DAT310

Web programming

2022 spring

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About me

- Robert Ewald
- Lecturer at UiS / Senior Scientist at NORCE
  - Autonomous Systems Engineering

- Web development part of the job.

What is web programming?

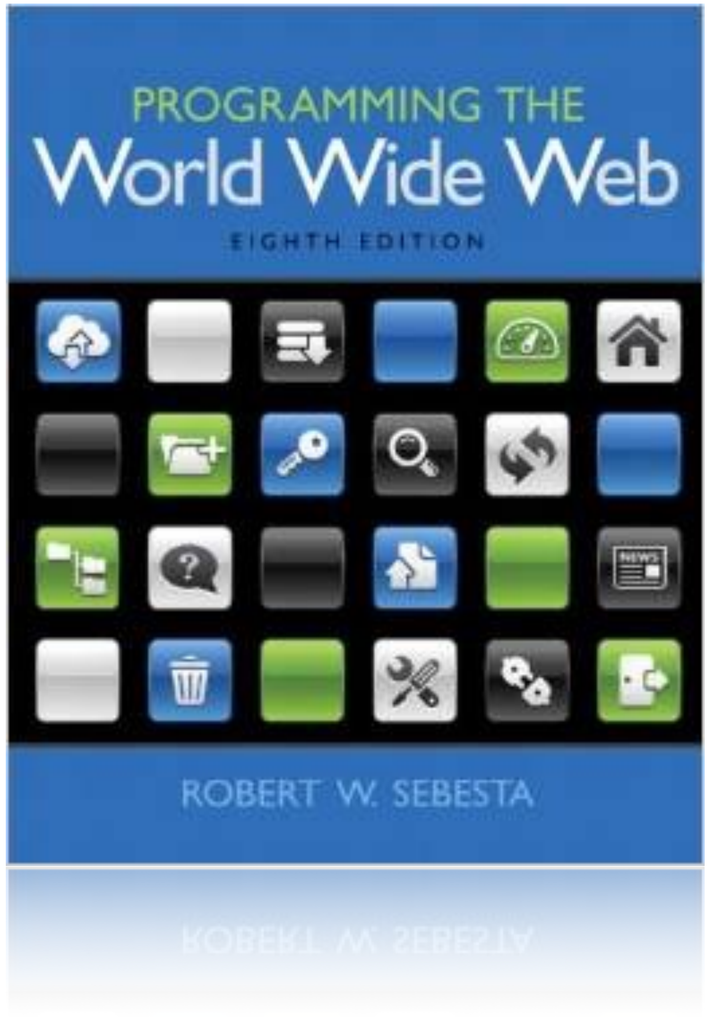
Goals for this course

- Learn Web programming
  - Client-server communication on the Web
  - Mark-up languages, W3C standards
  - Client-side scripting, server-side programming
  - Building and deploying complex web applications
  - Using existing tools and frameworks
- Build an interactive website

Web technologies

Flask

Book



Not needed!

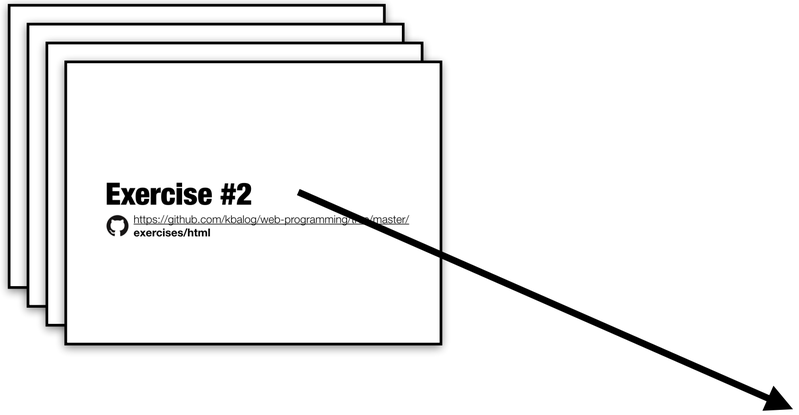
Slides, videos, exercises and solutions are curriculum!

Teaching style

- Flipped classroom:
  - Watch videos at home
  - Come to lab and solve the exercises
- When possible in-person lectures
- Lab in small groups
  - Do the exercises and ask for help
  - Use slides to look up
  - Use solution or ask if you are stuck

Lectures include exercises

Lecture



Exercises on GitHub

Exercise #1: Hello world

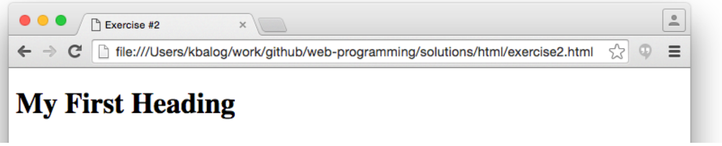
Copy-paste the following snippet to a text editor and save it as exercise1.html. Then open the file with any web browser (e.g., Firefox, Chrome, or Internet Explorer).

```
<!DOCTYPE html>
<html>
<head>
    <title>Exercise #1</title>
</head>
<body>
    Hello world!
</body>
</html>
```

Exercise #2: Headings and paragraphs

Create the following HTML page. You can use a text editor or the w3schools try-it editor.

- The headings should be `<h1>`, `<h2>`, and `<h3>` (don't forget the closing tags!)
- The paragraph text should be inside `<p>..</p>`.



Solve these exercises during lab hours!

Course schedule

- Lab: Mon 12.15 - 14; Tue, Thu 14.15-16; Fri 10.15-12
- January: Labs are digital
  - Join discord, ask questions during lab hours.
  - Ask for !help and do a video call with a TA.
  - Join DAT310-2022
- February (hopefully)
  - In-person lectures
  - Physical labs in small groups

Assignments

- 8 assignments in total
  - Increasingly more difficult
- To be completed individually
- Binary assessment: approved (godkjent) or not approved (ikke godjkent)
- At least 6 points needed (approx. 6 assignments) to be allowed to take the exam
  - At least 4 points from Assignments #1-#5
  - At least 2 points from Assignments #6-#8

Assignments

Assignment	Announced	Deadline	Points	Solution
#1 HTML	11. Jan	18. Jan 18:00	0.7p	
#2 CSS	18. Jan	25. Jan 18:00	0.7p	
#3 Page Prototype	25. Jan	1. Feb 18:00	1.4p	
#4 JavaScript	1. Feb	15. Feb 18:00	1.3p	
#5 Vue Memory	15. Feb	1. Mar 18:00	1.3p	
#6 Templates	1. Mar	15. Mar 18:00	1p	
#7 AJAX	15. Mar	29. Mar 18:00	1p	
#8 Online shop	29. Mar	12. Apr 18:00	1p	

Rules for assignments

1. No deadline extensions
   - Special cases (e.g., illness) are only considered if reported min 3 days (=72 hours) before the deadline
2. Working together is allowed, copying someone else's solution is not
   - 1st time: warning (assignment is not accepted)
   - 2nd time: you'll be dismissed from the course

Rules for assignments

4. Once the solution has been posted, submissions can no longer be accepted
5. **No exceptions!**

Autograder

- Use GitHub and Autograder to submit assignments.
- Assignment 1 and 2 have automatic tests. You need 80% to pass.
- Assignment 3 - 8 are graded manually.

Admin

- Student assistants
  - Present during lab time on discord
  - Use !help to ask for help from student assistants during lab hours.
- Lecturer
  - Send an email to make an appointment:
  - robert.ewald@uis.no

Exam

- Curriculum: everything that was presented during the lectures
- Web application project

Student testimonials

What did you like about the course?

Fun to see the progress we made. From just a "simple" html page, to a more dynamic one.

It was fun

Practical, very practical

Very practical and hands-on, the best way to learn is to do, at least in my opinion.

The combination of slides and working on relevant exercises during lectures

You learn actual useful stuff

Student testimonials

What did you dislike about the course?

CSS

Didn't always had time to finish the exercises in class

The workload was perhaps a bit too much at times. Not by much though.

Maybe too many languages for a single course

Sometimes it felt overwhelming

Hated the complexity of the assignments but learned the most from it.

The pacing in the middle steps up. The course starts easy, but turns difficult fast.

Resources

- Announcements on **canvas**
- Slides, examples, exercises on **github**
  - github.com/dat310-2022/info
- Assignment status on autograder
  - https://uis.itest.run/

What do you need?

- Your own laptop
- A *proper* text editor
  - **VSCode,** Atom, Emacs, vim, etc.
- A *proper* browser which is *not* Internet Explorer, i.e., **Firefox** or Chrome

Signup - get connected

- Join GitHub
  - https://github.com/
- Join course on autograder
  - https://uis.itest.run/
- Accept invitation to course on github
  - https://github.com/dat310-2022
- Join Discord Server
  - https://discord.gg/rhr8Rsrw
  - Type !register in Discord server

That’s all folks

- All this information can be found under the course’s GitHub repository

  github.com/dat310-2022/info