TECHNISCHE UNIVERSITÄT DRESDEN

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

Application Development for Mobile and Ubiquitous Computing

Seminar Task

Second Presentation

GroupNo. 13

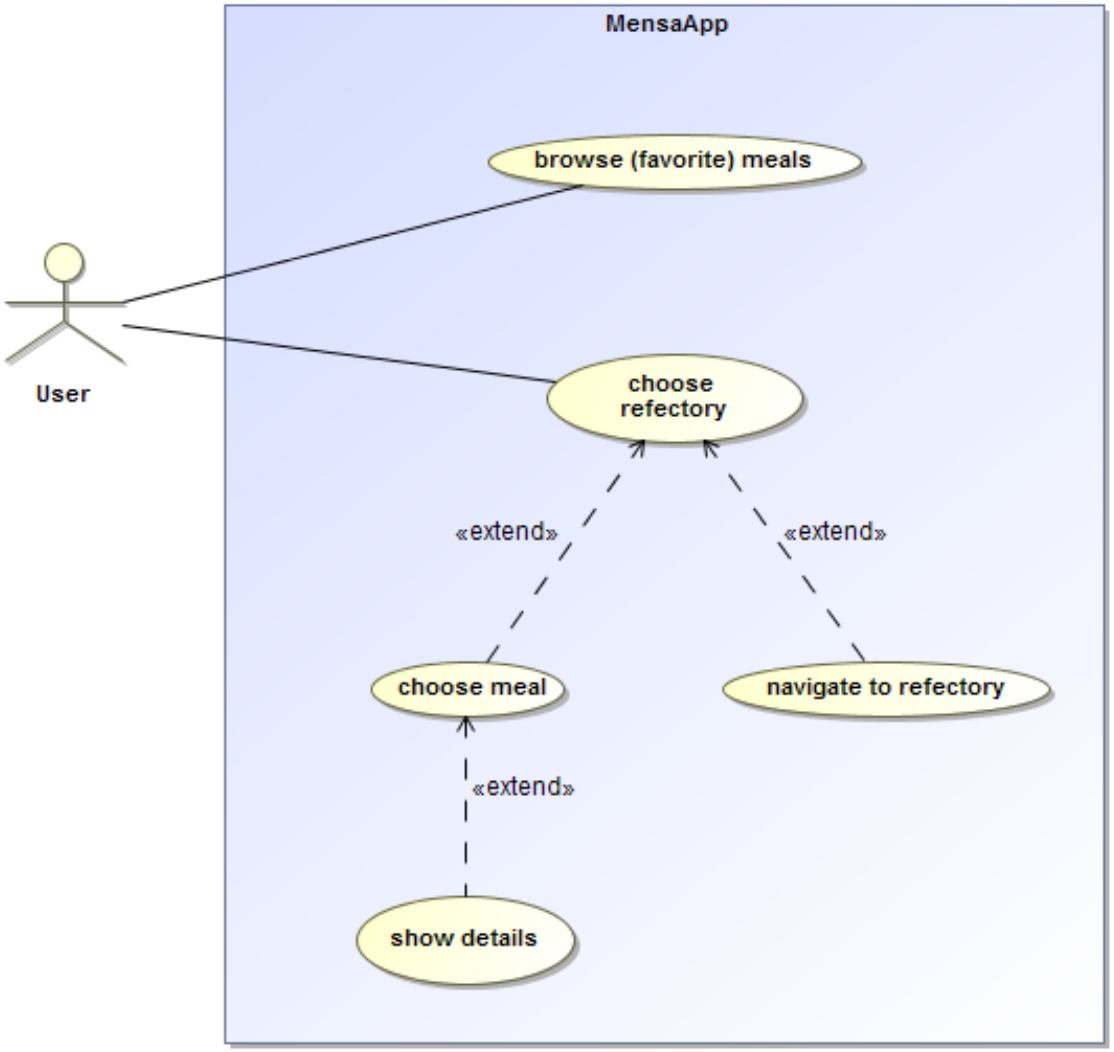
Team: Patrick Buchholz and Mikael Reiersølmoen

MensaApp

Users can...

- see what meals are served in the refectories
- search for meals
- locate canteens using the built-in map

Use Case


MensaApp
browse (favorite) meals
User
choose refectory
«extend»
«extend»
choose meal
navigate to refectory
«extend»
show details

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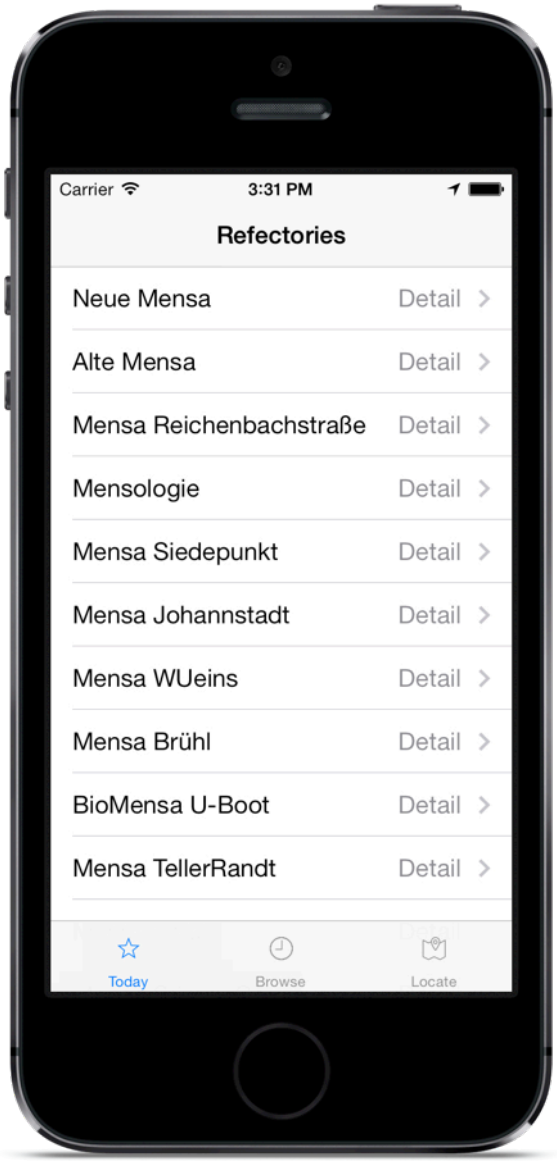
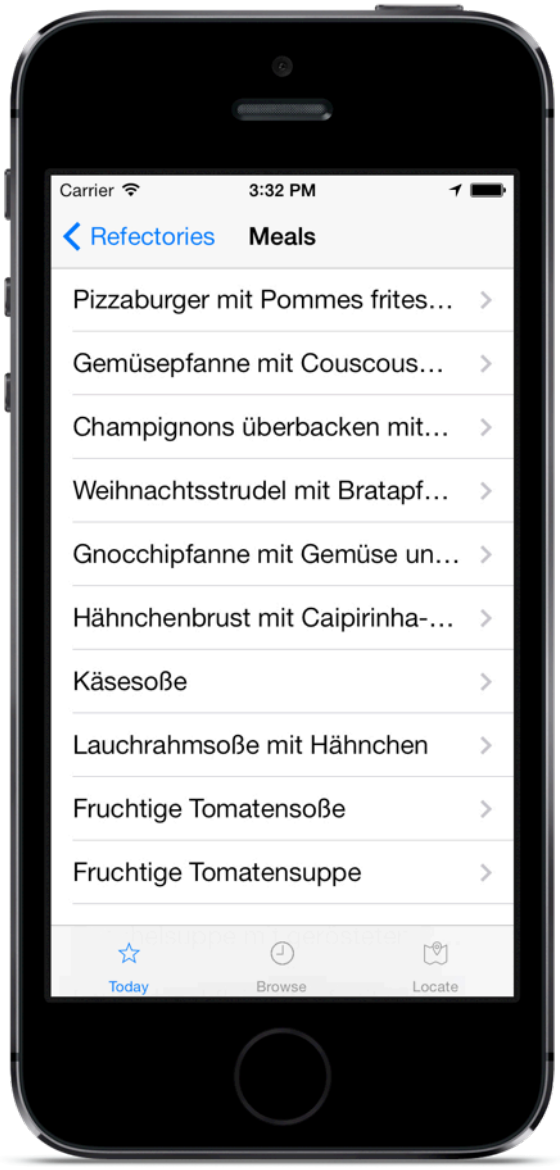
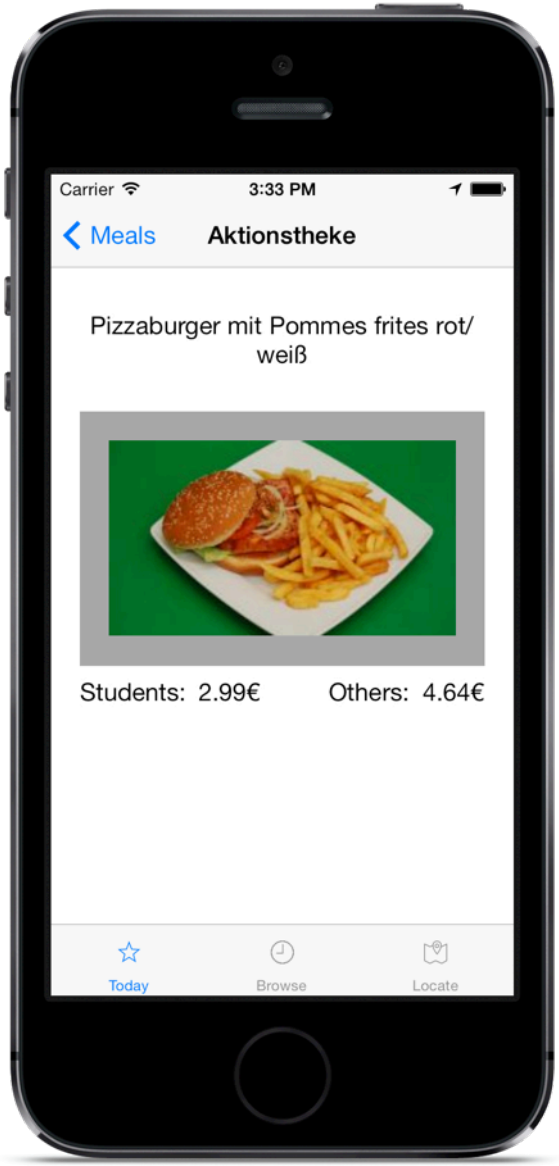
Screenshots







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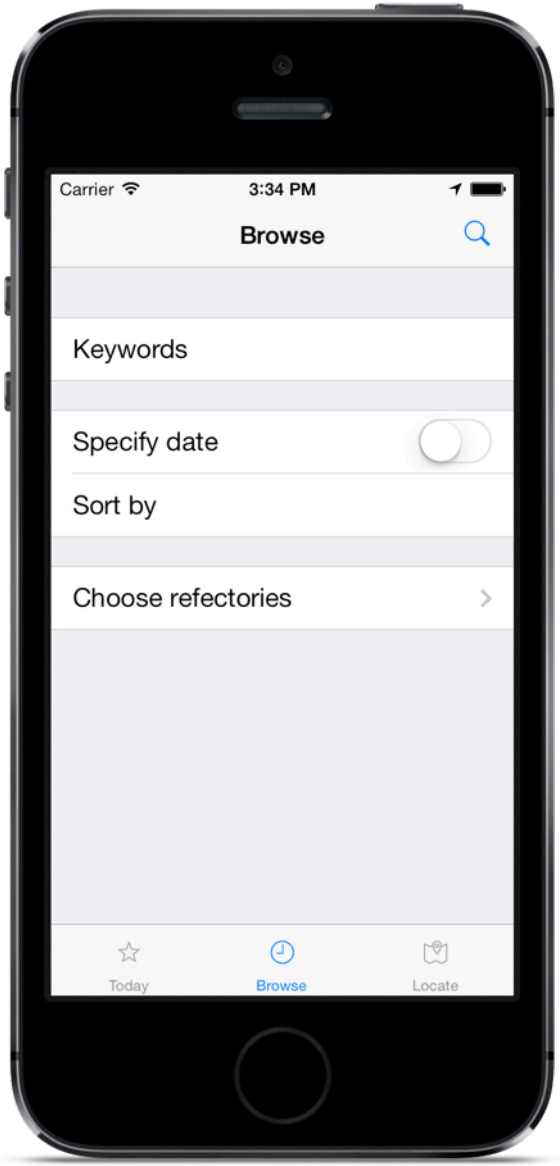
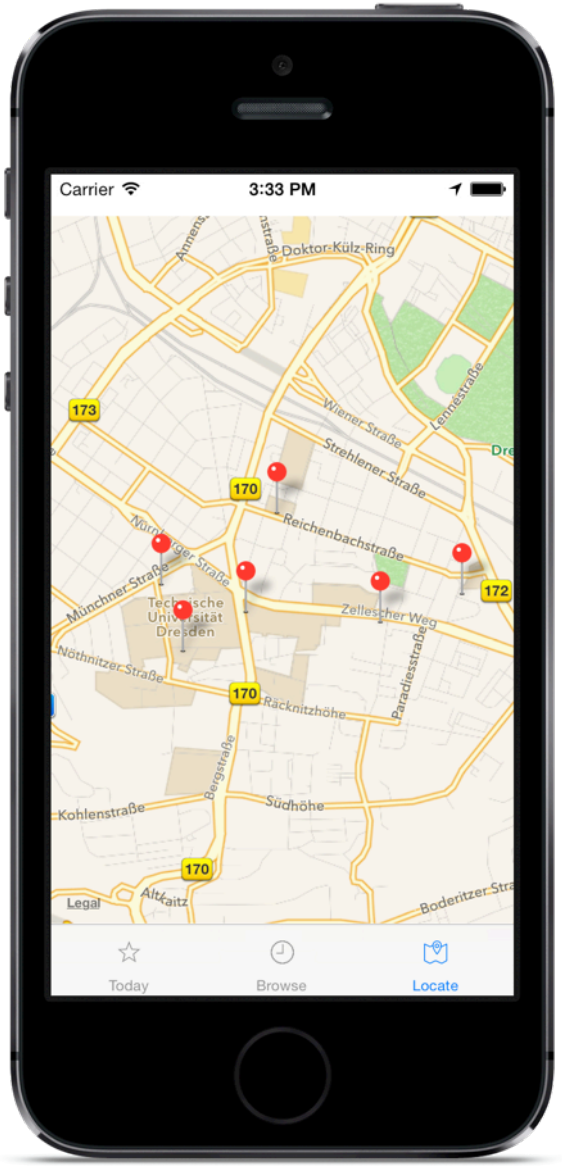




Architecture and Technologies

- iOS 7
- Core Location framework
- MapKit framework
- HTTP (HTML scraping)
- Core Data for offline saving

Studentenwerk Dresden ZUSAMMEN. WIRKEN.

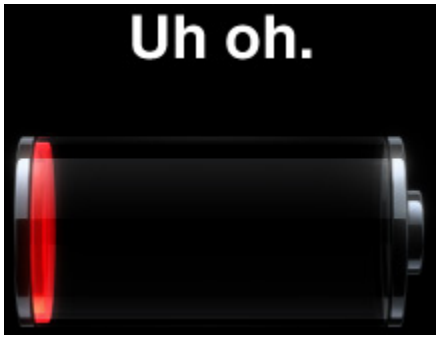
Challenges

Connectivity and offline services

- Meals are stored locally with Core Data
- Each meal entity has a date
- Current date is available without network connection

Energy challenges

- Goal is to make the app energy efficient
- Recieve GPS coordinates only when necessary
- Open network connection only if required



Reduction

Filtering

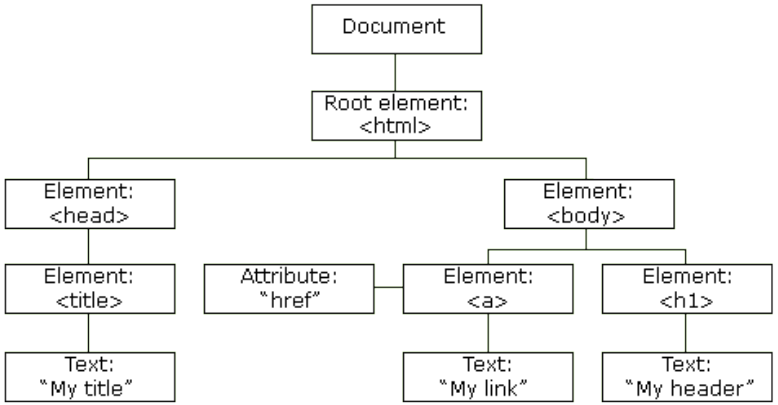
- Download whole HTML-site and hand it to the parser
- Set starting point with XPath
- Use ID's and classes to filter out the desired elements
- Loop through tables and check the rows

Adaptation of Application Data

Transformation

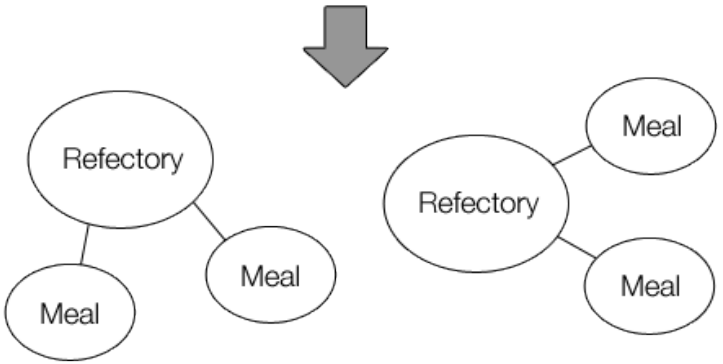
Format

- Transform content of HTML-objects to custom data types



Structure

- Create entities for each refectory and each meal



Physical context

Location

- GPS/Wifi for user location

Technical context

Network

- Check for network connectivity

Work plan

To be done

- Network indication
- Ingredients of the meals
- Map improvements
- Fully implement browse functionality
- Graphical elements and interface
- Testing – debugging – optimizing
- Translate