



Application Development for Mobile and Ubiquitous Computing

Mobile Chef Final Presentation

Group No. 7

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Application Scenario

Hungry?

- You got some stuff in your fridge.
- But how to make a nice meal out of it?

That's why Mobile Chef:

Recipes and inspirations in
your pocket.

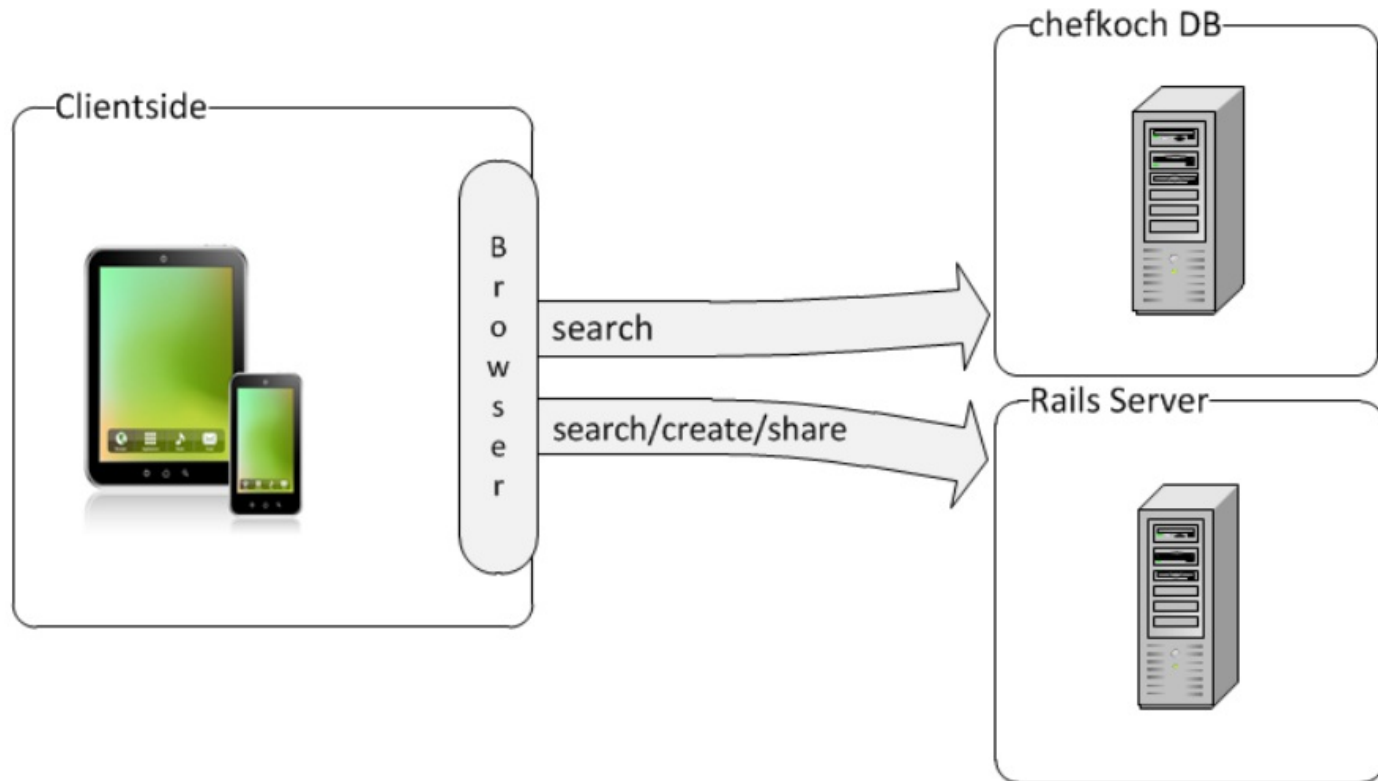
Features

- Choose ingredients you have at home, get matching recipes.
- Create, save and share your recipes online. Access them from everywhere!
- Reduce the waste of food by showing people how to use what they already got in their fridge.

Resulting Challenges

- Heterogeneity of Devices
- Adaption to screen size, connection and location
- Energy Consumption
- Usability and Security

Technologies



Client-Server-Architecture

Client:

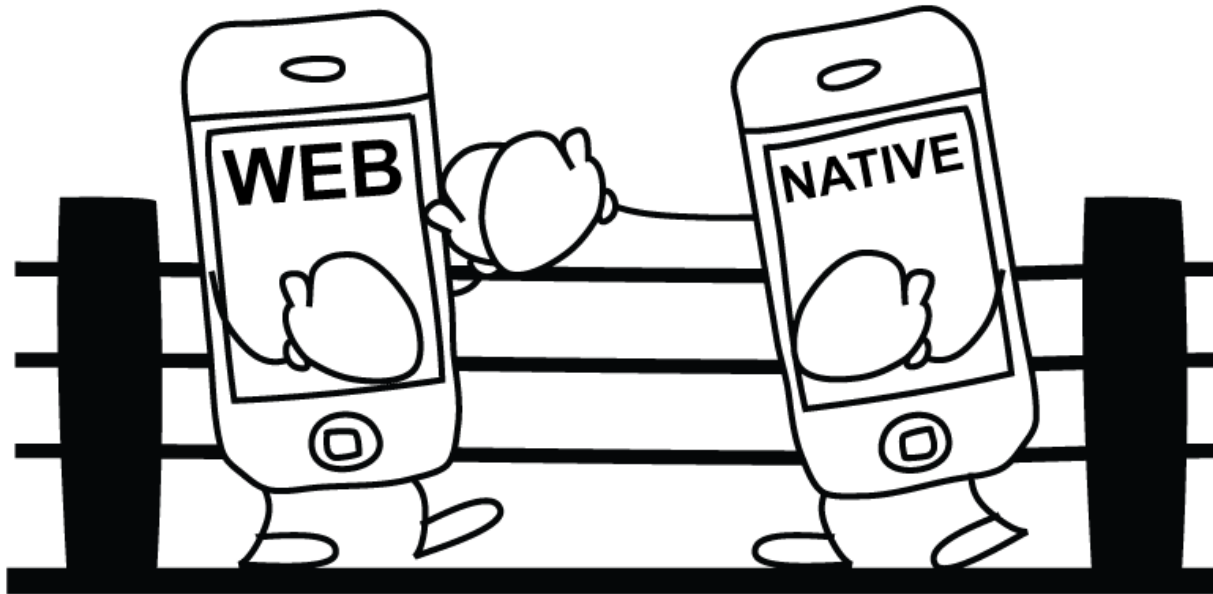
- Any modern web browser
- HTML5, CSS3 and JavaScript
- That's why the client is rather "light"
- Not more impact on battery life than just normal web browsing

Client-Server-Architecture

Server:

- Ruby on Rails Framework
- Webrick, Thin, or Puma as application servers
- "Fat" server - precompiling, caching
- SQLite as database storage

Native vs Web App



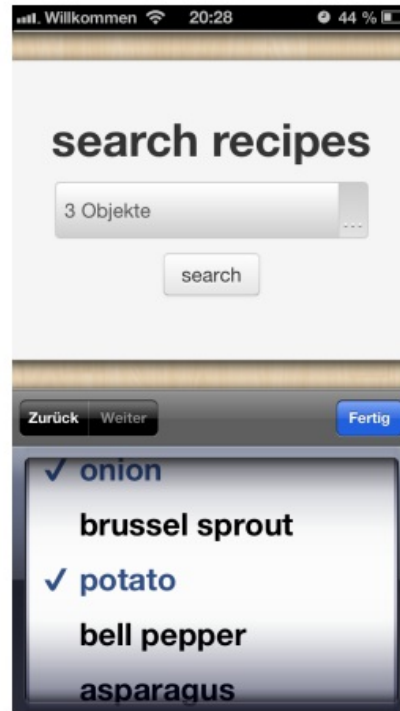
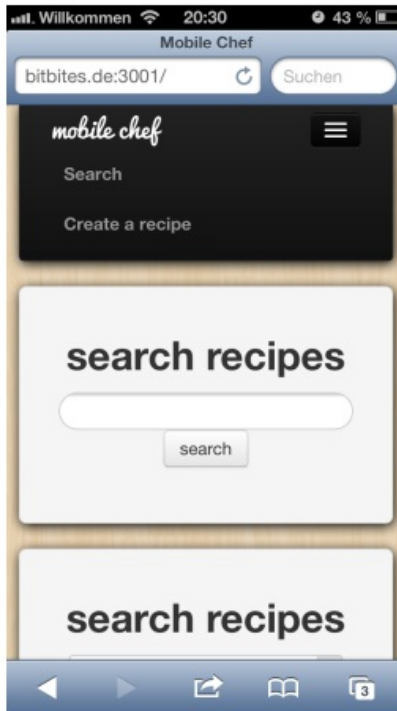
Benefits of Web Apps

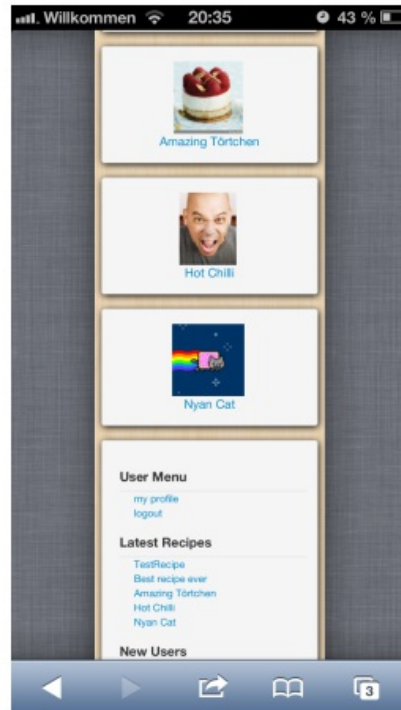
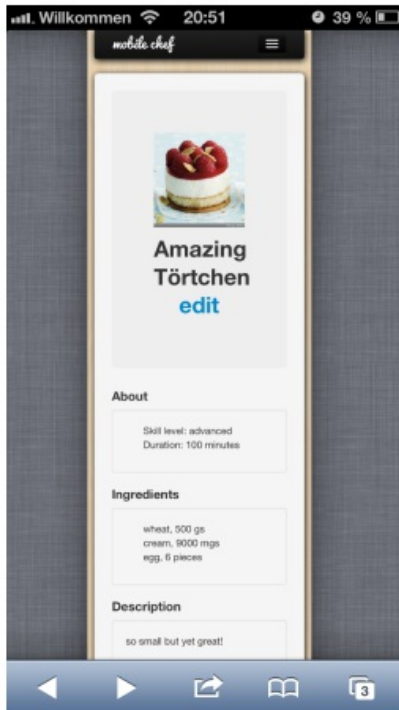
- No need to download and install the app
- Easy versioning
- Common code base across all platforms

Weaknesses of Web Apps

- Not every device feature is accessible from browser
- Supporting multiple web browsers can result in high development & maintenance cost
- Can be "hard to find" due to lack of centralized app store

Screenshots





Which challenges of mobile computing are tackled?

- ✓ Accessible from nearly any device
- ✓ Adaption of screen sizes
- ✓ Resource friendly both in cases of battery and storage
- ✓ Use of device hardware such as camera (integrated browser functionality)
- ✗ Including geo location into a feature

Lessons learned

- Pros & Cons of Native & Web Apps
- Responsive Design
- Get in touch with new Frameworks/Technologies

Questions