IF.03.01_BASIC WEB TECHNIQUES

HTML, CSS, Javascript

BASIC WEB TECHNIQUES

Motivation, Overview, Basic Setup, Organizational, First Html Page

GOALS FOR THIS UNIT

- You have an overview of the whole course

- You have a rough picture how things work in the web

- You have a working setup

- You know the organizational stuff about this course

- You have written a "Hello World" html page

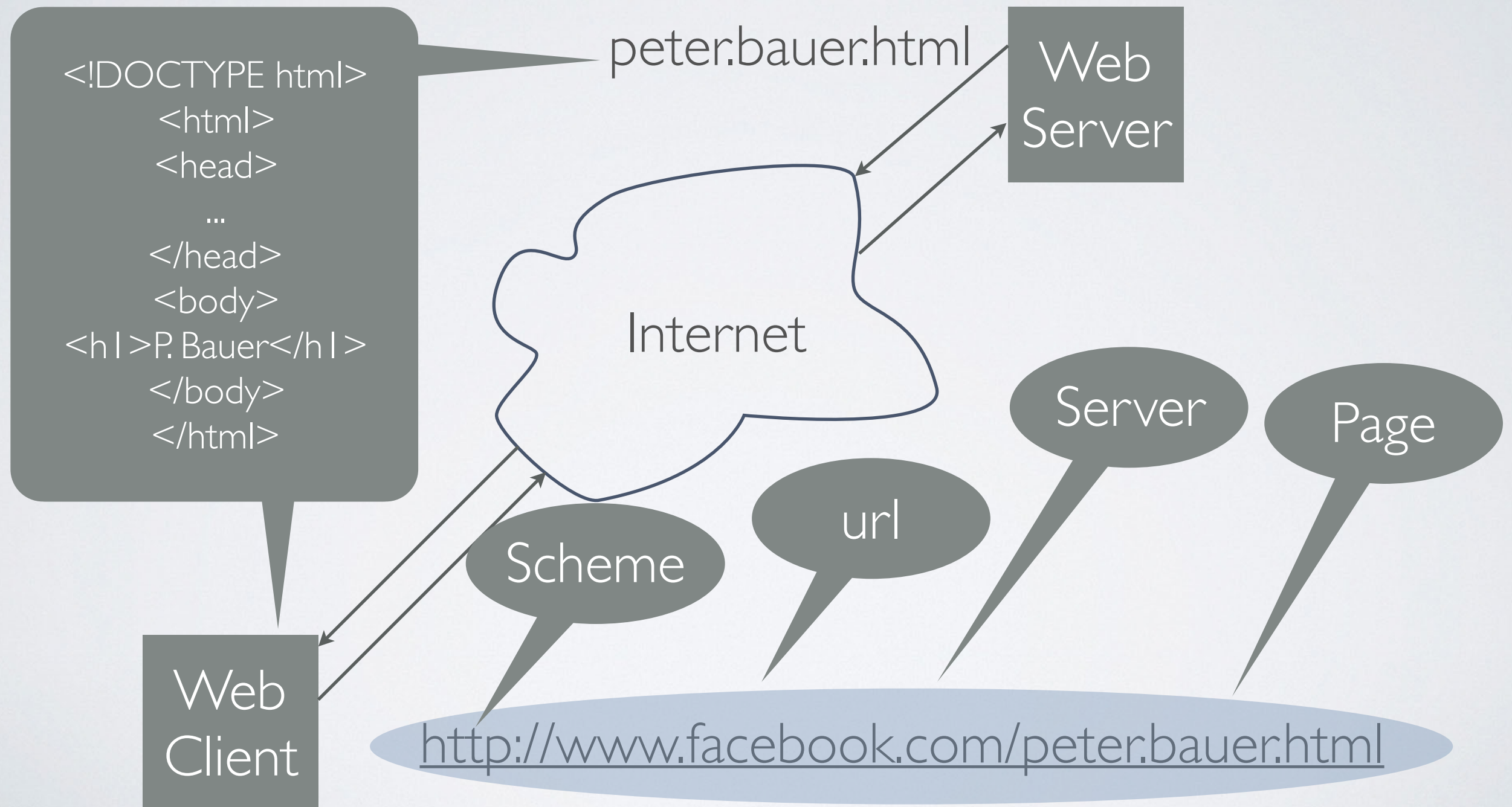- You know the list of projects

COURSE OVERVIEW

TOPICS

1. Introduction

2. Basic html and css

3. Advanced html and css

4. Css mastership

5. Forms and first steps in html

6. Introduction to JavaScript

PRE-REQUISITES

- Good knowledge in programming

  - IF.01.02 Programming

- Knowledge in technical informatics

  - IF.01.01 TINF

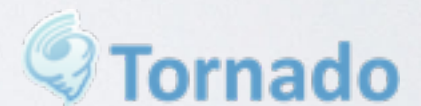# THE WORLD WIDE WEB IN ROUGH PICTURES

THE BIG PICTURE – EXTREMELY SIMPLIFIED

peter.bauer.html

Web Server

```
<!DOCTYPE html>
<html>
<head>
...
</head>
<body>
<h1>P. Bauer</h1>
</body>
</html>
```

Internet

Server

Page

Scheme

url

Web Client

http://www.facebook.com/peter.bauer.html

COMMON WEB SERVERS AND WEB CLIENTS

Web Server

Web Client

SERVER SIDE STATIC

```
<!DOCTYPE html>
    <html>
    <head>
        ...
    </head>
    <body>
<h1>P. Bauer</h1>
    </body>
    </html>
```
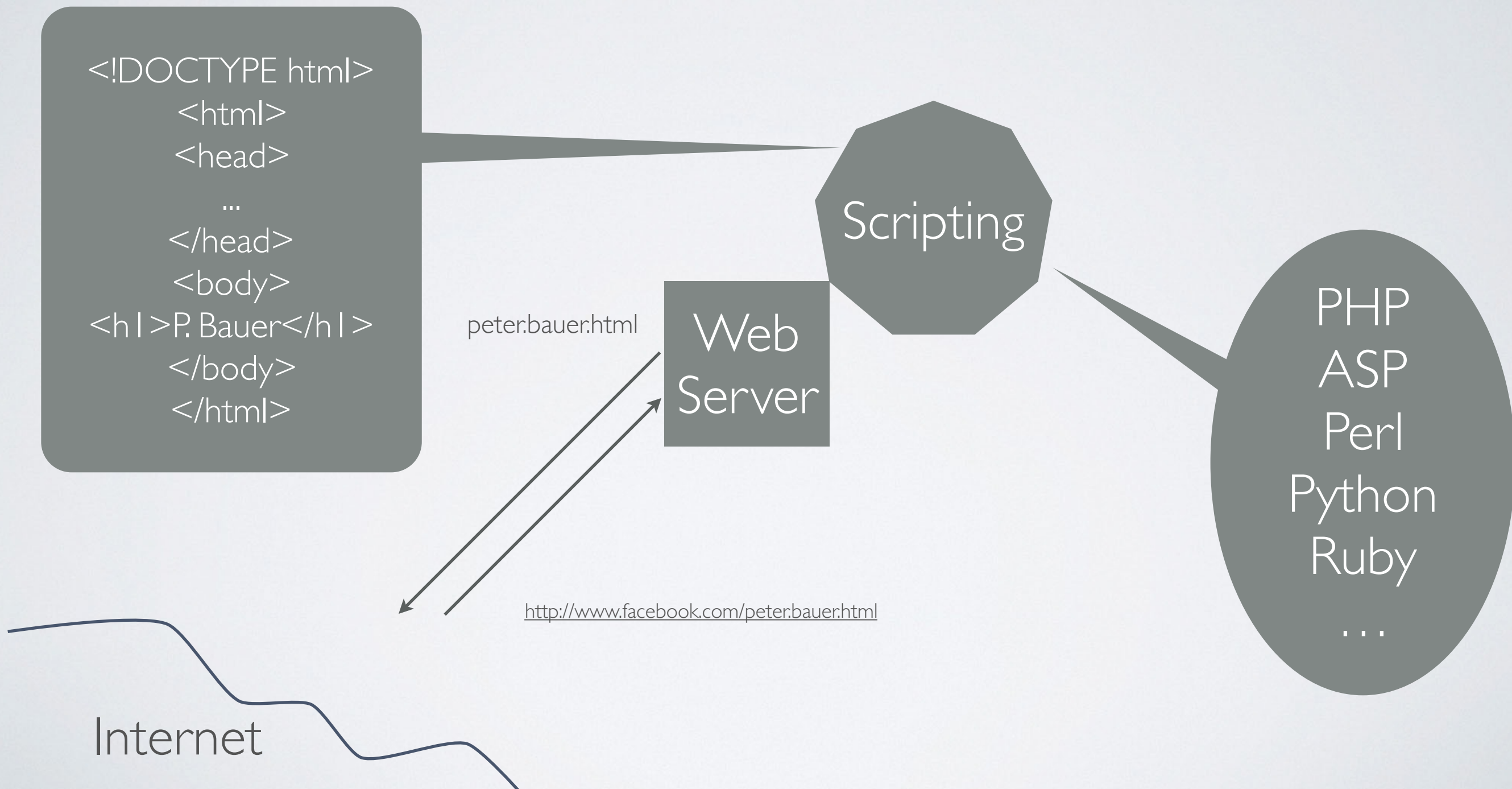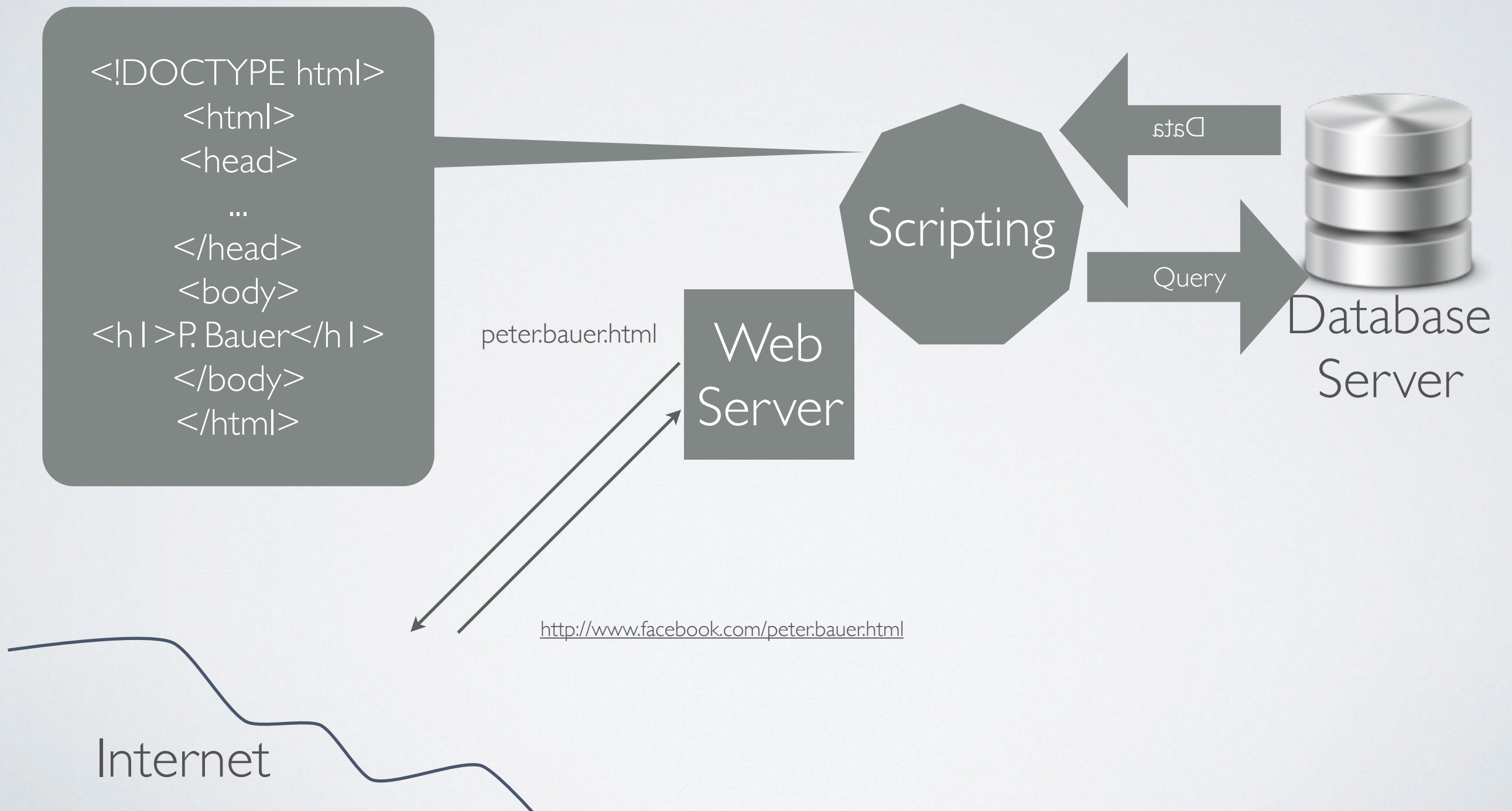
```
                            Terminal — bash — 74x16
Peters-MacBook-Pro:MyBasicWebTSite peter$ ls -l
total 14264
drwxr-xr-x  6 peter  admin      204 Jul 12 19:02 10_cv_project
-rw-r--r--  1 peter  admin     5501 Jul 12 19:56 assignments.php
-rw-r--r--  1 peter  admin     6977 Jul 12 20:18 course_structure.php
drwxr-xr-x  7 peter  admin      238 Jul 12 14:33 css
-rw-r--r--  1 peter  admin     1240 Jul 12 15:13 cv_project.php
-rw-r--r--  1 peter  admin  7269078 Jul  8 08:30 de_neu.dic
-rw-r--r--  1 peter  admin     1820 Jul  8 10:22 hangman.php
drwxr-xr-x  6 peter  admin      204 Jul  8 08:43 img
drwxr-xr-x  5 peter  admin      170 Jul 12 13:43 include
-rw-r--r--  1 peter  admin     2433 Jul 12 14:14 index.php
drwxr-xr-x  6 peter  admin      204 Jul  8 08:30 js
-rw-r--r--  1 peter  admin     3197 Jul 12 20:14 resources.php
Peters-MacBook-Pro:MyBasicWebTSite peter$ ▮
```

get file

peter.bauer.html

Web
Server

http://www.facebook.com/peter.bauer.html

Internet

SERVER SIDE DYNAMIC

```
<!DOCTYPE html>
<html>
<head>
...
</head>
<body>
<h1>P. Bauer</h1>
</body>
</html>
```

Scripting

peter.bauer.html

Web Server

PHP
ASP
Perl
Python
Ruby
…

http://www.facebook.com/peter.bauer.html

Internet

SERVER SIDE DATA BASE DRIVEN

<!DOCTYPE html>
<html>
<head>
...
</head>
<body>
<h1>P. Bauer</h1>
</body>
</html>

peter.bauer.html

Web Server

Scripting

Data

Query

Database Server

http://www.facebook.com/peter.bauer.html

Internet

CLIENT SIDE

peter.bauer.html

Internet

http://www.facebook.com/new_page.html

Web
Client
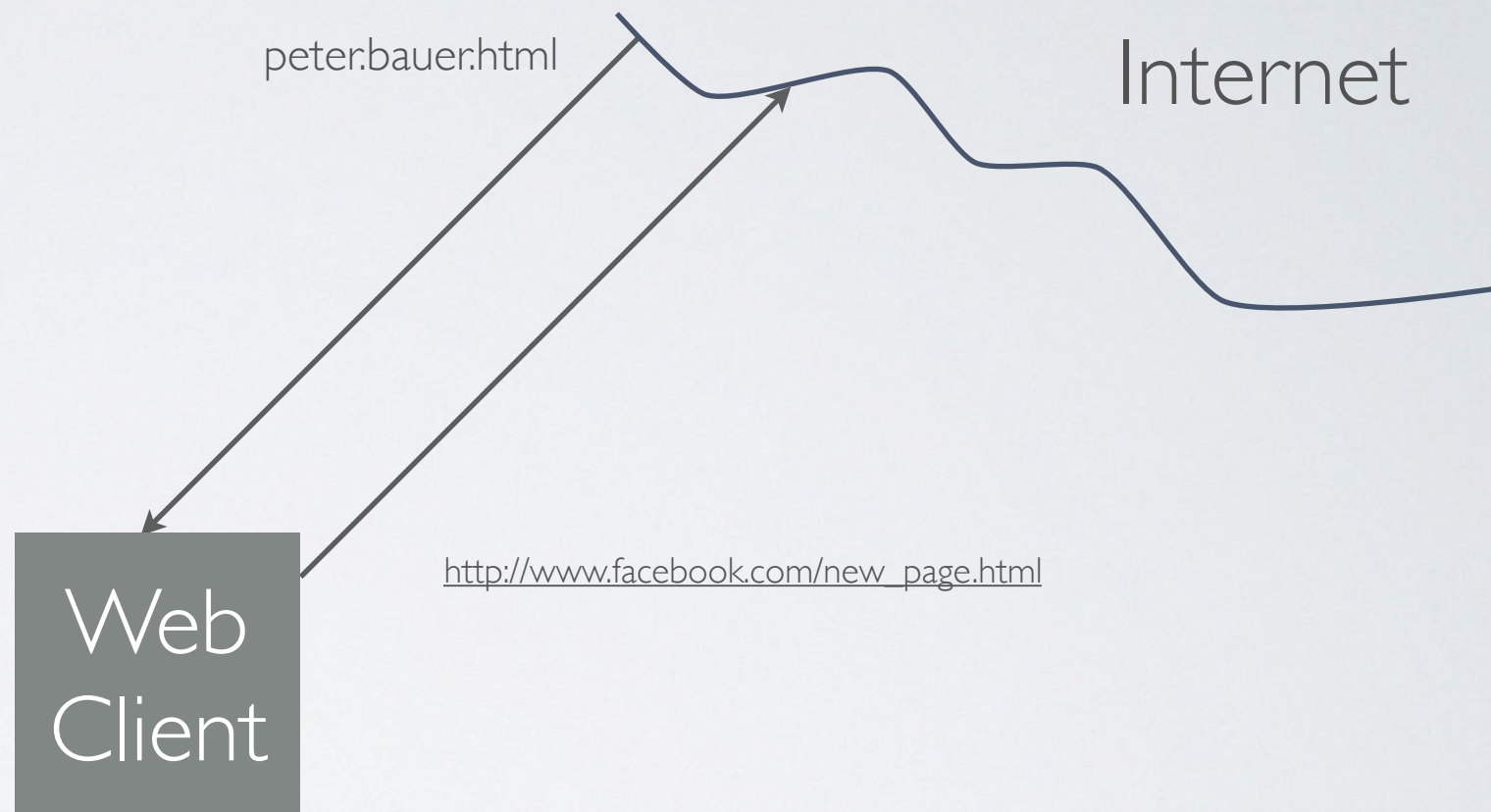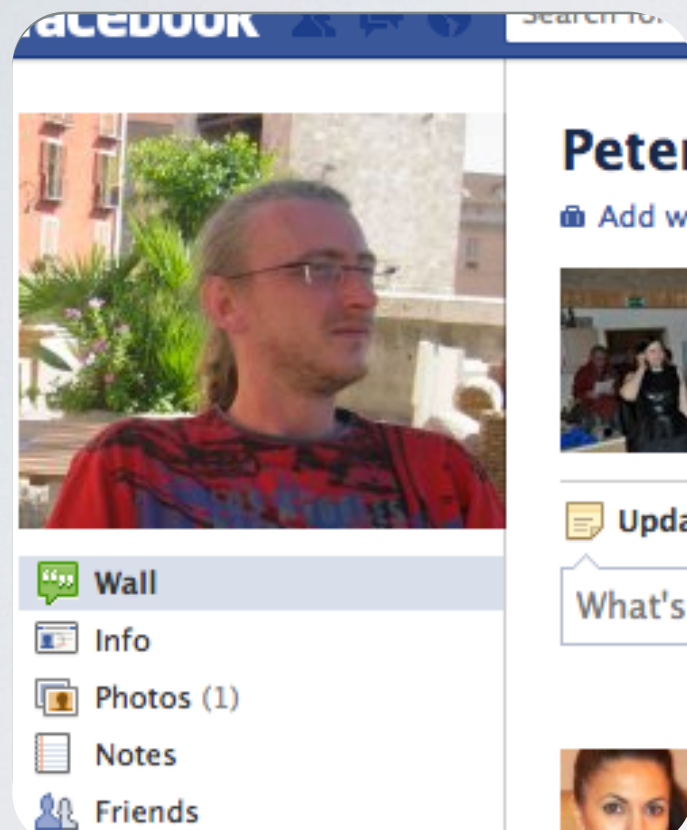
✤ Rendering
✤ Local input
evaluation

✤ Animations and
other
fancy GUI stuff
✤ Requests new page

ADMINISTRIVIA

GRADING

- Your personal web site

  - In teams of two

  - Regular reviews

  - Based on coding assignments

- Several quizzes

  - Alone

  - Kahoot!

  - Based on reading assignments

RUBRICS

- Give a detailed view what we expect from you

- Available on Piazza(?)

- Link the specific content of this course to the competences your grade is based on

STATE STANDARDS

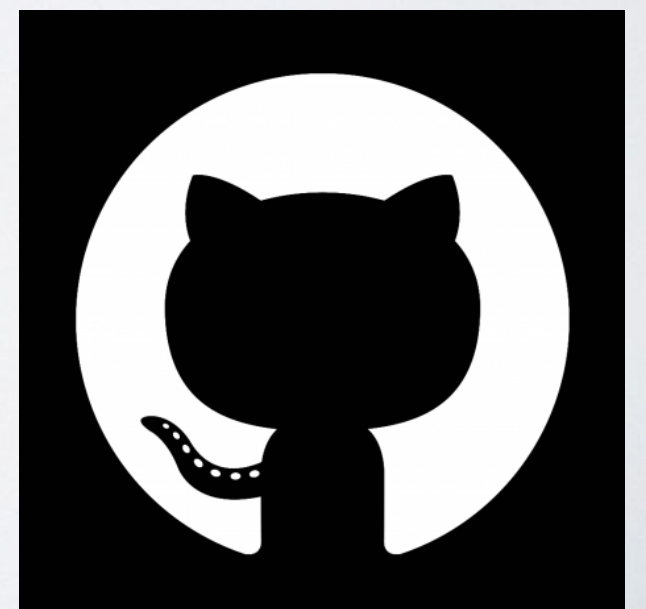| Id	Description
BWT.3.1	Students know basic components and elements of languages for designing web pages
BWT.3.2	Students can design web pages by means of script languages, can include dynamic elements, and can create design templates

RUBRICS — EXAMPLE

Unit	ID	Standard ID	Advanced	2	3	4	Unsatisfactory
All	**Web Knowledge**	**BWT.3.1**	Knows all basic components of web sites and apps (web server, web client, how these components work together, http, html elements, css declarations) in detail		Knows most of the basic components of web sites and apps (web server, web client, how these components work together, http, html elements, css declarations)		Does not know the basic components of web sites and apps (web server, web client, how these components work together, http, html elements, css declarations)
2	**Internal structure**	**BWT.3.1**	HTML code is clearly structured into sections and subsections	HTML code is mostly structured. Some parts are missing this structure	HTML code is structured. Several parts are missing this structure		Most of the HTML code is without any structure.
	Scale		**87 … 100**	**75 … 86**	**63 … 74**	**50 … 62**	**0 … 49**

COMMUNICATION

- Moodle

    - General announcements

    - Communication about tasks and assignments

    - Enroll

        - Course name: WEBT 2AHIF Bauer 1617

        - Key: WEBT2AHIF1617

- Skype / e-mail (Bauepete / p.bauer@htl-leonding.ac.at)/Piazza?

    - Short hand communication

- GitHub

WORKING SETUP

MACOS, ATOM, SAFARI, GOOGLE CHROME, GITHUB

DEMO

- Create a new folder in Finder

- Start Atom

- Create a "hello world" html page

  - doctype, html, head, body, meta, title, em, strong

- Have a look into the Browser

- Download first assignment from GitHub

THE PROJECTS

LIST OF PROJECTS

- A brief description of each project (1 min each)

- Both by technical and language teacher

- Then start of first project assignment

  - Find project partners and choose one

A FIRST HTML PAGE

To be moved into the second unit

FIRST PAGE – INDEX.HTML

```
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="tex
        <title>My Personal Web Technique Site</title
    </head>

    <body>
        <article>
            <h1>Hello World (Wide Web)</h1>
            <section>
                <h1>Mission</h1>
                <p>
                    This course is for me ….
                </p>
            </section>
```
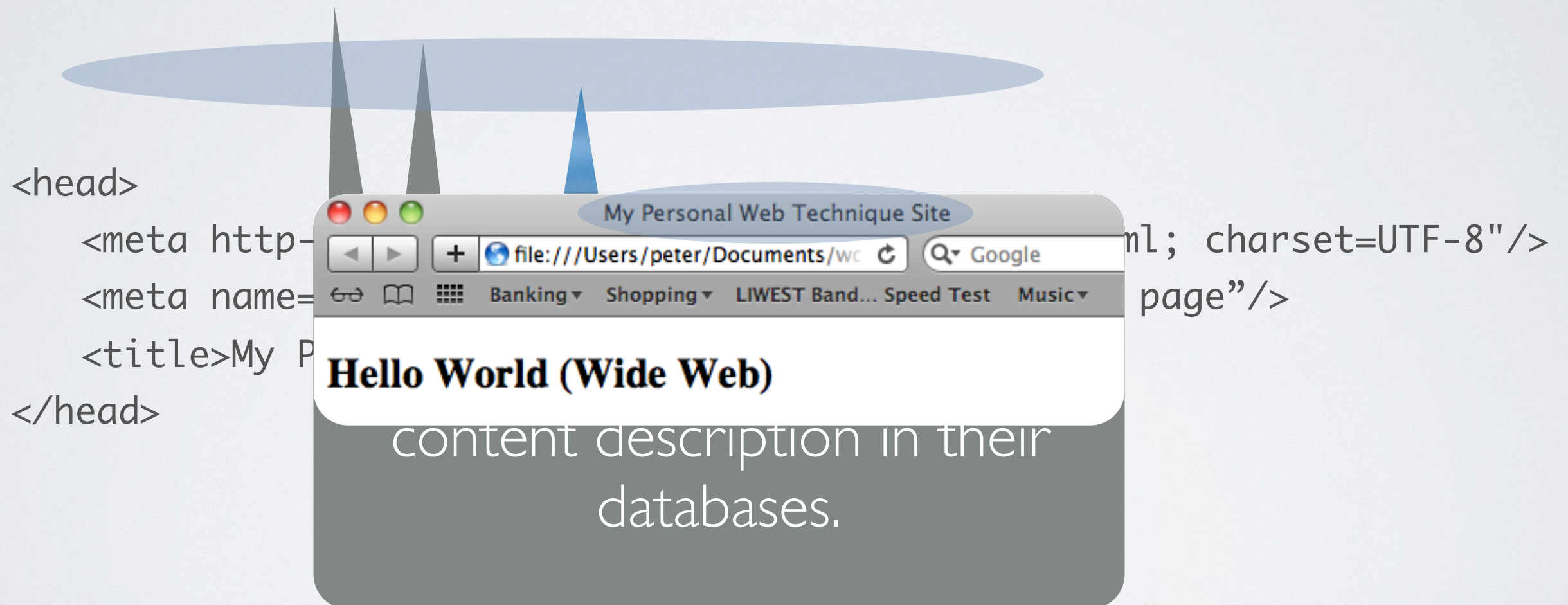
Most html tags are two-fold and embrace other elements, e.g., <html> and

The section-tag may be used to further structure your content.
Again one may define several sections on a page and sections may contain other sections.

THE HEAD IN DETAIL

```
<head>
    <meta http-                                    ml; charset=UTF-8"/>
    <meta name=                                    page"/>
    <title>My P
</head>
```

My Personal Web Technique Site

file:///Users/peter/Documents/wc

Google

Banking ▾ Shopping ▾ LIWEST Band... Speed Test Music ▾

Hello World (Wide Web)

content description in their
databases.

THE BODY IN DETAIL

```
<body>
   <article>
      <h1>Hello World (Wide Web)</
      h1>
      <section>
         <h1>Mission</h1>
         <p>This course is for me
      ….</p>
      </section>
      <section>
         <h1>Personal Goals</h1>
         <p>
            I want to learn in this
            course ….
         </p>
      </section>
   </article>
</body>
```

Btw, these p's denote a paragraph. Another structure tag.