TECHNISCHE UNIVERSITÄT DRESDEN

Department of Computer Science Institute for System Architecture, Chair for Computer Networks

Application Development for Mobile and Ubiquitous Computing

Seminar Task
First Presentation

GroupNo. 16
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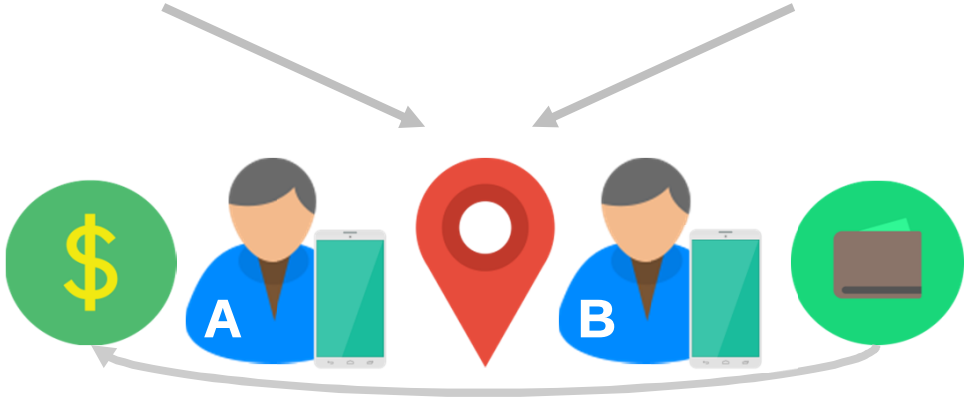
Application scenario

This is Andy.

And this is Bob.

- Owns a camera
- Doesn‘t have time to take photos

- Has to take photos
- Cannot afford a camera

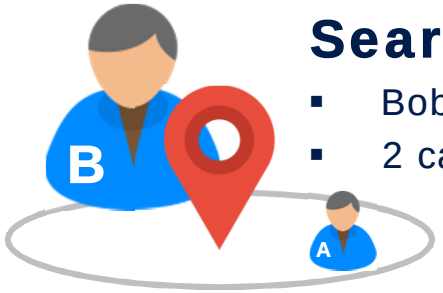


Application scenario

Upload an offer

- Andy can simply upload an offer:

*"Offering camera – Do you want to borrow my camera? **5 €/h**"*



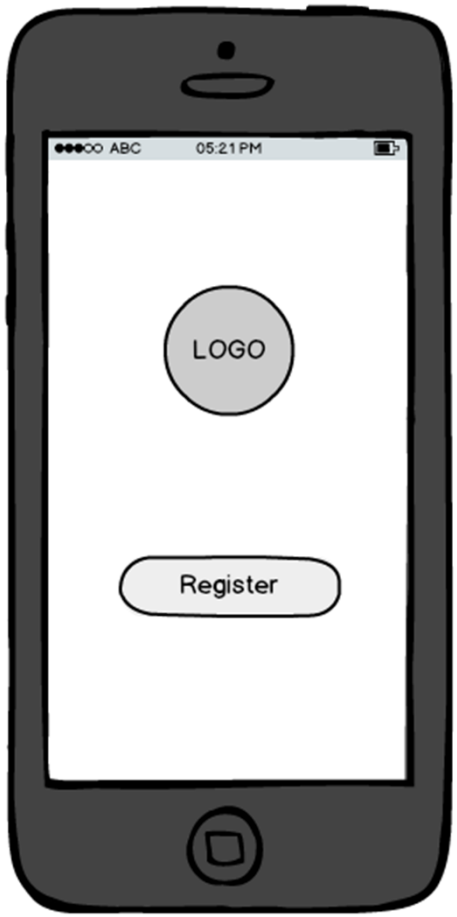
Search for offers near me

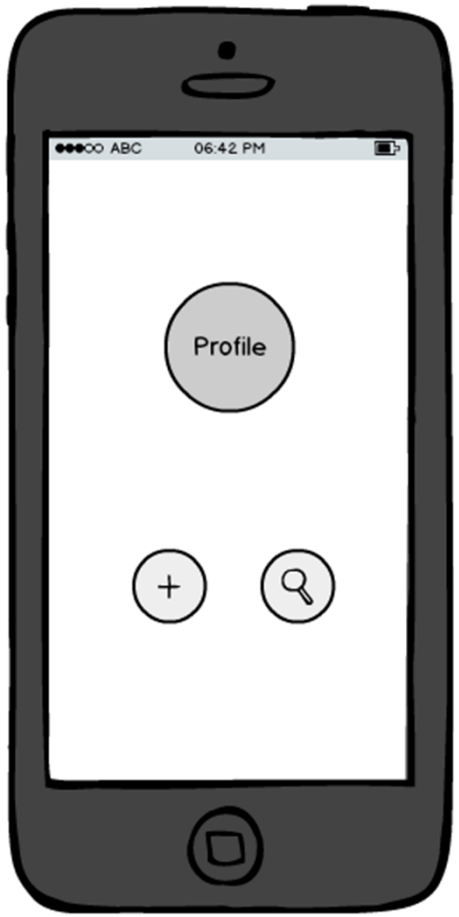
- Bob can search for offers near his current location
- 2 categories: Items to be lent, services to be used

Privacy

- For security reasons Bob will not get the exact location of Andrew
- Bob can contact Andrew via phone or email

Mockup – Start screen

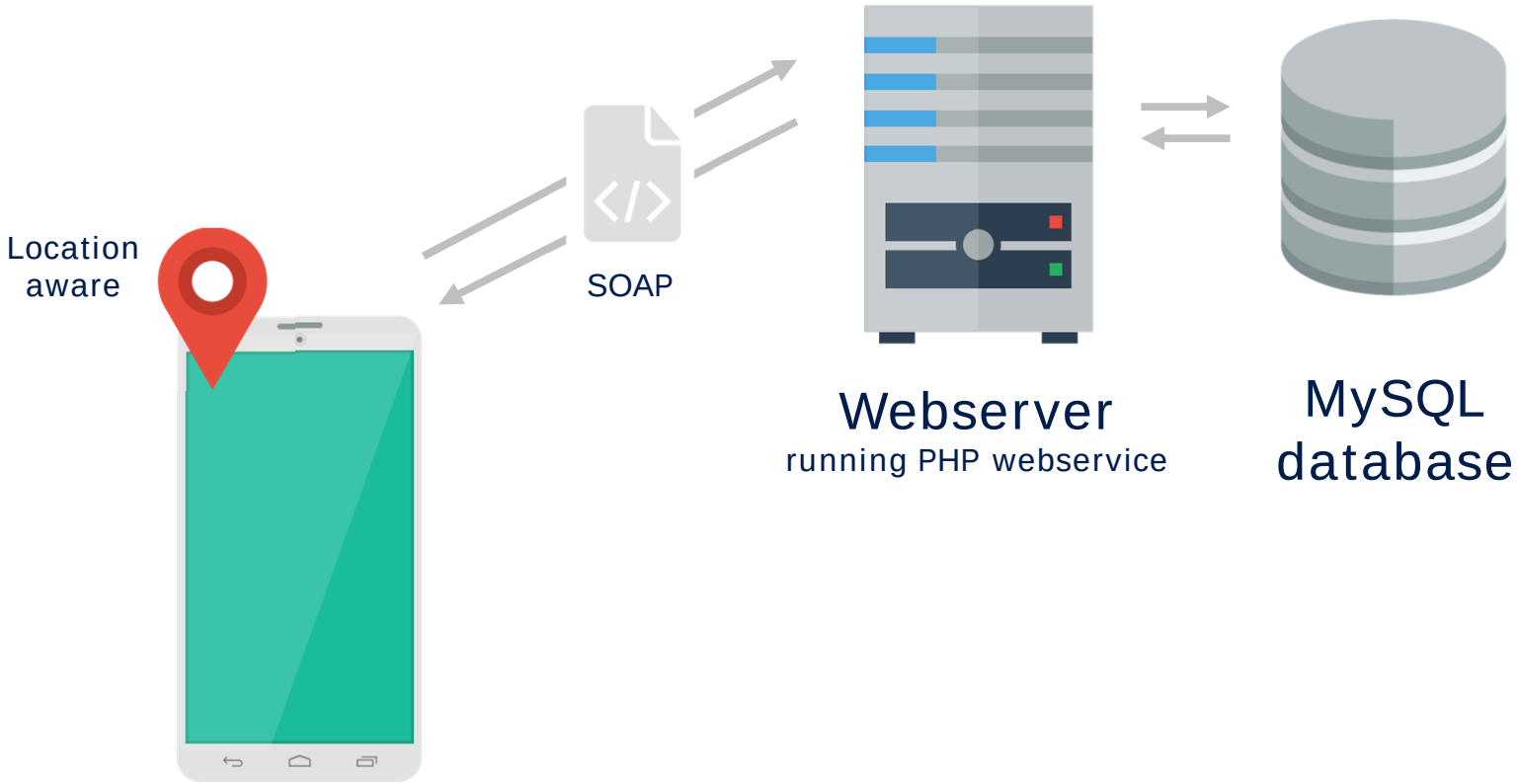




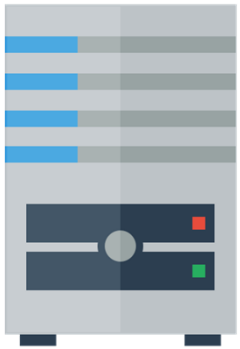
Mockup – User area

Mockup - Search

Technologies



Technologies - Webserver



- Running a webservice implemented with PHP
- Webservice will provide access to the database
  - Add data to database (user information, offer)
  - Search for data (offers nearby)
- Communication via SOAP
  (Simple Object Access Protocol)
- Errors reported with `fault` messages
  (errorhandling is done by client)

Technologies – Android application

- Client application for Android devices
  (implemented in Java)
- Use Android‘s build-in location manager functionality to get location
- Make use of the ksoap2 library for SOAP functionality
- Store data in local database for offline mode

Context awareness

Location

- Find offers nearby
- Use GPS location to personalize search results

Internet connection

- Consider internet status (connected/disconnected)
- Show error messages to user when no connection can be established
- Save data locally *(optional)*

User experience

- Make suggestions when creating account by using information from phone book *(optional)*

Challenges

Get location

- Get user location correctly and effectively
- Save energy

Connect to webservice

- Implement a webservice providing database access
- Connect to webservice
- Working with exchange formats (SOAP)

Comfortable UI

- Simple and lightweight user interface
- Easily access important information

Work plan

10/17/14 – 11/2/14	• Collecting ideas & brainstorming • Thinking about possible apps
11/3/14 – 11/6/14	• Presentation slides • Discussing the main ideas of future app
11/7/14	**First presentation**
11/8/14 – 11/30/14	Implementing first prototypes, testing technologies
12/1/14 – 12/18/14	• Implementation of webservice • Further app implementation • Writing the concept
12/19/14	**Adaptation concept document**
12/20/14 – 1/4/14	• Implementation • Testing
1/5/15 – 1/18/15	Bugfixing
1/19/15 – 1/29/15	• Finalization • Presentation slides
1/30/15	**Final presentation**

Sources *(graphics)*:

- http://www.graphicsfuel.com/
- Paomedia on http://www.iconfinder.com/
- Jonathan Patterson on http://www.iconfinder.com/
- Magnus Emil Liisberg Helding on http://www.iconfinder.com/
- Jerry Low on http://www.iconfinder.com/
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