



TECHNISCHE  
UNIVERSITÄT  
DRESDEN

# Application Development for Mobile and Ubiquitous Computing

Things – Final Presentation

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DRESDEN  
concept  
Exzellenz aus  
Wissenschaft  
und Kultur

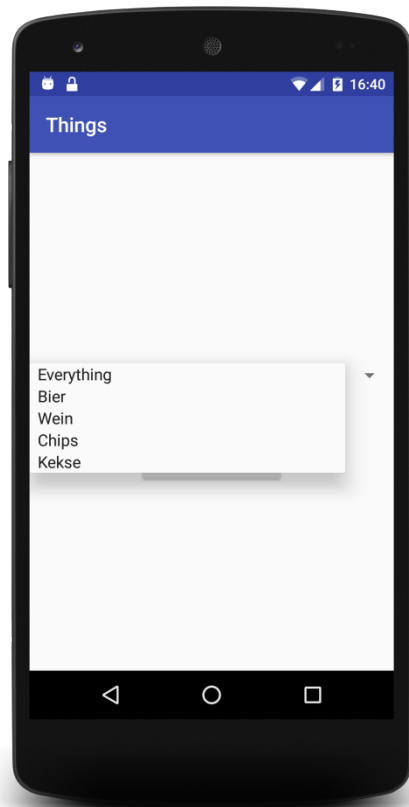
## App Idea

It's 11pm and you are in the mood for chips, beer or something else?

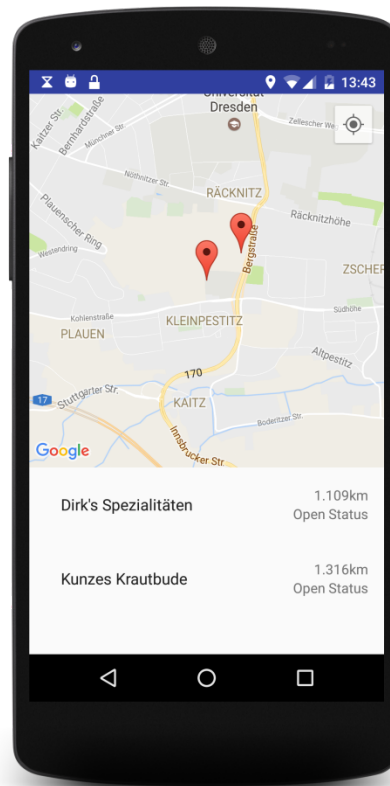
You don't know where you could get it?

Just use „Things“ to find out where to get it.

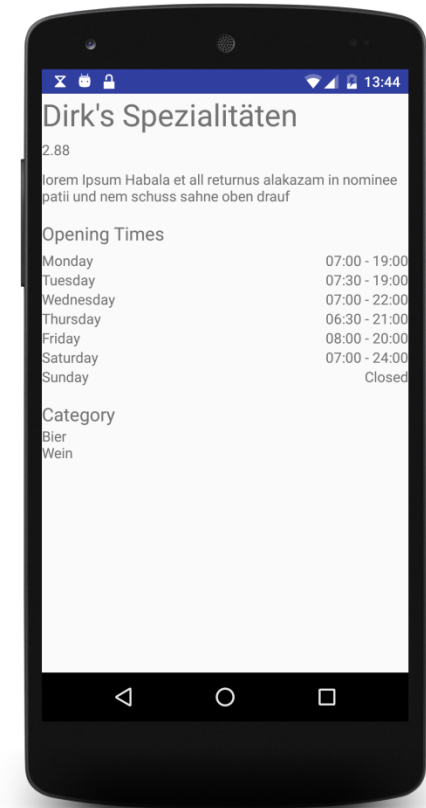
## Android Version



27.01.17



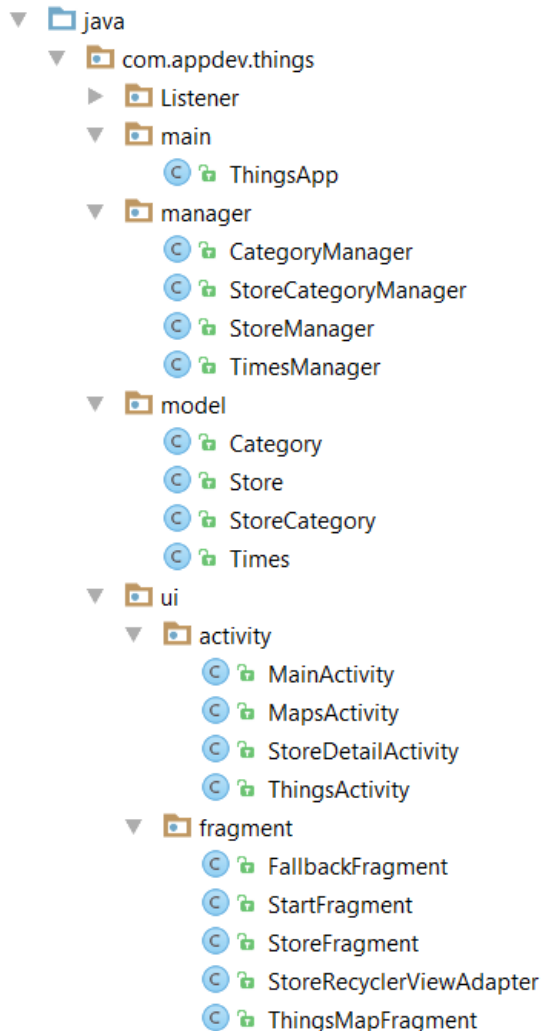
Application Development - Things



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## iOS Version

- Server
  - MySQL Database
  - Php – RESTful Webservice
- Android
  - SugarRecord (SQLite Database)
  - OKHttp (Interaction with Server)
- iOS
  - Alamofire (Interaction with Server)



- Model:
  - Database objects
- Manager:
  - Handle interactions with models
- Activity
  - Main: Search interface
  - Maps: Result overview
  - StoreDetail: Detail overview

- Caching:
  - Always cache the latest query results
  - User can still revisit data of known Stores
  - Depending on amount of previous results and/or signal Strength:
    - Repeat Query with higher Radius

- Caching:
  - Achieved with SQLite/CoreData
  - Results of last query always saved
  - User can review last results without internet
- Repeat Query:
  - Increase Search Radius depending on
    - WLAN: Use maximum amount of retries (4)
    - Mobile Data: Retries = Strength of Data (0..4)



- Prefetching:
  - Retrieve detail data about next Store in list when user checks previous Store
  - No delay when user checks next Details
  - Depending on signal strength and total amount of cached stores:
    - Prefetch more/less details

- Prefetching:
  - Check for WLAN
    - Prefetch all details
  - Check for Mobile Data
    - Prefetch depending on Signal Strength

- Location
- Mobile Data Connection
- User Choice

- Store Owner Interface
- Differences between Versions
- Category vs Product Search

- Well documented Interfaces make everyone's life easier