Topics

1. Welcome
2. Course Organization
3. Inspiration for Projects
4. Prospeum Pitch
The Plan

You are here

24. Oct
Kickoff meeting

End of March
Final presentation

Goal
The Plan

Project ideas and group finding (until ~7. Nov)
- Come up with an idea
- “Elevator” pitch (30s - 2min, slides, rough mockup/picture)
- Form groups of 3-4 students

24. Oct
Kickoff meeting

~7. Nov
Project ideas and group finding

End of March
Final presentation
The Plan

Vision document (until ~21. Nov)
- Define minimal viable product
- Define final project goals
- Slides with mockups + technology stack (2 - 5min)

24. Oct
Kickoff meeting

~7. Nov
Project ideas and group finding

~21. Nov
Vision document

End of March
Final presentation
Vision Document

- Similar to scope + requirements statement
- Requirements statement ("Lastenheft"):  
  - Motivation + Problem description  
  - Project goal (what would the final product look like)
- Scope statement ("Pflichtenheft"):  
  - System Architecture  
  - Technology stack  
  - Project scope (what will we implement for this course)
- Roughly 2-3 pages
- Due 21. November
The Plan

First Demonstration (19. Dec)
- Implement first prototype
- Demo some functionality
- Technology stack analysis

24. Oct
Kickoff meeting

7. Nov
Project ideas and group finding

21. Nov
Vision document

19. Dec
First Demo

27. Feb
Final presentation
First Demonstration

- Implement the first prototype
- Demo some functionality
- Technology Stack Analysis:
  - Justify the choices for the stack
- Lessons learnt
  - What were the problems that you faced?
  - How did you solve them?
  - How did you divide the work among you?
- 5-8 slides
- Due 19. December
#1 Smart Weather Forecast

Build a website to interactively explore these the differences between the forecasted weather and the actual (measured) weather.

- Allows professionals to identify weaknesses in weather models
- Detect which weather service is best for which location
- Analyse difference between forecast and measurement
- Temperature, wind, pressure ...
- Big data management: 100GB+ weather data
#2 Traffic Aware Routing

User wants to drive from A to B and wants to arrive by datetime X. When should he/she depart to minimize the travel time?

Tasks:

- Get necessary data from public data sources
- Design and create database
- Design and implement web interface
- Plot estimated travel (y axis) and departure times (x axis)
This project would allow web developers to configure their database in node.js.

Tasks:

- Design and create secure management platform for a modern database.
- Could be done for postgres to help make it more popular in the node community.
- Many possibilities: Provide enhanced analytics, easy setup, management features, monitoring ...
- Contribution to open source community.
A website to help manage big lectures with multiple tutor groups.

Features:

- Existing system
- Tutored accounts, tutor groups, bonus points, export, import
- If finished (and good), it will definitely be used!
US has a number of National Parks and areas which do not have cellular coverage. Also, a number national parks do not have any options for food/water at the visitor centers.

Tasks:

- Design and populate various databases for cellular coverage, and national parks that do not have food options etc
- Make an app that allows a user to plan a trip based on the data that you populated
One More Thing ...

Open datasets (https://www.google.com/publicdata/directory) !!!!