

# Introduction

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## 1 Who are we?

- Lecturer: LCL IMM Ben Lauwens / D30.20 / [ben.lauwens@mil.be](mailto:ben.lauwens@mil.be)
- Assistant: CDT Piet Van Der Paelt / D30.17 / [piet.vanderpaelt@mil.be](mailto:piet.vanderpaelt@mil.be)

## 2 Programming Algorithms and Project

- Theory: 16 Hr → 48 Hr (preparation of exercises)
- Exercises: 16 Hr → 32 Hr (preparation of project)
- Project: 10 Hr → 30 Hr (implementation of project)

## 3 Documentation

- All notebooks can be found on github: <https://github.com/BenLauwens/ES123/Lectures>
- Complete book from 2019 is available online (lecture notes are more recent and include supplementary information): <https://benlauwens.github.io/ThinkJulia.jl/latest/book.html>.

## 4 Schedule

Lectures	Theory	Exercises	Project
1/2	06/02	08/02	
3/4	07/02	20/02	
5/6	14/02	27/02	
7/8	28/02	06/03	
9/10	07/03	13/03	
11/12	14/03	20/03	
13/14/15	21/03	27/03	
16/17/18	28/03	25/04	
Project list available			03/04
First feedback (groups of 2)			17/04
Final feedback (groups of 2)			15-16/05

We are always available during contact hours

## 5 Evaluation

Test: 30/03 - 2Hr: Exercises

Exam: final evaluation of project (individual)

## 6 Julia

- Install Julia on CDN laptop
- Save following code to a file `start.jl` in the Downloads folder:

```
const downloadfolder = joinpath(homedir(), "Documents")
!ispath(downloadfolder) ? mkdir(downloadfolder) : nothing
cd(downloadfolder)

using Pkg
const deps = [pair.second for pair in Pkg.dependencies()]
const direct_deps = filter(p → p.is_direct_dep, deps)
const pkgs = [x.name for x in direct_deps]
if "Git" ∉ pkgs
    @info "Installing Git tools for Julia $(VERSION)..."
    Pkg.add("Git")
end

@info "Downloading course material into $(downloadfolder)"
using Git
try
    run(`$(git()) clone https://github.com/BenLauwens/ES123.git`)
    @info "Download complete"
catch err
    @warn "Something went wrong, check one of the following:\n - .gitignore file
    ↪ location\n - destination folder already is a git repository"
    @info err
end
```

- Start Julia and enter following command in the REPL when your laptop is connected to a network without proxy, i.e. not to CDN:

```
julia> include(joinpath(homedir(), "Downloads", "install.jl"))
```

## 7 Pluto Notebook interface

The browser based interface can be started from the Julia REPL with the following command:

```
julia> include(joinpath(homedir(), "Documents", "ES123", "setup", "start.jl"))
```



Please copy the lectures files from Lectures to work and open the files in the work directory.

## 8 Updating the Lectures

Enter the following command in the Julia REPL when your laptop is connected to a network without proxy to update the lectures:

```
julia> include(joinpath(homedir(), "Downloads", "update.jl"))
```



Be warned, all local changes except those in the work directory will be deleted!