

Web Applications 2016

Course Presentation
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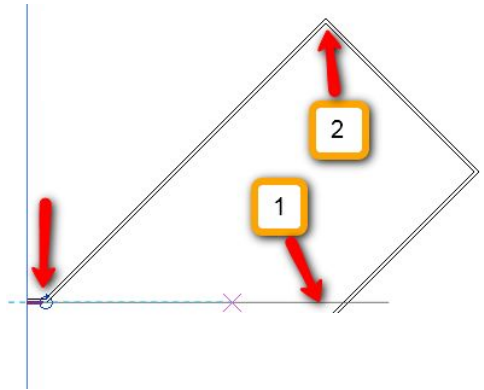
What's the course about?



A practical introduction to the area

- The standards (recommendations)
- Some common techniques
- Different approaches to architecture and design of web applications
- A technical course, not much of HCI and design.

What you will Gain!



Reference points!

More specific

- Area and technology overview
- Knowledge of standards and specifications
- Increased programming, design and architecture skills (programming in the large)
 - Very valuable experience if targeting any kind of SE master program
- Hands on experience with potentially very complicated/large software systems (touching many topics/areas in one application)

Area is far too big to cover in a single course

- Let's say it's also an inspiration course

Skills Needed



Good programmer!!!

Good at solving problems in general

- It's not just programming, other problems will show up ...
- ... not always obvious where the problem comes from...
- .. can't guarantee bug-free environment (or code samples) , must be able to do "workarounds"
- ... must be able to carefully and thoroughly browse and read (sometimes veeeeeeeeery loooooooooong) error messages

Good at speed-browsing documentation, searching information.

The Fine Prints

HTTP Status 500 - The absolute uri: <http://java.sun.com/jsp/jstl/core> cannot be resolved in either web.xml or the jar files deployed with this application

type Exception report

message The absolute uri: <http://java.sun.com/jsp/jstl/core> cannot be resolved in either web.xml or the jar files deployed with this application

description The server encountered an internal error that prevented it from fulfilling this request.

exception

```
org.apache.jasper.JasperException: The absolute uri: http://java.sun.com/jsp/jstl/core cannot be resolved in either
org.apache.jasper.compiler.DefaultErrorHandler.jspError(DefaultErrorHandler.java:56)
org.apache.jasper.compiler.ErrorDispatcher.dispatch(ErrorDispatcher.java:445)
org.apache.jasper.compiler.ErrorDispatcher.jspError(ErrorDispatcher.java:117)
org.apache.jasper.compiler.TagLibraryInfoImpl.generateTLDLocation(TagLibraryInfoImpl.java:325)
org.apache.jasper.compiler.TagLibraryInfoImpl.<init>(TagLibraryInfoImpl.java:154)
org.apache.jasper.compiler.Parser.parseTaglibDirective(Parser.java:410)
org.apache.jasper.compiler.Parser.parseDirective(Parser.java:475)
org.apache.jasper.compiler.Parser.parseElements(Parser.java:1410)
org.apache.jasper.compiler.Parser.parse(Parser.java:138)
org.apache.jasper.compiler.ParserController.doParse(ParserController.java:242)
org.apache.jasper.compiler.ParserController.parse(ParserController.java:102)
org.apache.jasper.compiler.Compiler.generateJava(Compiler.java:198)
org.apache.jasper.compiler.Compiler.compile(Compiler.java:373)
org.apache.jasper.compiler.Compiler.compile(Compiler.java:353)
org.apache.jasper.compiler.Compiler.compile(Compiler.java:340)
org.apache.jasper.JspCompilationContext.compile(JspCompilationContext.java:657)
org.apache.jasper.servlet.JspServletWrapper.service(JspServletWrapper.java:357)
org.apache.jasper.servlet.JspServlet.serviceJspFile(JspServlet.java:390)
org.apache.jasper.servlet.JspServlet.service(JspServlet.java:334)
javax.servlet.http.HttpServlet.service(HttpServlet.java:727)
org.apache.tomcat.websocket.server.WsFilter.doFilter(WsFilter.java:52)
```

note The full stack trace of the root cause is available in the Apache Tomcat/7.0.55 logs.

Apache Tomcat/7.0.55

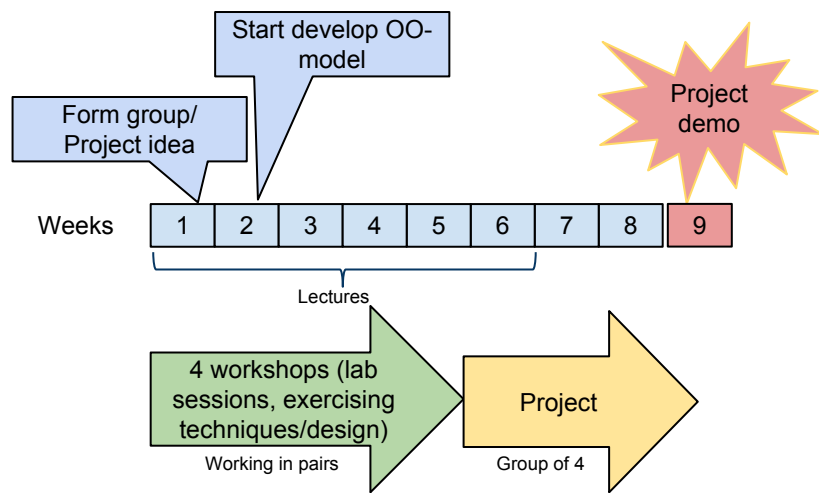
I'll assume you're used to solve problems...

- You will get even more training ...
- Must get things up and running
 - The major challenge in course!

ALSO: Area is moving very fast

- Things come and go (but old/bad things will live (forever?) on the web ...)
- Things are renamed (but the same)
- New versions ...
- ... sometimes very confusing

Course Planning



There are "red" markings in schedule, we'll probably run anyway.

- See news page for announcements

Lectures



Traditional with slides, drawings, live coding and code samples

- Questions welcome
- I.e. each and every slide will probably not be shown
 - Recommended to review the slides
- You can't learn all of the presented material, ...
 - ... make notations of interesting concepts, then deepening the understanding during the project

Slides and Code samples

- Have tried to name samples close to slides content
- Should be possible to match, if not contact assistants

A Note on the Workshops

Somewhat complex to create

- Keeping everything in synch
- Communicating what to do ...

There will probably be errors and/or unclear points

- Should not have to struggle for days with non-relevant problems
- If strange or very time consuming errors contact assistant (during lab sessions)

Literature, Links and Samples

Central access point for everything is course page

Many links on course page and in slides!

- Have to be careful on the Web, there are bad advices, contradicting advices, ...

Many code samples on course page!

- Will save you a **lot of time** (students tends to realize this too late)

Very hard to find a single (or even multiple < 10) book(s)

- Also, ... area is moving too fast... books quickly deprecated
- See Course PM for suggestion

Passing the course

Only 2 mandatory moments

1. Do the workshops (U-G)
2. Handle in an acceptable project (U-5, U-VG)
 - As an individual you must have contributed sufficiently to the project, about 800 SLOC (if less add some explanation in some document)

Course grade given by project

- Individual grade normally same
- See Course- and Project-PM on course page for details

Guest Lectures

Hopefully ...

- Oscar Söderlund (Spotify) ... demo of MEAN-stack
- Daniel Hausknecht (Phd) about security
- Possibly: Adam Waldenberg on creating own components

Will be announced!

Prerequisites Mismatch

This year a mismatch for IT-programme

- Data communication missing

To catch up read [HTTP part 1](#)

- ... or other (basic) tutorial on web
- [Here](#) is Wikipedia's version ...
- ... and here's the [specification](#)
- HTTP will not be covered during lectures

Questions

?