Application Development for Mobile and Ubiqitios Systems

Synaps

A tool to manage and join interdisciplinary projects.

Fr, 02 NOV 2017 (E008)

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Gliederung

The Application

_ manage and join interdisciplinary projects
_ beyond the university context
_ find people from all divisions

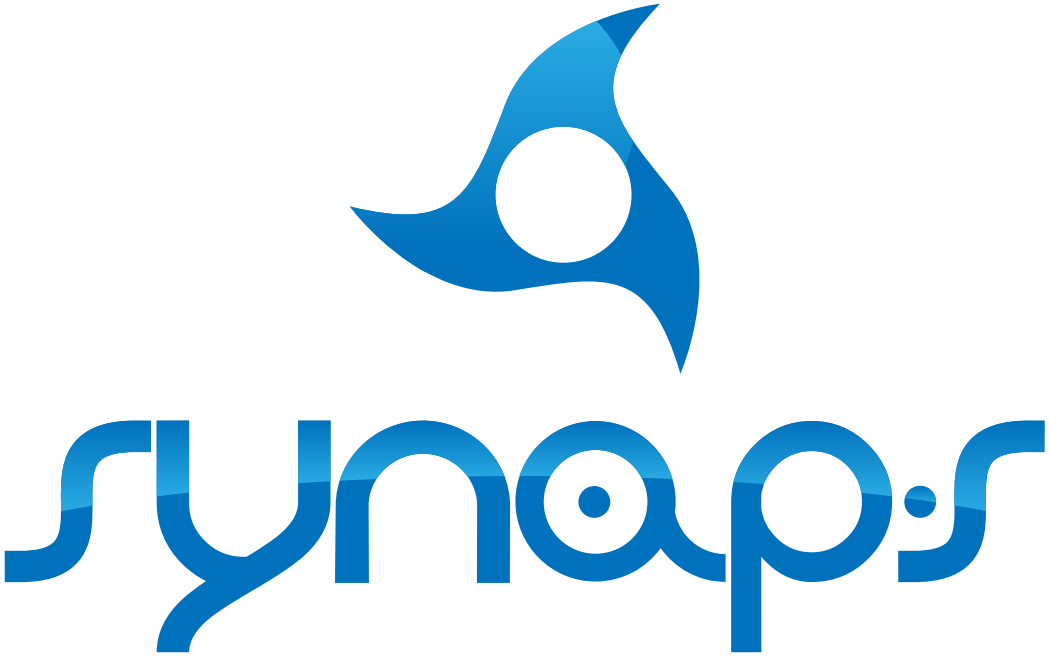

Bild 01 Logo design with icon and lettering

Use Cases

_ mainly two roles

_ project owner is a user with additional use cases

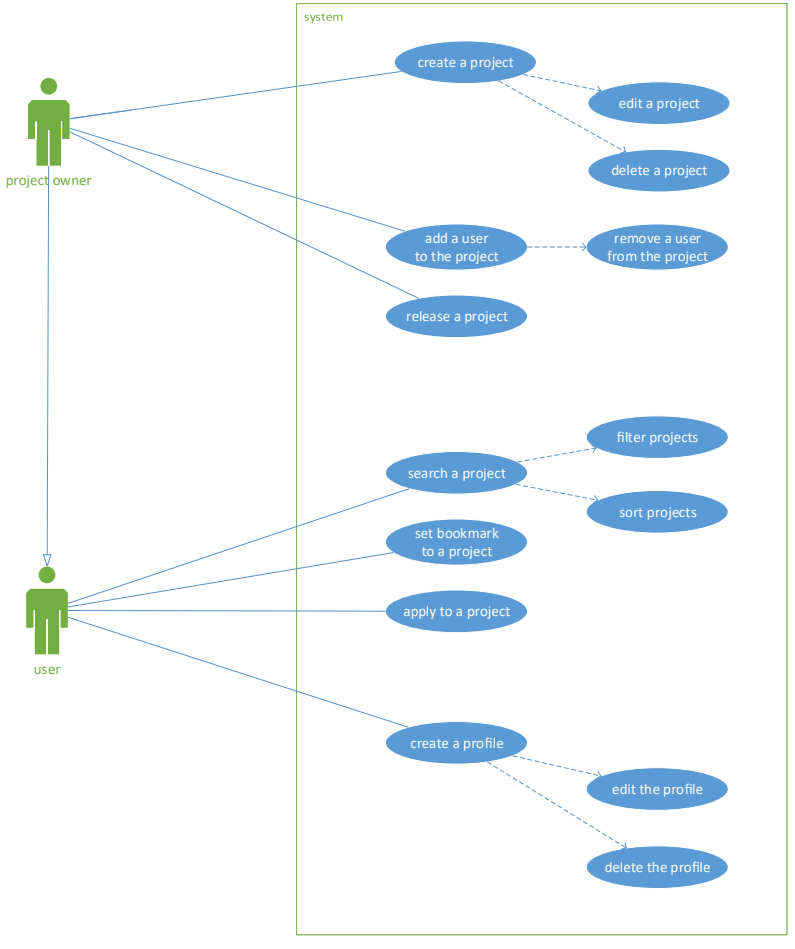

Bild 02 Use-Case diagram

Mockups

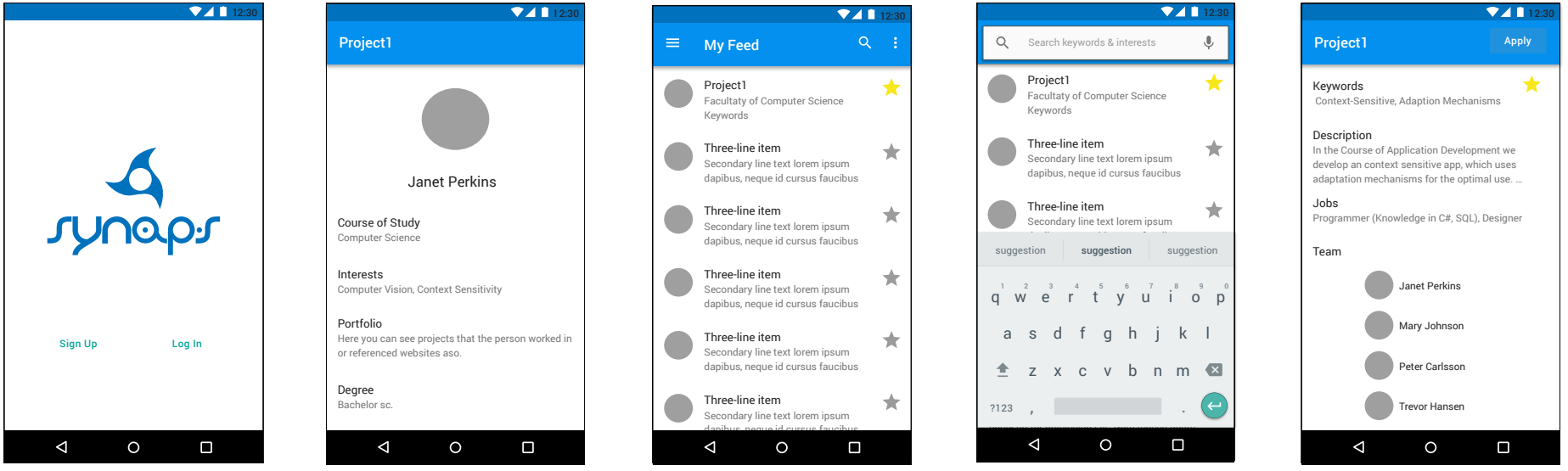

Bild 03 Mockups of different screens derived from the use cases

Challenges

Connectivity

_ reduce the amount of network activity, when the datavolume or network speed is low

Context

_ detect the type and speed of network

Adaption

_ lazy evaluation on client side (text first then images)
_ reduce size an quality of images

Challenges

Offline Time

_ provide functionality when offline (bookmarked projects, feed, notifications)

Context

_ detect if the app is online or offline

Adaption

_ use of cached data when offline
_ update cache if connection is good enough
_ store joined projects persistently

Challenges

Form Factor

_ usable on many screensizes

_ limited memory resources

Context

_ detect screen size

_ detect amount of free memory

Adaption

_ responsive layout for most screens

_ if memory is nearly full, the app stores a smaller amount of cached data

Technologies

Client

_ Android and iOS on mobile phones, Windows10
_ own design which works flawlessly on both systems
_ Xamarin for crossplatform development

Server

_ RESTful Webservice

Database

_ MySQL

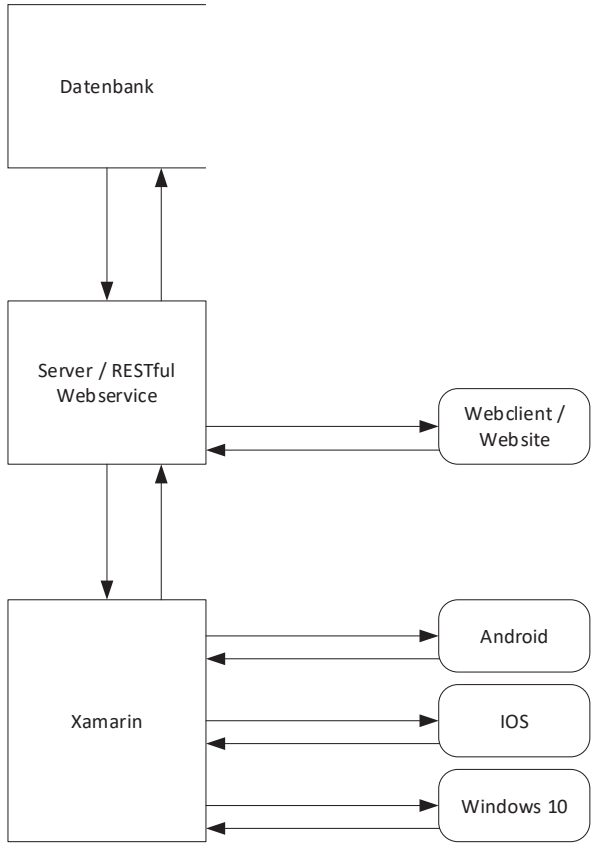

Bild 05 Architecture overwiev

Work Plan

23.10.2017: Begin of project planning (structure, technologies, design)

03.11.2017: First Presentation

01.12.2017 : First version (important funcionallities)

15.12.2017: Second Presentation

20.12.2017: Finalize the components (nice to have features)

04.01.2018: Final testing and correction of the last bugs

26.01.2018: Final presentation