

Application Development

# Adaption Concept Presentation

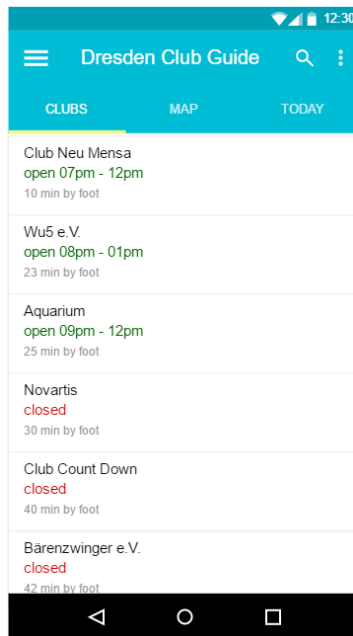
## "Studentclub Finder"

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Dresden, 16 December 2016

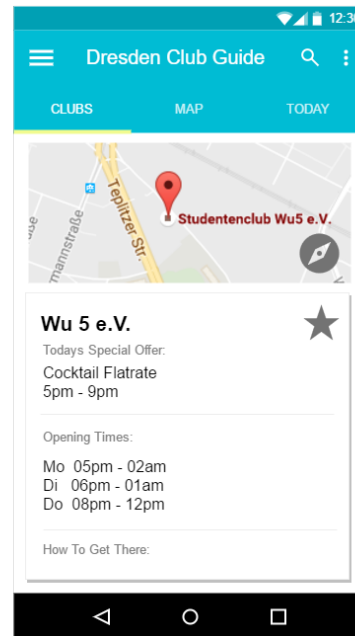
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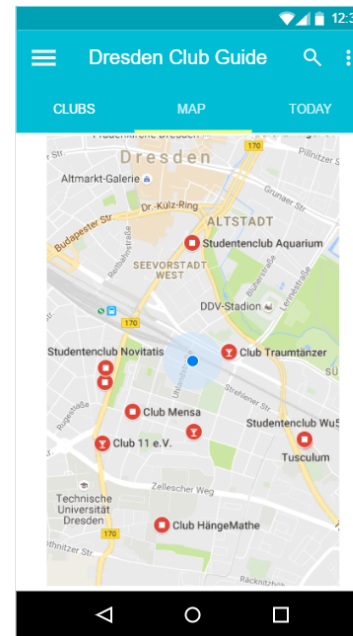
# 1. Architecture and Technologies



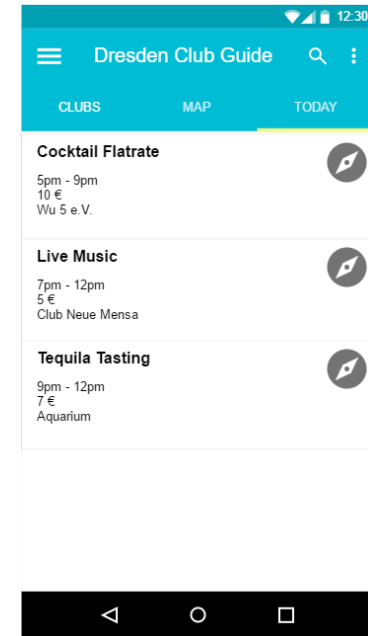
**HomeScreen**  
 MainActivity



**DetailScreen**  
 DetailActivity

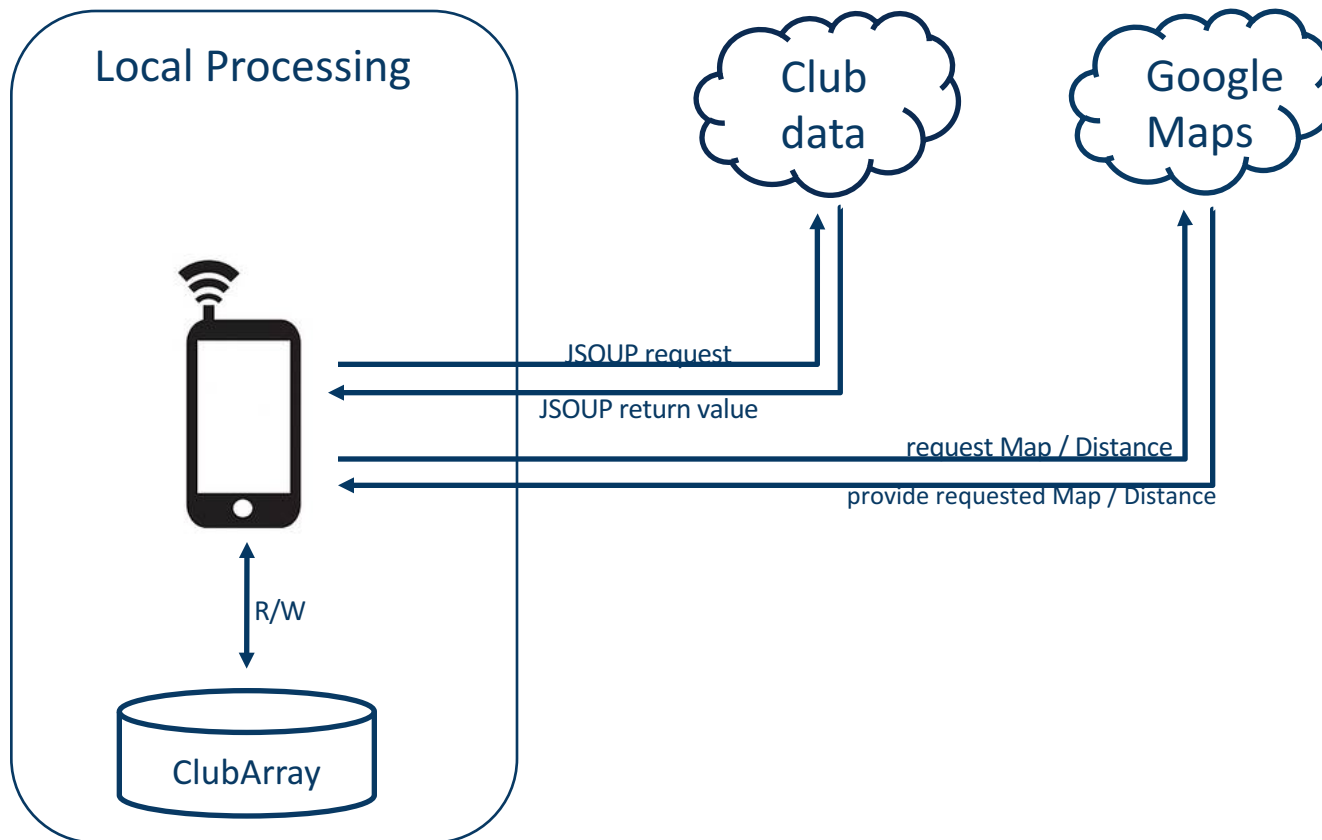


**MapsScreen**  
 MapsActivity



**OfferScreen**  
 OfferActivity

# 1. Architecture and Technologies



## 2. Localisation based push notification

### 2.1. Subject

- Localisation Challenge:
  - get current position
  - if user's next to a student club
    - => send push notification

## 2.2. Solution

- get current location by GPS/GMS query
- query every minute, background update
- access authorization
- check distance to student clubs
- Google Maps API
- trigger push notification for all clubs by 1km range
- Android Toast class to flash alert
- Notification Builder to generate content views using the platform's notification layout template

## 3. Battery saving

### 3.1. Subject

- get current battery charge
- reduce energy consumption

## 3.2. Solution

- Battery state: background update every 5 minutes
  - access authorization
- less than 30%
  - change to darker view through Intent
  - change localisation settings
    - change to UTMS (instead of GPS)
    - query location every 5 minutes



## 4. References

- [https://www.tutorialspoint.com/android/android\\_push\\_notification.htm](https://www.tutorialspoint.com/android/android_push_notification.htm)
- <https://developers.google.com/maps/documentation/android-api/location>
- <https://developer.android.com/training/monitoring-device-state/battery-monitoring.html>
- <http://www.androidhive.info/2011/08/how-to-switch-between-activities-in-android/>
- <http://stackoverflow.com/questions/24180985/gps-position-logging-battery-life>