

Danmarkskort: Visualisering, Navigation, Søgning og Ruteplanlægning

Lecture 5: Projektbeskrivelse og gruppearbejde

based on slides by Claus Brabrand

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Plan for the rest of the course

- Today: (wk 9)
 - Project requirements
 - Structure of project work
 - Group contracts
- Wednesday 16/3 (wk 11): Lecture on efficient data structures for spatial data
- Wednesday 23/3 (wk 12): Lecture on improved algorithms for shortest paths
- Wednesday 6/4 (wk 14): Group progress presentations
- Wednesday 27/4 (wk 17): Group progress presentations
- Friday 13/5 at 2 PM (wk 19): Code freeze, hand-in of source and program
- Friday 20/5 at 2 PM (wk 20): Hand-in of report

Project requirements

Short recap: (full version on learnit)

- work on any .OSM file describing a part (or all) of Denmark.
- save and load the current model to and from a binary format.
- draw all roads, using different colors to indicate types of road.
- coherent UI (incl. panning and zooming)
- show the name of the road closest to the mouse pointer
- allow the user to search for addresses
- compute the fastest route between two user specified points
- option for biking, finding the shortest route not using highways
- textual description of the computed route
- allow the user to change the visual appearance of the map
- be fast enough, even on the full map of Denmark (hint: lectures in weeks 11 and 12)

Releases

- You must use a github.itu.dk repository that we create for your project
- Release every week
 - First release is tagged v0.1, next is v0.2, ...
 - You decide when to release; we check for new releases every Monday morning
 - The final exam submission version must be tagged v1.0
- Each release must be accompanied by release notes:
 - Change-log, indicating feature/bug progress
 - A representative screenshot
- Document project progress:
 - Activity on github documents the process, and will be used at the exam
 - Hint: Each github repository has a wiki

Time spent on the project

- This course is 15 ECTS, i.e., half of your time
- Full time is 40 hr/wk, i.e., 20 hr/week for BFST
- You will be working in groups of 5 students, i.e., 100 hr/wk
- Starting salary for developers is \sim DKK 250/hr, including benefits
- To cover other expenses, multiply that by 3.5 (\sim DKK 850/hr)
- For a weeks worth of team development you must charge the customer:

$$3.5 \cdot 250 \text{ DKK/hr} \cdot 100 \text{ hr/wk} = \text{DKK } 87\,500$$

- When you make your progress presentation in four weeks, the customer will be looking for how his

$$4 \cdot 87\,500 \text{ DKK} = 350\,000 \text{ DKK}$$

has been spent so far

What is a group?

group := a collection of people that:

- have one (or more) common goals
- have common conditions
- have common norms; and
- feel as a ... **group** **recursive definition**

Kilde: "Arbejdsgruppens Psykologi"

Reitzels forlag 1983

B. Lenéer-Axelson & I. Thylefors



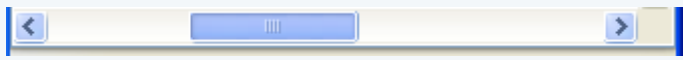
Norms?

Definition: A principle of right action binding upon the members of a group and serving to guide, control, or regulate proper and acceptable behavior

Organizational norms

- Form of organisation?
 - all work by everyone together, all the time >< delegation of sub-tasks onto sub-groups >< "individual"
- Roles?
 - scribe (referent) / chair (ordstyrer) / process manager / ... permanent >< alternating >< fluid (NB: 'strongest' takes control!)
- Reception of suggestions?
 - open (positive reception) >< closed (negative reception)
- Meeting place?
 - group rooms >< various random locations
- Discussions (degree of formalization)?
 - formal (= rules+chair+scribe) >< informal (NB: 'strongest'!)
- Documentation?
 - full (personal notes + project diary + worksheets) >< "paper-less"

Work norms

- Level of ambition? 
 - pass course (02) >< top grade (12)
- Work pace? 
 - casual >< intense
- Thoroughness? 
 - all details >< thorough >< “cost-effective” >< superficial
- Working hours?
 - “from when until when?”, “which days?”, “weekends?”, ...
- Discussions?
 - planned >< “laissez-faire” (NB: “strongest”!)
- Decisions?
 - conclusions of discussions >< majority vote >< veto for all

Group constitution

- A lot of problems can be avoided by having clearly defined rules
- Group constitution := written set of norms
- Each group must write a group constitution and push it to the group repo — use exercises today to create a full draft
- This document will be part of the final report

Groups and constitutions

The groups:

- We have placed students who have shown activity into groups taking your preferences into account, but also seeking to form relatively homogeneous groups with similar expectations.
- The list of groups is available on LearnIT. You will also receive an invitation to join the group repository on [github.itu.dk](https://github.com/itu.dk), as well as group rooms on Discord

Exercises today 12-14 on group constitution.

Signed group constitution must be pushed to your group repo asap, and by the end of the week at the very latest.

Next steps

- Individually formulate what you would like in a group constitution
- Write a group constitution
 - All group members must sign it
- Each group has a TA assigned, to monitor your progress and guide you. Agree with your TA when and how to interact.
- We have created a shared repository at `github.itu.dk`
 - All group members have full access
 - `trbj` and the assigned TA has full access
- Upload your constitution to your repository by the end of the week at the latest
- Set up a meeting with your assigned TA