian
brew install git     # mac
winget install Git   # windows package manager, we advise using Git inside your WSL!
```

Or you can use the [Git website](#).

## 2. Setup keys

```
ssh-keygen -o -a 100 -t ed25519 -f ~/.ssh/id_muni -C "xuser@fi.muni.cz"
```

# Git: Setup

## 3. Add public key to Gitlab

- Go to [gitlab.fi.muni.cz](https://gitlab.fi.muni.cz) and sign in with `xlogin` (or `xUCO` if you're not from FI)
- Click on your profile avatar (top left corner)
- Click Preferences
- Find the SSH Keys category and click it
- Click Add new key
- Paste the content of the **public key** ( `id_muni.pub` ) into the Key text input
- Set the title to something meaningful, as the key cannot be edited, only deleted and added again
- **Remove expiration date**

## Git: Setup

4. Update the ssh config (on Mac & Linux `/home/username/.ssh/config` , on Windows `C:\Users\username\.ssh\config` )

```
Host gitlab.fi.muni.cz
  User git
  IdentityFile /home/username/.ssh/id_muni # the path will vary depending on your OS
  IdentitiesOnly yes
```

5. Verify that your key works with `ssh`

```
ssh -T gitlab.fi.muni.cz
# After adding the certificate, should print:
# Welcome to Gitlab, @xlogin!
```

## Git: Basics

Commit in [Conventional commits](#)

```
git config --global core.excludesFile "**/node_modules"  
git config --global user.name xuser  
git config --global user.email xuser@fi.muni.cz
```

```
git clone <url> # Clones the repository  
git status # Show status of added, removed files  
git checkout -b submit-00 # Switch to new branch  
git add -A # Stage all files for the commit  
git commit -m "feat: Some meaningful commit message" # Commit all staged files  
git push --set-upstream origin submit-00 # Push committed to remote branch
```

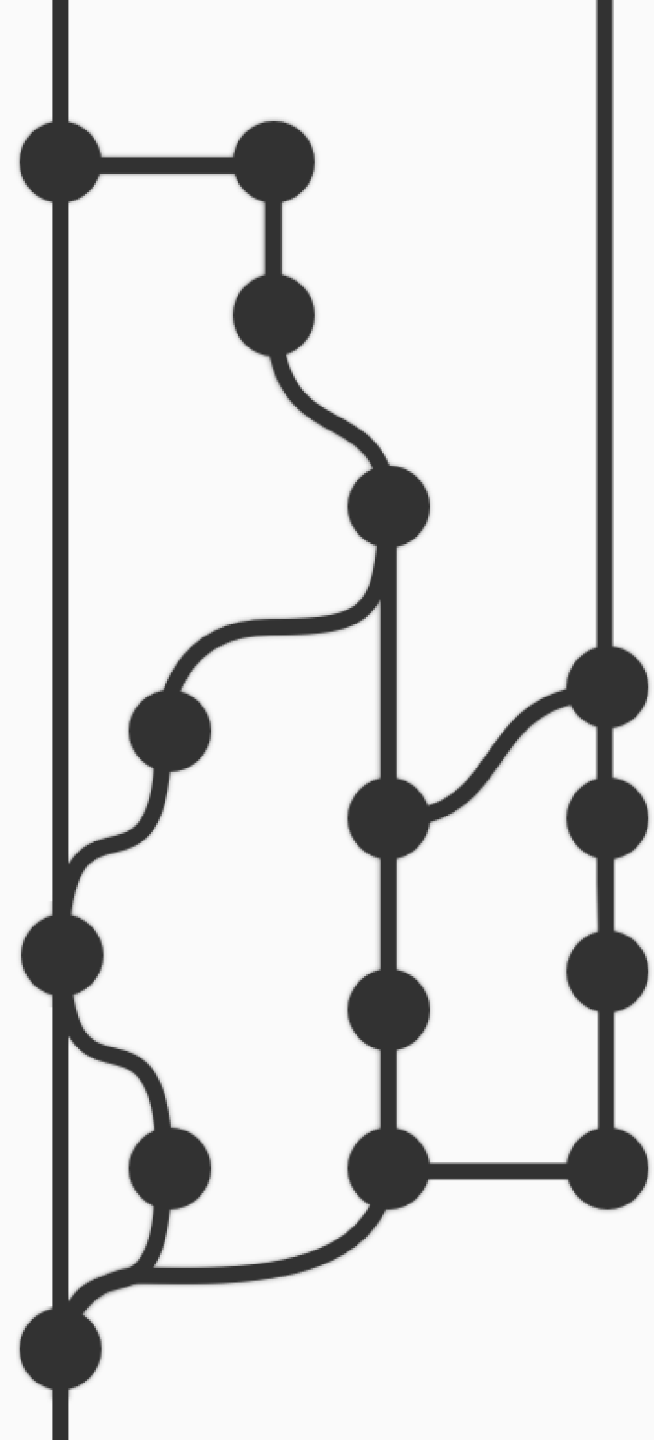
[Cheatsheet](#)

## Git: Gitflow

- Starts from the main branch
- Feature branches contain new features, additions
- Master/Main is stable (tagged)

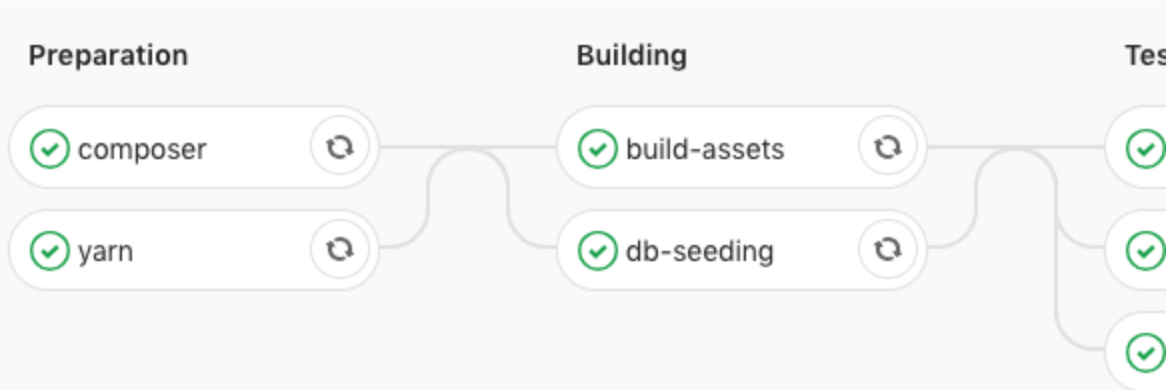
*Note: You'll most likely work in trunk based development (it ignores the develop branch)*

[In-depth explanation](#)



# Git: Merge requests / Pull request

- MR/PR the way you check source code changes into a main branch
- Before pushing code, check [common mistakes](#)
- CI is not your enemy
- We require you to discuss changes



GitLab Community Edition

Project

Repository

Issues 11,511

Merge Requests 668

CI / CD

Operations

Snippets

Settings

Open Opened 44 minutes ago by Mayra Cabrera 2 of 9 tasks completed

Edit Close merge request

## Resolve "Deploy Tokens failed to clone LFS repository"

What does this MR do?

Allow `DeployTokens` to be utilized to clone LFS repositories

Why was this MR needed?

When downloading LFS repositories through git cloning and deploy tokens as an authorization method, the cloning fails. This MR prevents that

Screenshots (if relevant)

Does this MR meet the acceptance criteria?

- Changelog entry added, if necessary
- Tests added for this feature/bug
  - Conforms to the code review guidelines
    - Has been reviewed by a Backend maintainer
  - Conforms to the merge request performance guidelines
  - Conforms to the style guides
  - Conforms to the database guides
  - If you have multiple commits, please combine them into a few logically organized commits by squashing them
  - Internationalization required/considered
  - End-to-end tests pass (`package-and-qd` manual pipeline job)

What are the relevant issue numbers?

Closes #46869

Edited 38 minutes ago by Mayra Cabrera

Request to merge 46869-deploy-tokens-failed-to-clone-lfs-repository into master

Open in Web IDE Check out branch

Pipeline #26130830 running for @a3350d9 on 46869-deploy-tokens-failed-to-clone-lfs-repository Coverage 56.42%

Approve Requires 1 more approval

Failed to load codeclimate report

Security scanning detected no vulnerabilities

Merge when pipeline succeeds Remove source branch Modify commit message

Closes #46869

You can merge this merge request manually using the command line

Discussion 3 Commits 1 Pipelines 2 Changes 5

Mayra Cabrera @mayra-cabrera marked the task **Changelog entry added, if necessary** as completed · 34 minutes ago

Mayra Cabrera @mayra-cabrera added 1 commit · 34 minutes ago

- `@a3350d9` - Make DeployTokens compatible with LFS download access

Compare with previous version

Mayra Cabrera @mayra-cabrera marked the task **Tests added for this feature/bug** as completed · 30 minutes ago

Mayra Cabrera @mayra-cabrera · 29 minutes ago

Maintainer

Todo Add todo

Assignee Edit

Kamil Trzcinski @ayufan

Milestone None Edit

Time tracking No estimate or time spent

Labels C/CD Edit

Lock merge request Unlocked Edit

3 participants

Notifications

Reference: gitlab-org/gitlab-ce...

# Let's create your repositories

This might be a lot of information to process. But fret not! We created comprehensive guides for you. You will learn how to:

- [Fork the repository](#) - **today!**
- [Download the provided assignment template for each iteration](#) - later during the course
- [Submit the assignment](#) - later during the course

## Don't forget to

- Set your forked repository as **PRIVATE**
- Invite your tutor(s) and **give them at least Developer or better yet Maintainer** role
- When submitting the assignment, **set your code reviewer as Assignee**

# Workspace setup

IDE: **Webstorm, VSCode, vim**

Git: **Gitkraken, Github desktop\***

*Visual Studio Code extensions will be announced for every seminar session (We use many in this course)*

*\*Note: optional, but ignore if you like solving conflicts on your own*



# Kahoot

Let's get to know each other! Also, let's find out how deep your webdev knowledge goes!

For tutors: [Kahoot session](#)