

Application Development for Mobile and Ubiquitous Computing

Beer Guide

Second Presentation

Group No. 18
Dresden, December 16th, 2016

Application Scenario

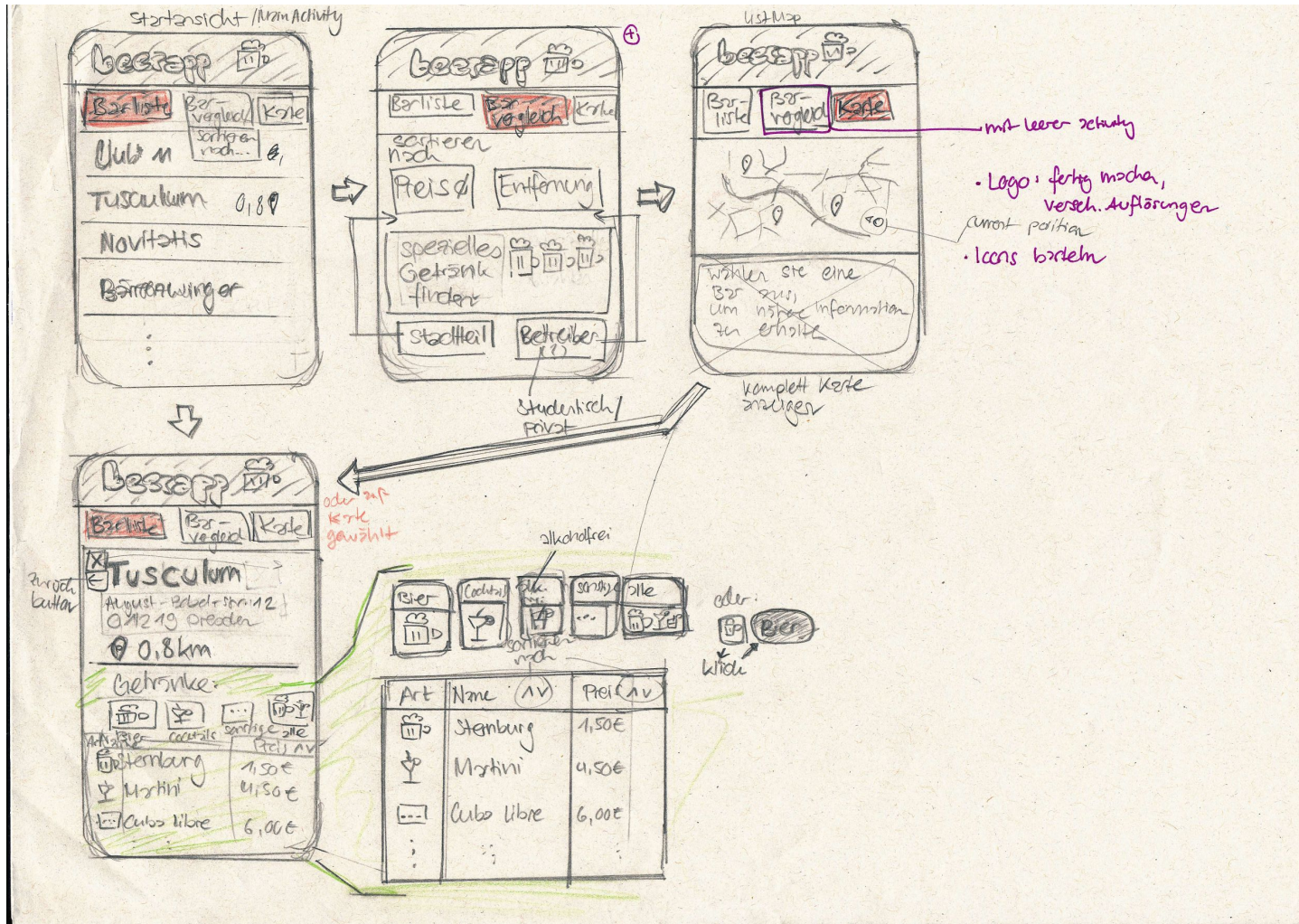
Where can I get my next beer?

- Check for bars in your surrounding
- Get bars listed based on specific criteria (distance, price...)
- Search where your favorite drink is available
- Get informed about special offers near you

Intermediate Result

App Logo:





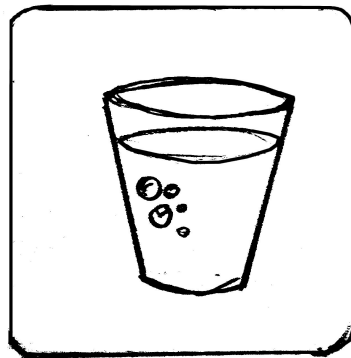
Intermediate Result

- Design for filter buttons

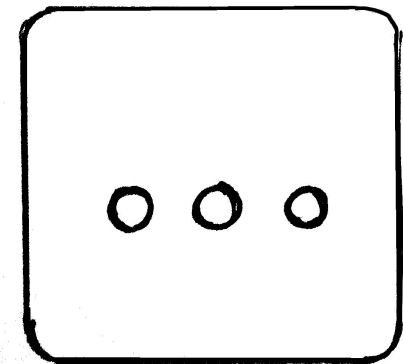
cocktails



nonalcoholic



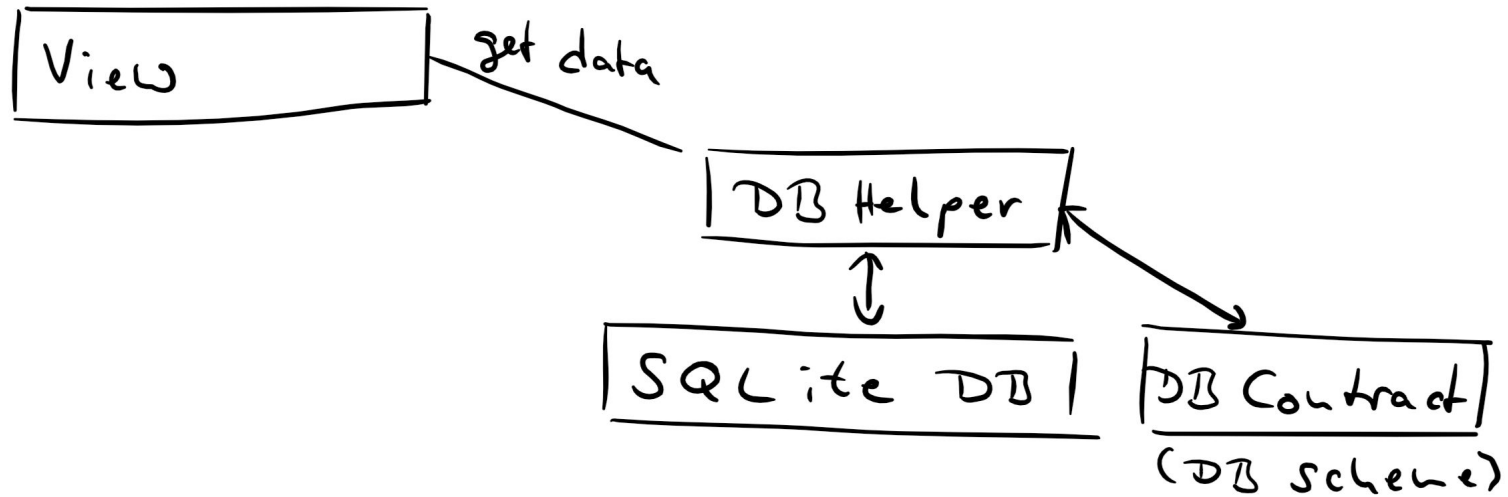
others



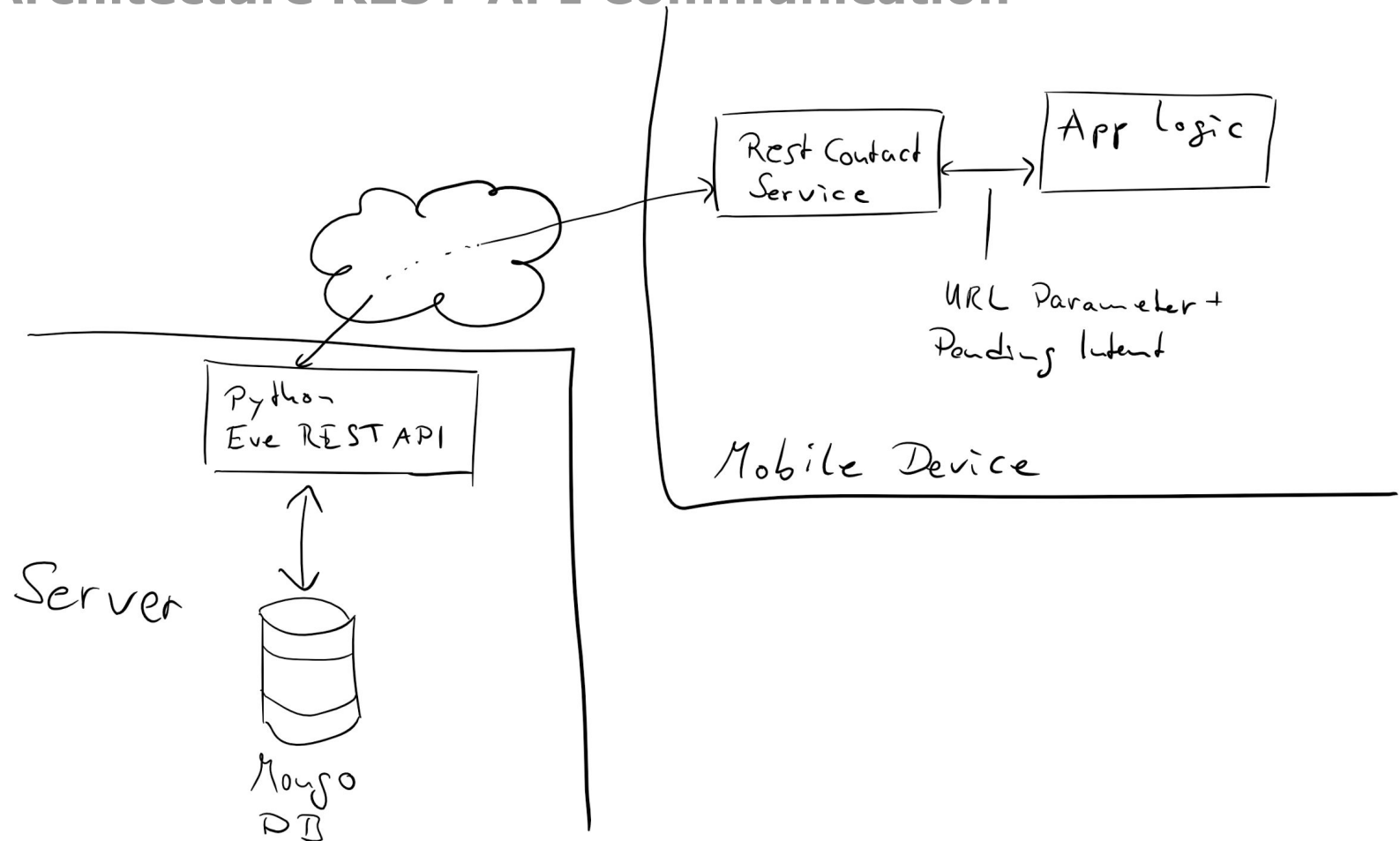
Intermediate Result

- Database (SQLite) implementation with dummy data on mobile device
- GPS implementation with distance calculation
- Menu and UX concept
- Mongo-DB with dummy data
- Python REST API connected to local Mongo-DB
- Network communication to REST API on Server

Architecture Database Connection



Architecture REST-API Communication

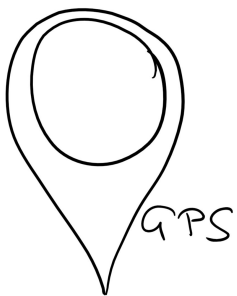
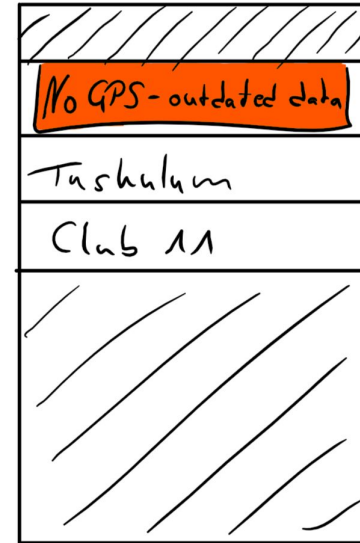


Challenges

- Form Factor Challenge
 - Change input modalities depending on display size
 - Display different amount of information depending on space
 - Different amount of menu icons depending on size

Challenges

- Offline Challenge
 - Detect offline status
 - Give the user a hint that the information might be outdated without annoying him
 - Also handle “offline” GPS-Connection



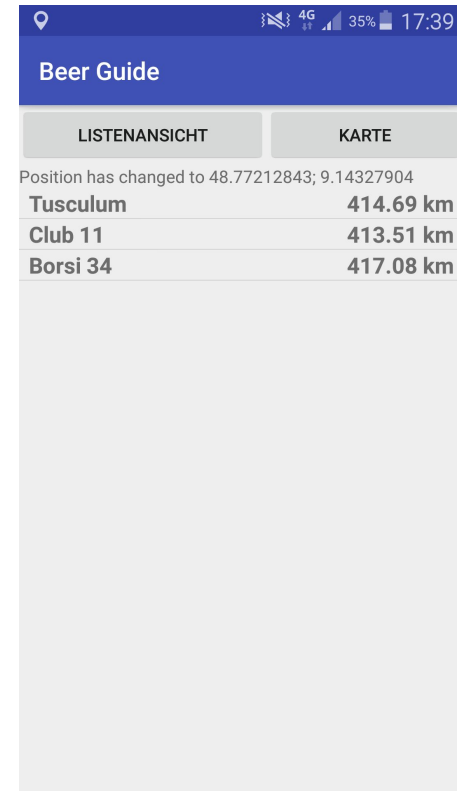
↳ Let the user set his position

↳ Make the distance calculation and filtering by distance unavailable

Adaptation and Context

Position Adaptation

- If the current position changes the list order has to be checked and rearranged if necessary depending on the chosen order type
- When the position changes the distance information has to be recalculated and updated in the list view and the current position in the map has to be changed



Technology

SQLite Database



Eve Python REST API Framework



android

MongoDB



Technology

Layout Adaptation

- using RelativeLayout instead of LinearLayout
→ increasing app performance

Workplan

Date	Action
14.10	First Idea, Target Smartphone OS, Started Android Tutorial
28.10	Start Implementing
03.11	First Presentation
18.11	Context and Adaption, Start Adaption Development, First Android Prototype
25.11	First Server Prototype
16.12	Adaption Concept Presentation
06.01	Testing on real devices
26.01	Final Presentation

Thank you for your attention.