

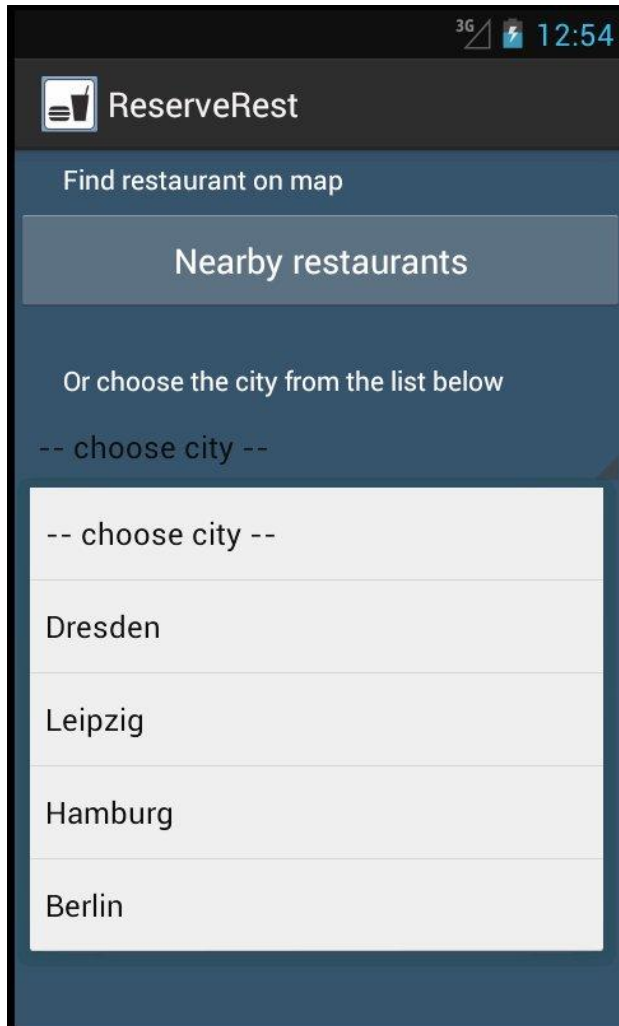
Application Development for Mobile and Ubiquitous Computing

Seminar Task Third Presentation

Group №10

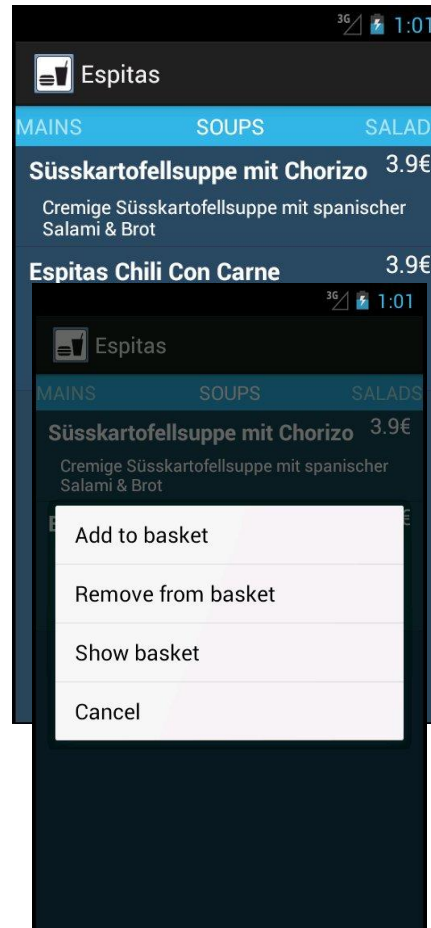
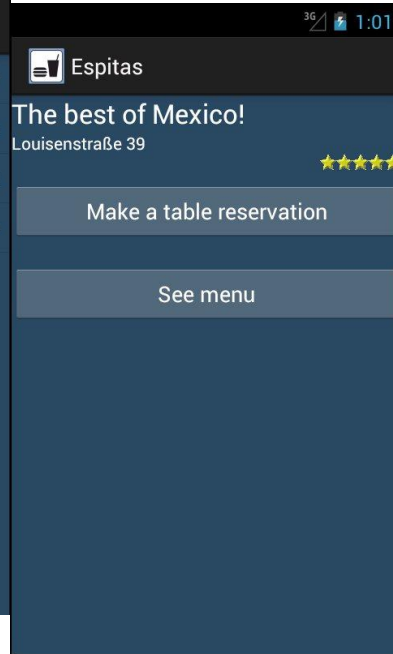
Team: Andrieshyna Uliana, Kuvayskiy Dmitry
Android App: ReserveRest



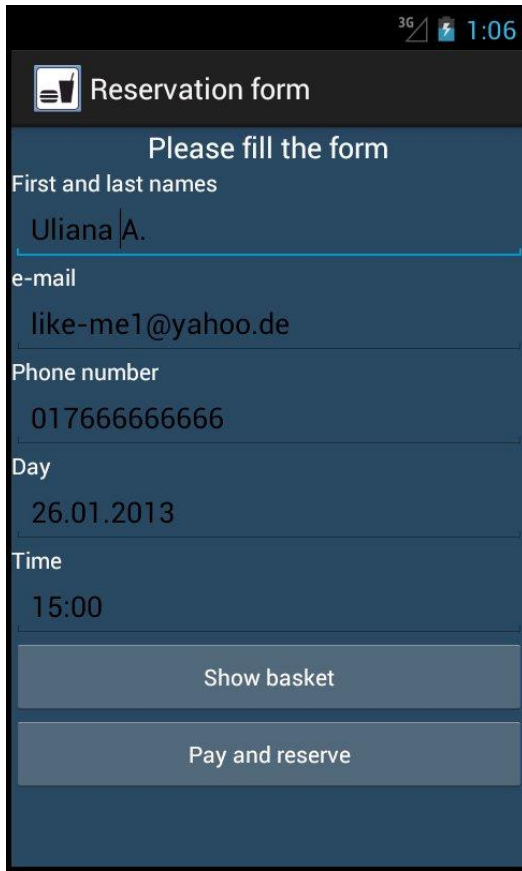


- Android App for **reservation of meals and tables** in restaurants
- See real-time **table availability** and browse **menus**
- **Location-based map** with opportunity to choose nearby restaurants

Client chooses a city from a drop-down list



- than



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Reservation form

Please fill the form

First and last names
Uliana A.

e-mail
like-me1@yahoo.de

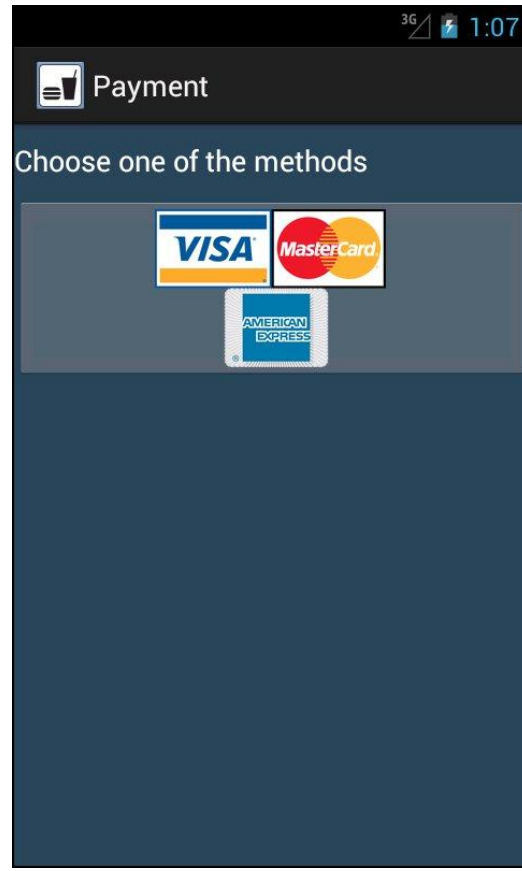
Phone number
01766666666

Day
26.01.2013

Time
15:00

Show basket

Pay and reserve



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Payment

Choose one of the methods

VISA MasterCard AMERICAN EXPRESS



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Reservation was successful

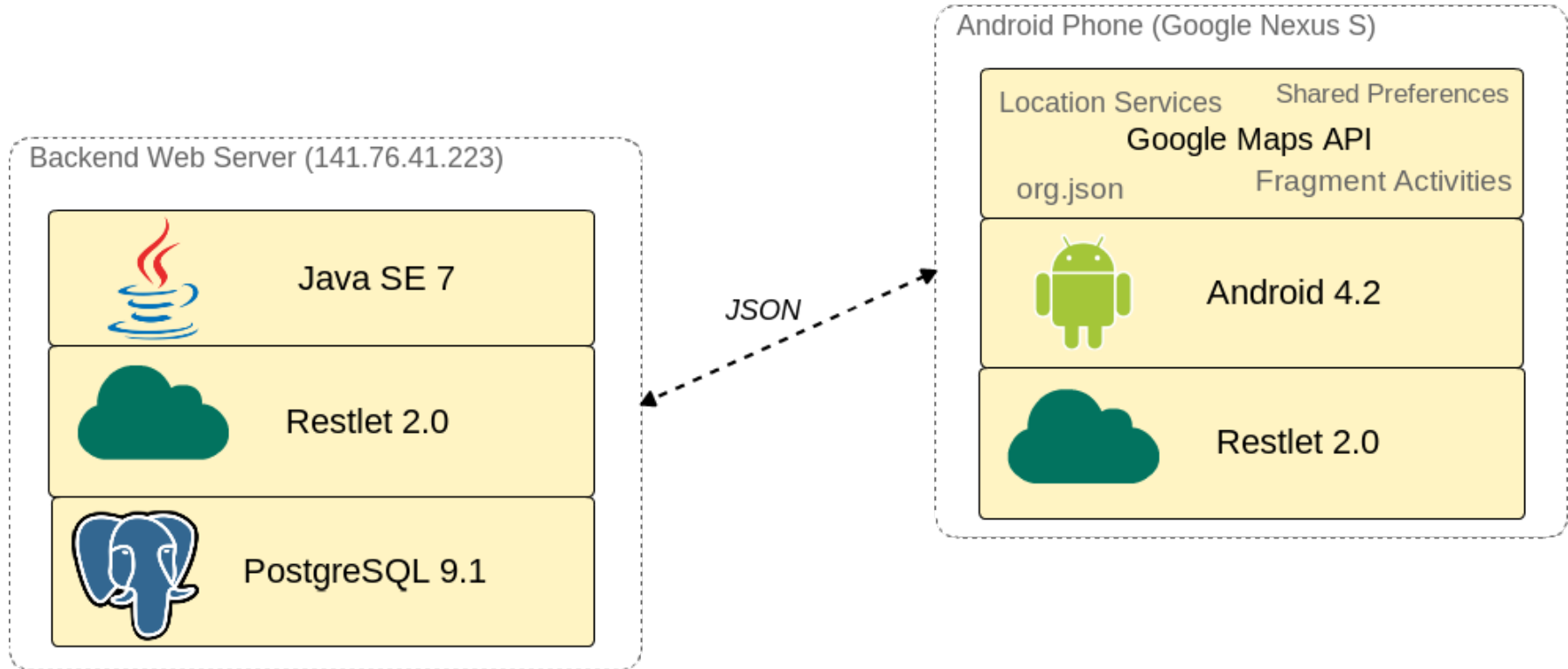
New reservation

Summary of your reservation:

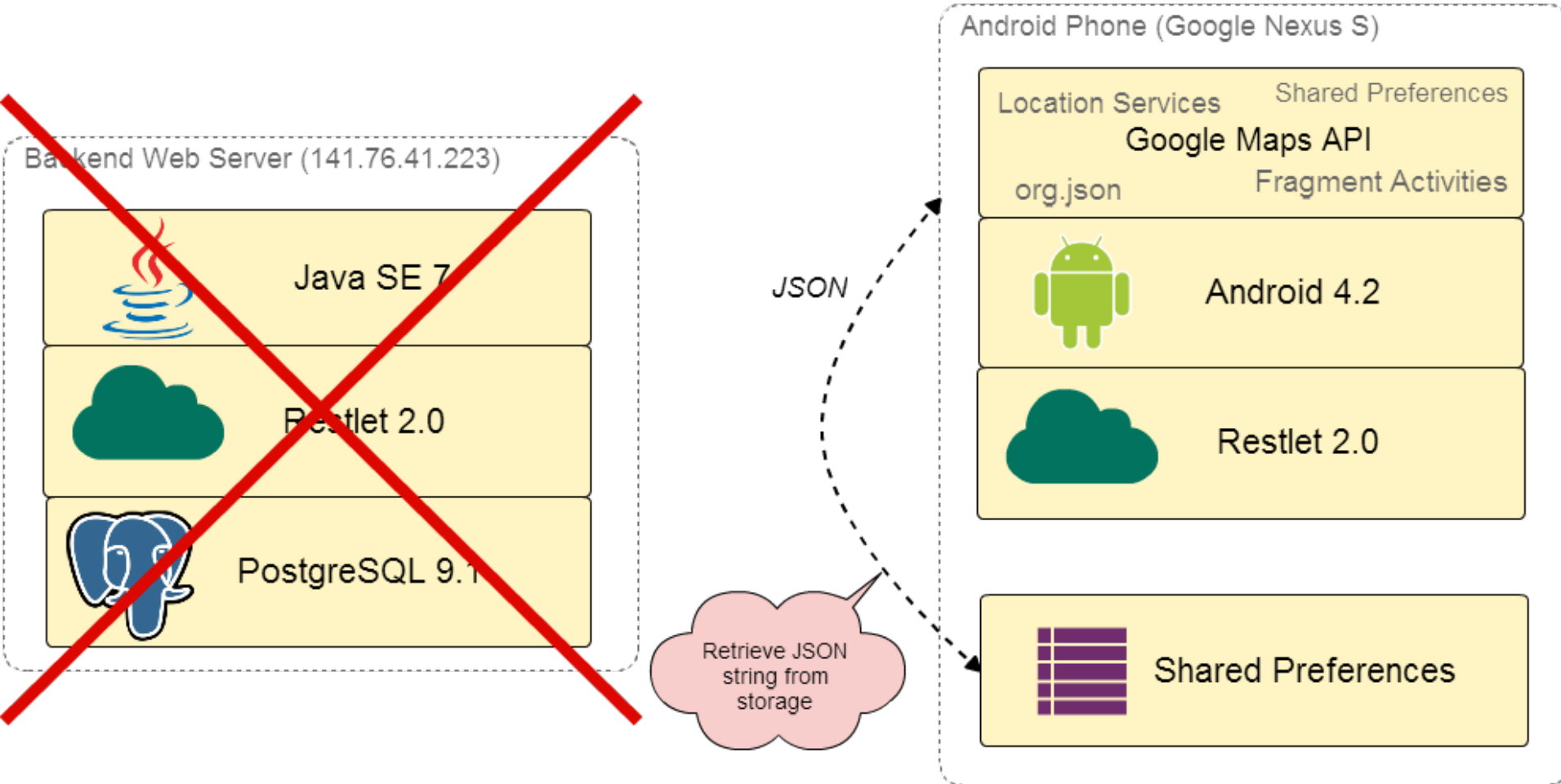
- Restaurant: Espitas
- Address: Louisestraße 39
- Client info:
 - name: Uliana A.
 - email: like-me1@yahoo.de
 - phone: 01766666666
- Date and time: 26.01.2013 15:00

- Dishes:

- Espitas Chili Con Carne
- Süsskartoffelsuppe mit Chorizo
- Cheesy nachos mit Spinat-Frishkäse-dip
- Cheesy nachos mit Espitas-Red-Hot-Salsa
- Cheesy nachos mit Käse-Jalapeño-dip



Technologies: Client-side caching



Basic sequence:

1. If there is an **internet connection**
 - retrieve data in JSON from backend and
 - save incoming JSON string to internal storage
2. If there is **no internet connection**
 - try to get JSON string from internal storage
(use classic **Shared Preferences** framework)
3. Parse JSON string and work with result objects

No need to replicate backend database
The same applies to sending data to backend

- Connectivity:
 - Provide independence from the Internet connection by using **client-side caching**
 - Reduce Internet traffic by using **JSON**
- Adaptation:
 - Use **Google Maps** for geolocation and pinpointing nearby restaurants
- Separation of Concerns:
 - Separate GUI (Activities) from logic — all logic is incorporated in a couple of singleton Managers.

How to find our current location?

- Use both location listeners: **GPS** and **Network**
- Use **timeout timer** to stop listening
- Choose the **latest** (or the only) value from GPS and Network
- Use found current location and predefined coordinates of restaurants to find nearest ones (by distance)

- Using **the same framework for different tasks** is complicated, because you always have to remember to check if anybody makes any changes and update it every time
- Some quirks between **Android SDK, Emulator** and **Eclipse** (re-opening Eclipse helps to start App)
- One huge advantage — everything for development Android App is **for free**

- **GUI design** is hard — better have your own designer
- **Google Maps Android API v2** does not work on Emulators
- **RESTful servers** are simple and great, especially if using some framework like Restlet
- If you develop client-server applications, better acquire **your own fully-fledged always-online server**

Thank you for attention!

Questions?