

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

Application Development for Mobile and Ubiquitous Computing

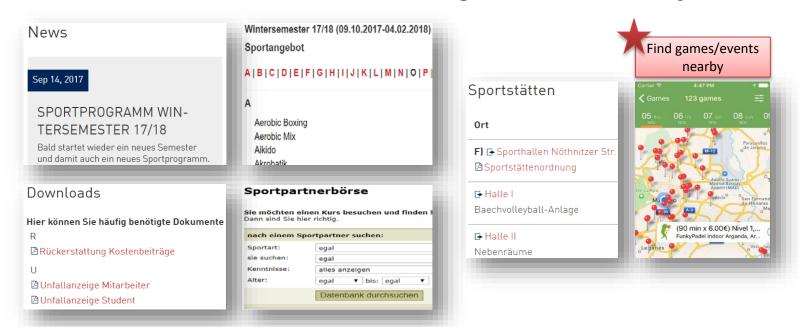
Final presentation

Sporty App

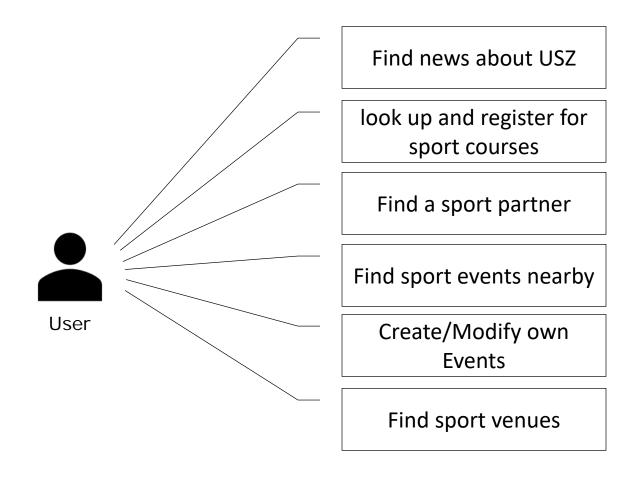
Baris Alp Yuncu Cem Unuvar



- The University Sports Center (abbreviated to USZ) has the task of providing students and employees of the TU Dresden with a variety of sports program.
- Problems: many websites ⇒ user has to search each site
- Solution: convenient UI for reaching results effectively



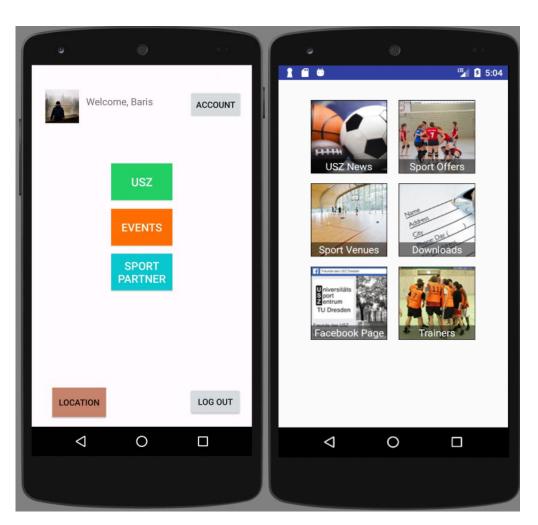


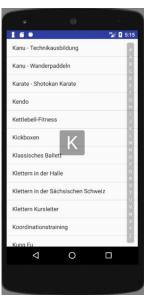




Sporty











- Android Studio
- Firebase for storage and secure-login
- Google Maps API to save place of an event
- Jsoup to scrape content from USZ web pages













Present information properly on Nexus 5 and Pixel XL display. Minimized effort for user input.

Context:

- Detect screen size and device type
- Detect user location with GPS

Adaptation:

- Adapt layout for Mobile and Tablet "two pane" pattern for large screens (7" tablets and above)
- Cache search queries



Connectivity Challenge

Network awareness

Context:

Detect screen size and device type

Adaptation:

- Context: network condition (technical context)
- How to capture: android.net.ConnectivityManager
- How to use:
- Download images if connection is fast enough (TYPE_WIFI II, NETWORK_TYPE_LTE II ...)
- Otherwise only text





Provide some functionality when offline:

- Store the bookmarkedEvents and myEvents
- Access storage on device and calendar.
- Modifications without internet access.
- Offline-notifications

Context:

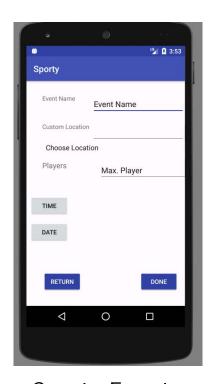
Detect if your App is online or offline. (offline-first approach)

Adaptation:

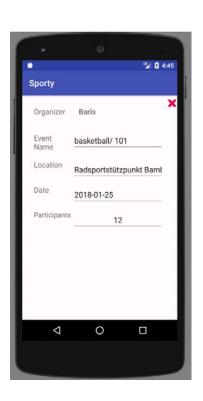
- Caching of Data
- Use cached data if application is offline, Enqueue events or user data to be uploaded later on



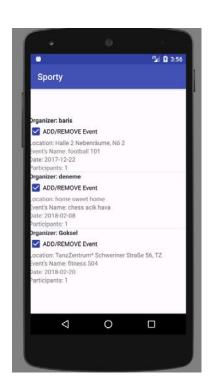




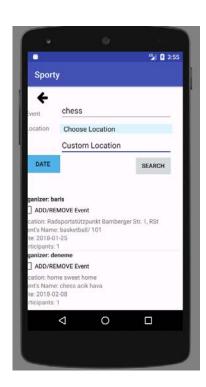
Create Event - Offline



Modify Event - Offline



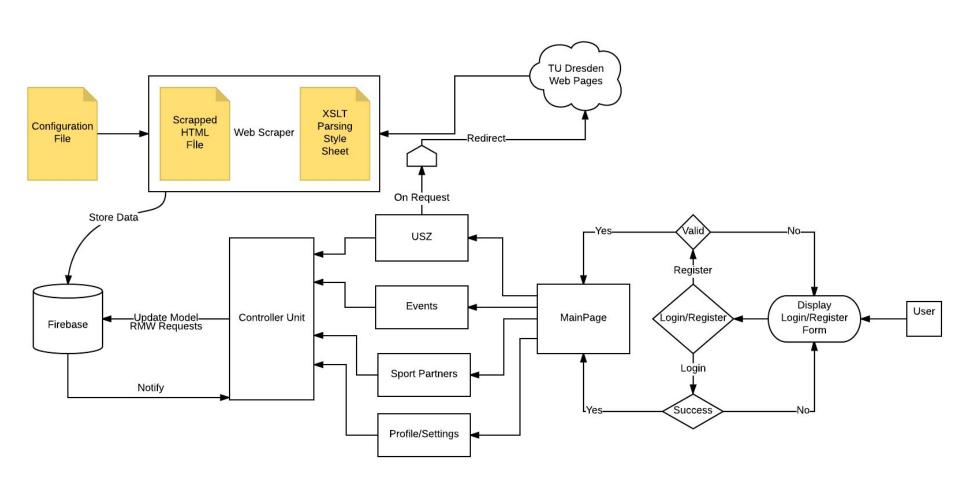
Marked Events



Find Events



Detailed Architecture







- Sport Course Registration Notification
 Before the registration opens at a certain day/time, user will be notified.
- Sharing Events on Social Media
- Uniform Design





Sporty

- Follow USZ News and Sport Events
- Find sport courses
- data scraped from USZ webpage

