Introduction and course organization

https://github.com/heig-vd-dai-course

Web · PDF

L. Delafontaine and H. Louis, with the help of GitHub Copilot.

Welcome to the Développement d'applications internet (DAI) course!

Who are we?

Ludovic

Delafontaine

Connaissances préalables recommandées

L'étudiant-e doit connaître et savoir utiliser les notions suivantes :

- Programmation (Java, C) ;
- Programmation orientée objet ;
- TCP/IP.

Les unités d'enseignement PRG2, RXI et POO permettent d'acquerir ces connaissances.

> **Objectifs**
>
> A l'issue de cette unité d'enseignement, l'étudiant-e sera capable de :
>
> **Programmation réseau**
>
> - être capable de concevoir une application client-serveur ;
> - être capable d'implémenter un client et un serveur en utilisant l'API Socket dans différents langages ;

Protocole HTTP

- connaître les concepts principaux du protocole ;
- être capable de concevoir et réaliser une infrastructure HTTP avec un reverse proxy et plusieurs serveurs ;
- être capable d'implémenter le protocole en utilisant l'API Socket ;

> **Protocoles de messagerie**
>
> - connaître les principaux protocoles relatifs à la messagerie électronique ;
> - être capable d'implémenter un client de messagerie simple ;

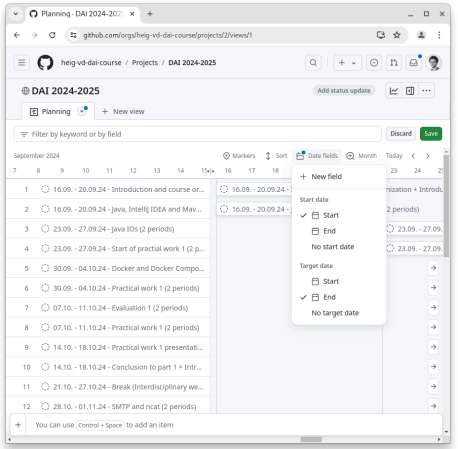
> **Protocoles de transfert de fichiers et d'accès à distance**
>
> - connaître les protocoles de transfert de fichiers et d'accès à distance, ainsi que leurs principales utilisations (y compris tunneling/forwarding).

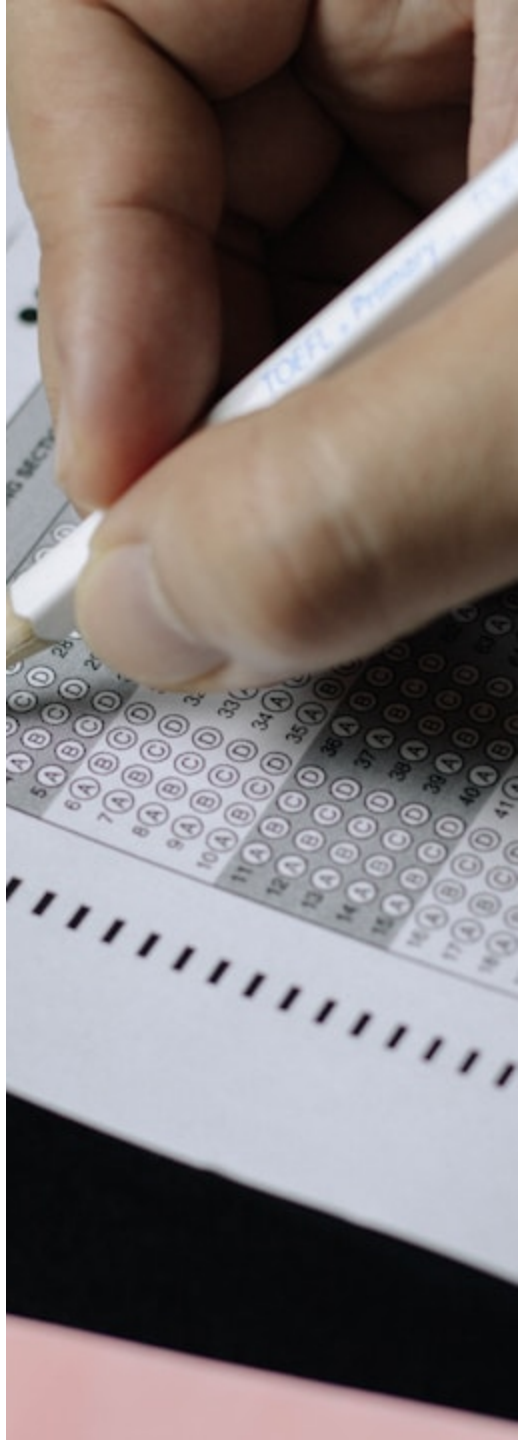
Topics

You will learn the following topics during this

The planning is subject to change. We will do our best to inform you in advance if there are any changes.

*Set the **Start date** and the **End date** fields as shown to display the course planning correctly!*





Course sequence

1. Overview of the subject meant to be short and concise (us)
    - Sessions of 20-30 minutes - Dynamic and interactive
2. Practice the content with theoretical and practical parts (you)
    - Prepare you for the practical work -

You can change groups between practical works.

We will try our best to give you your grades and feedback as quickly as possible so you can improve for the next work.

We can be flexible on the deadlines if you have a good reason. Please let us know as soon as possible if you have any difficulties.

Communication channels

Feel free to use any of these communication channels for any kind of questions related to the course:

The course material is available in several formats:

- **Markdown format** (recommended). You can read it directly on GitHub or on your computer with your favorite text editor.
- **PDF format**. We are aware that the generated PDFs are not perfect, sorry about that.

These formats are generated from the same source files. There are no differences between them. Use the one you prefer!

Chapters marked as *"work in progress (WIP)"* in the main README file are still in review and might change.

Our wishes for this course

What we want this course to be

- A place to learn

Your responsibilities

- Read and understand the course material
- Do the practical content given in the course material
- You can give feedback and suggestions
- You are responsible for your own learning:
  - If you have any questions, ask them
  - If you have any difficulties, let us know
  - If you have any suggestions, share them

Let's work together to give you the best course possible.

"Un cours en anglais, ?"

If you are on Windows, follow the guide we created to set up a development environment with Windows Subsystem for Linux (WSL): *Set up a Windows development environment*.

This guide will help you to set up a Linux environment on your Windows computer to be able to follow the course (and beyond).

If you are on macOS, we recommend you to install Homebrew and use it to install the tools we will use during this course.

You can install Homebrew by following the instructions on the Homebrew website.

You can always install Linux on your computer if you want to. Ubuntu, Debian, or Fedora are recommended.

Whatever operating system you are using, **you should read the *Considerations for a development environment* guide**.

This guide will help you to set up your development environment in a way that will make you more productive and efficient.

"I have an ARM computer, is this an issue?"

If you have an ARM computer (Apple Silicon M1/M2/M3 for example), some parts of the course might be a bit more tricky. We will try our best to test all our course material but we cannot guarantee that everything will work as