TECHNISCHE UNIVERSITÄT DRESDEN

DRESDEN concept

SKIALP – Rent to win

An app designed in the lecture **APPLICATION DEVELOPMENT FOR MOBILE AND UBIQUITOUS COMPUTING**

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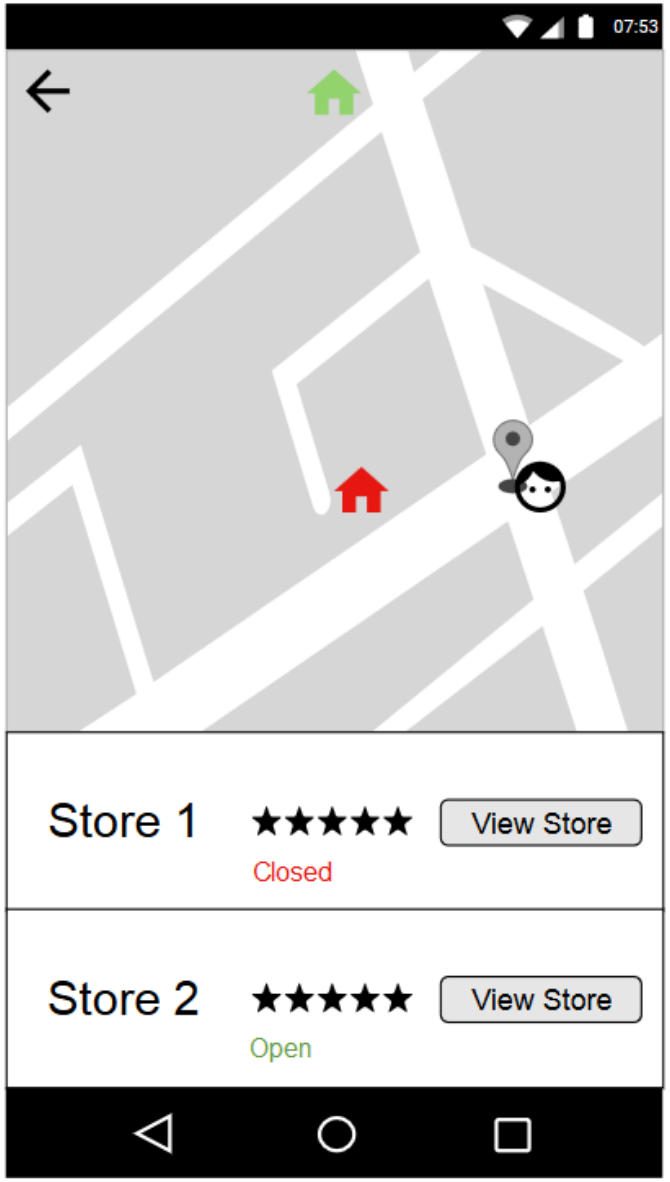
Dresden, 13.12.19

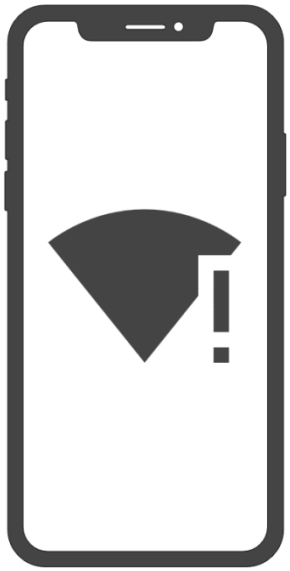
App idea

- rent skiing equipment mobile
- Prepare your reservation on phone and get your fitting equipment on site
- find stores of our branch in your environment or search for them in a specific place



Challenges

Offline



Connectivity

Usability

Offline Adaptation

- Context (*Personal*): personal informations
  - name, address, height, shoe size, head size, skill level
- Mechanism: delayed write-back
- Control: preparing reservation offline, caching until connectivity is given, send it to server

Connectivity Adaptation

- Context (*Technical*): Network
  - Connectivity type
- Mechanism: replacement
- Control: Getting Connectivity Status via ReactNative NetInfo, replacing pictures with text in catalog and store informations if connectvity is worse than 2G/3G

Connectivity Adaptation

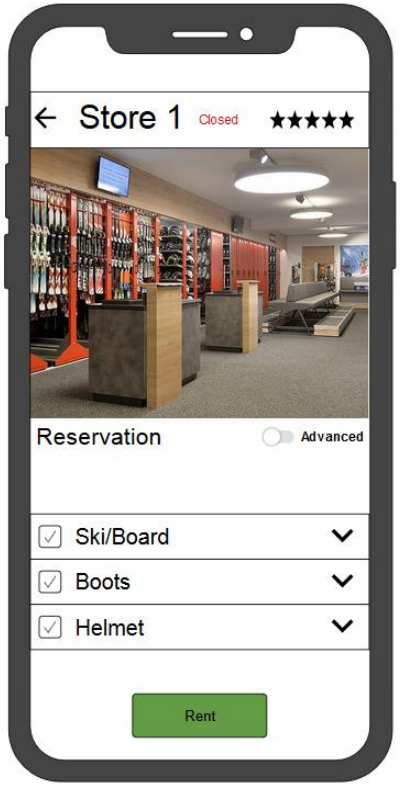
- Context(*Personal*): personal informations
  - name, address, height, shoe size, head size, skill level
- Mechanism: app data → reduction → filtering
- Control: filtering articles in catalog (in advanced mode), filtering offers (stores) by matching equipment

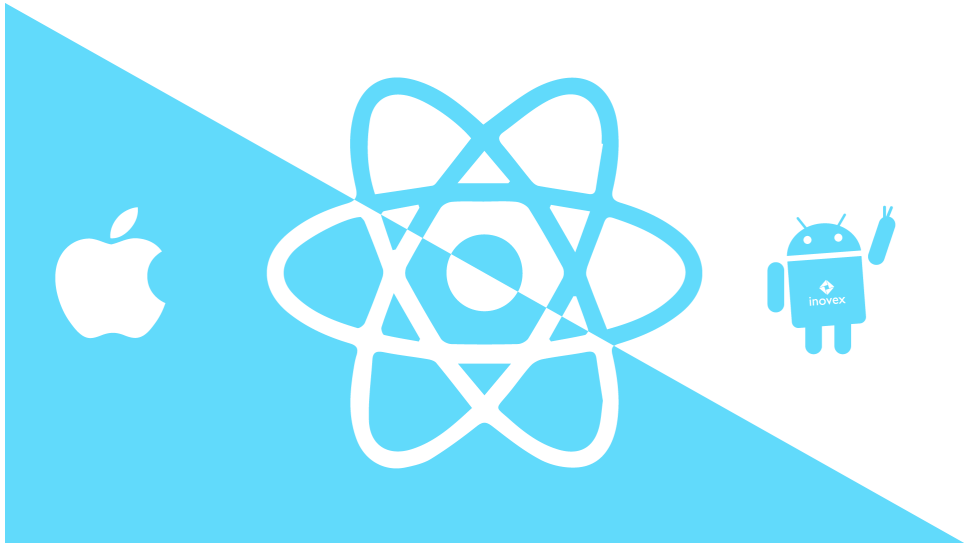
Usability Adaptation

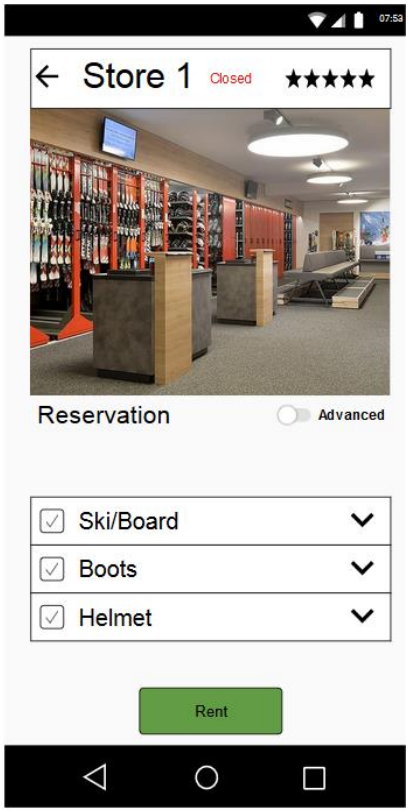
- Context (*Physical, Personal*): Location
  - Getting user lcoation via GPS
  - Getting personal informations from profile
- Mechanism: reduce user interactions
- Control: fast one/two-click reservation with prestored personal information, getting offers in location based area

Technologies

React Native







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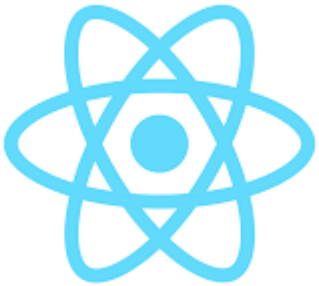
Technologies

NetInfo

Geolocation

Frontend



AsyncStorage

React Native Maps, by Airbnb

Backend

https://sspectra.net/wp-content/uploads/2018/05/google-maps-api.jpg
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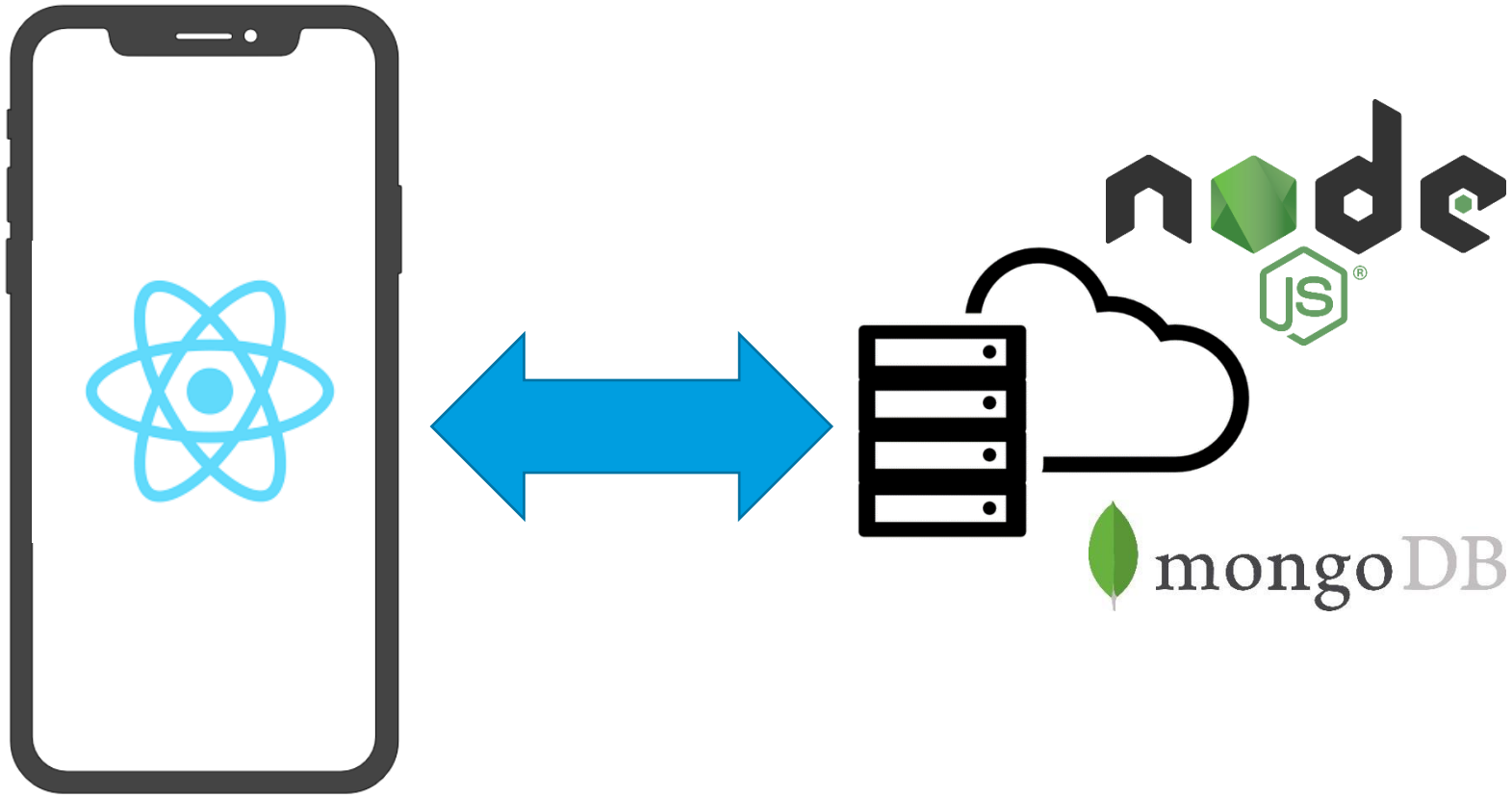
Architectures



Concept from Mern stack tutorial

https://imageog.flaticon.com/icons/png/512/31/31988.png?size=1200x630f&pad=10,10,10,10&ext=png&bg=FFFFFFFF

Schedule

- **November**
  - learning React
  - improving frontend design
  - elaborate data base design

- **December**
  - implementing core functionalities

- **January**
  - fixing bugs
  - adding remaining features

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Thanks for your attention