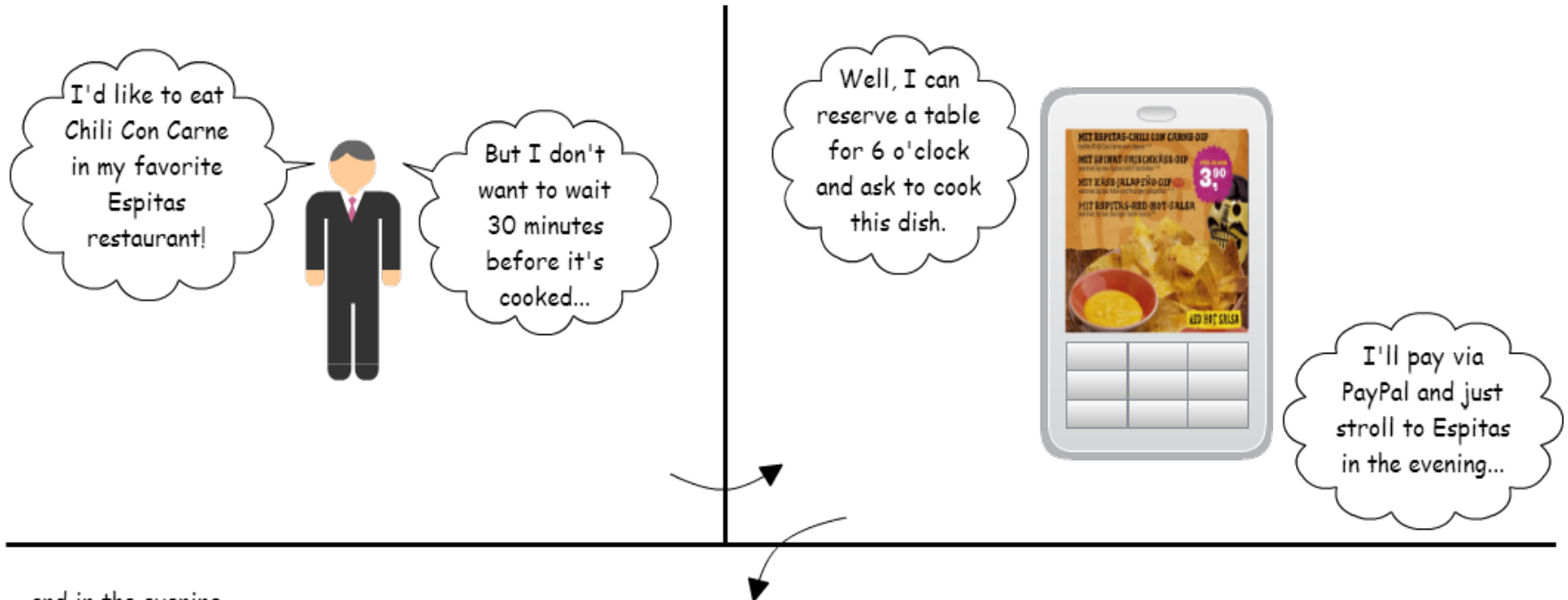


Application Development for Mobile and Ubiquitous Computing

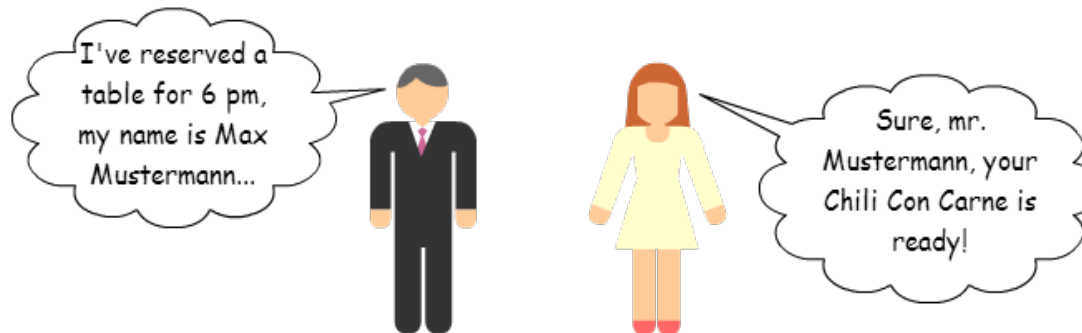
Seminar Task Second Presentation

Group №10
Team: Andriireshyna Uliana
Kuvayskiy Dmitry

Application Scenario: ReserveRest

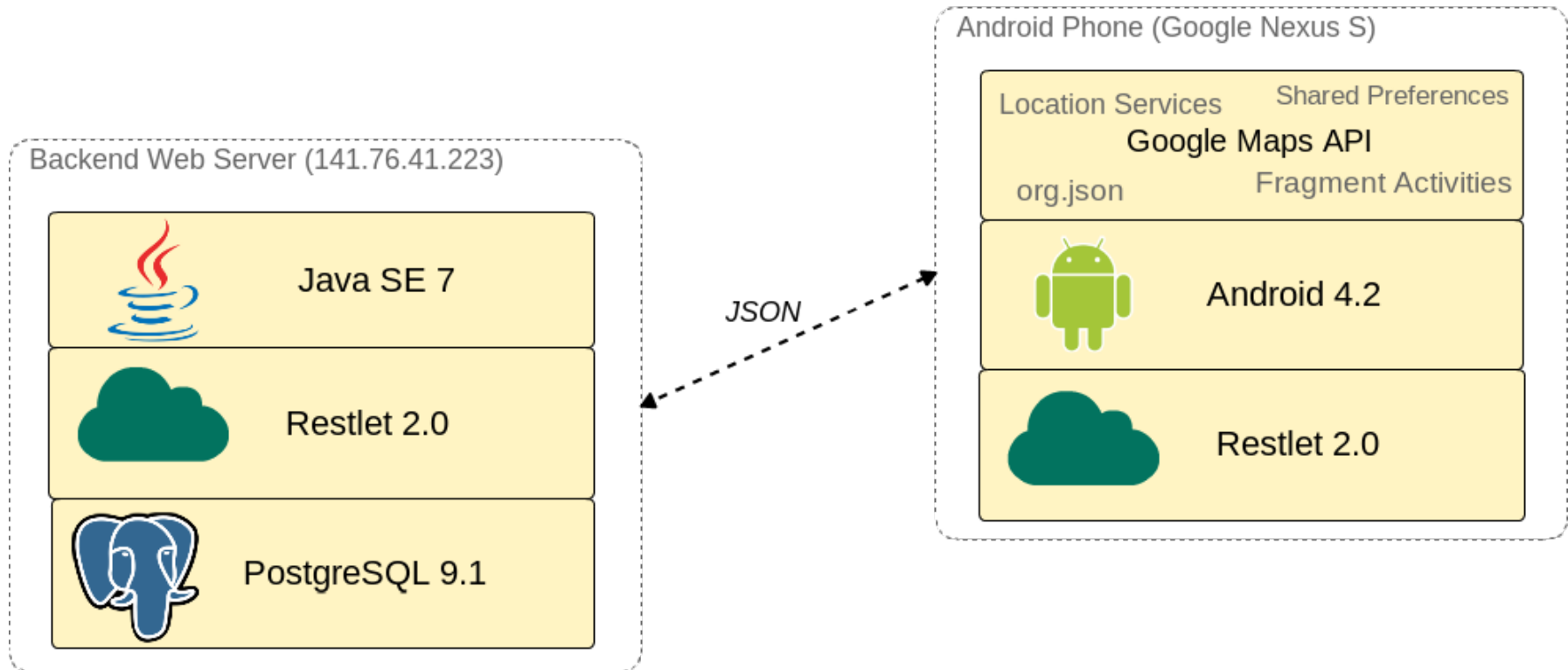


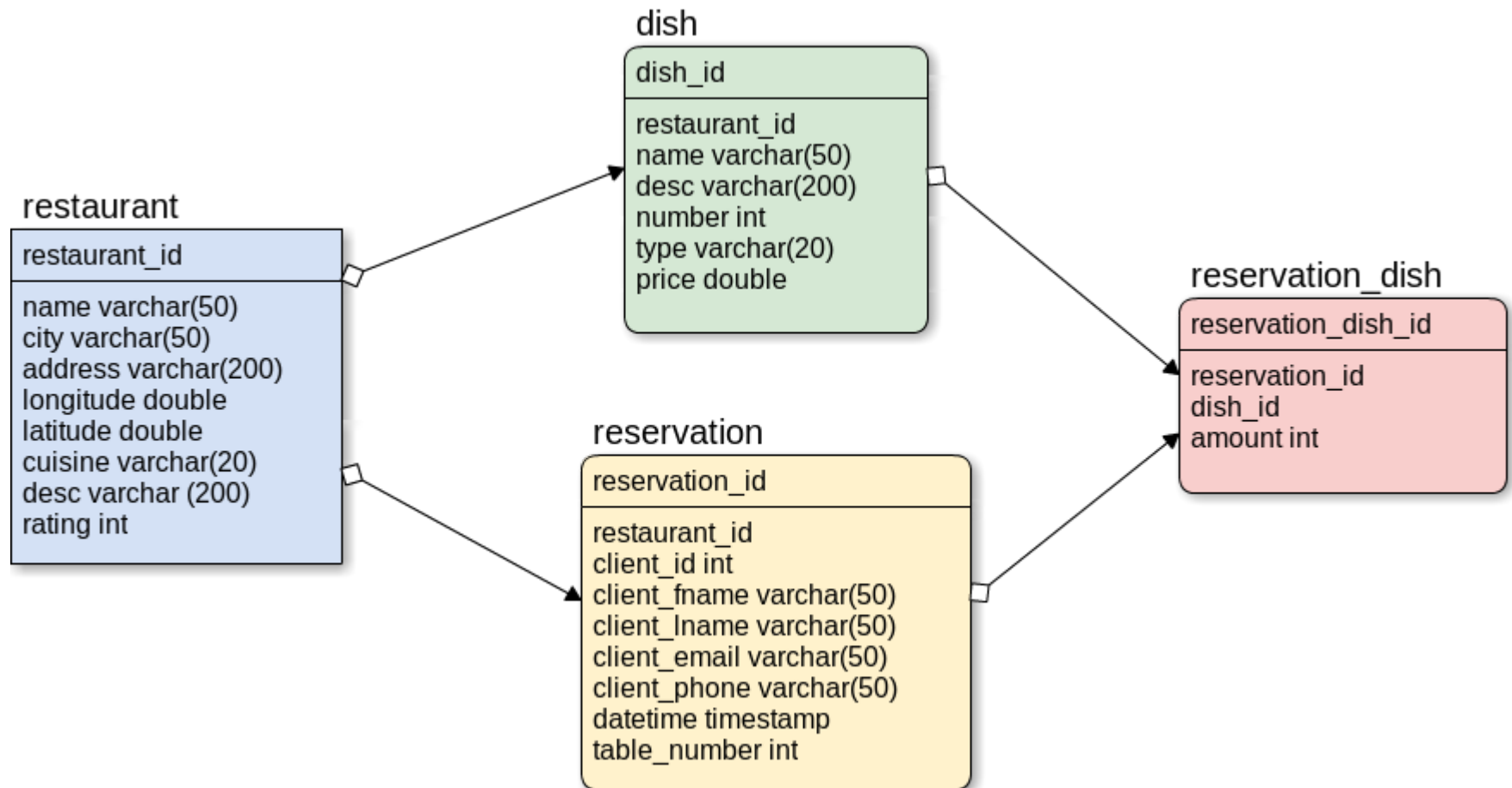
...and in the evening...



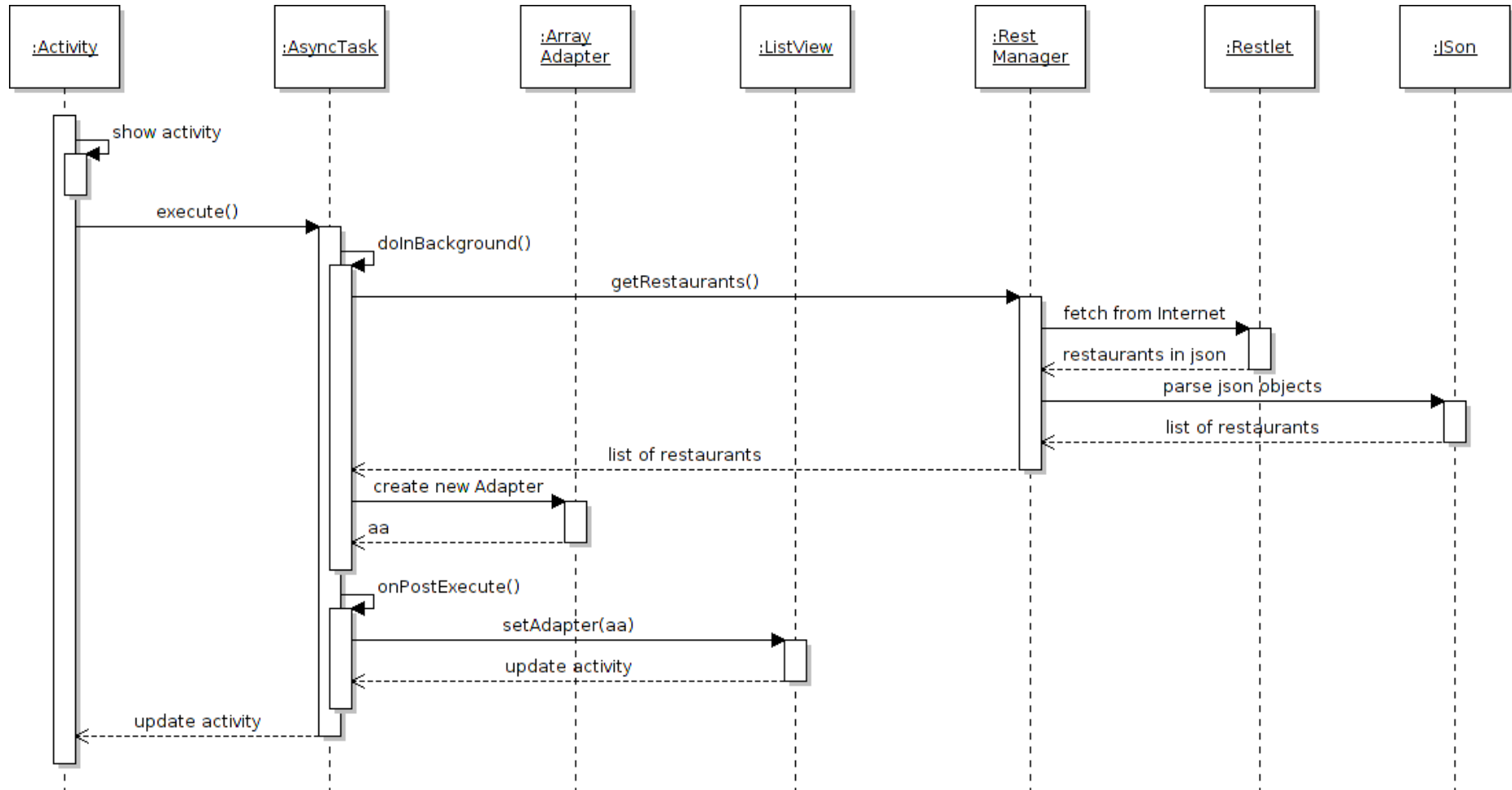
- System with backend and frontend for **reservation of meals and tables**
- **Location-based map** with opportunity to choose nearby restaurants
- Restaurant description, open hours, cuisine, rating, etc.
- See real-time **table availability** and browse **menus**
- **Offline mode** also possible, reservations are pushed to server as soon as client become online again
- ReserveRest diner **ratings** and **reviews**

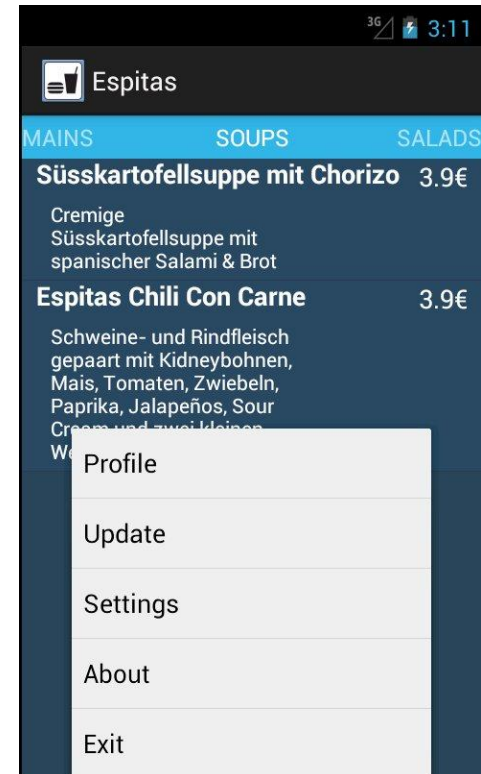
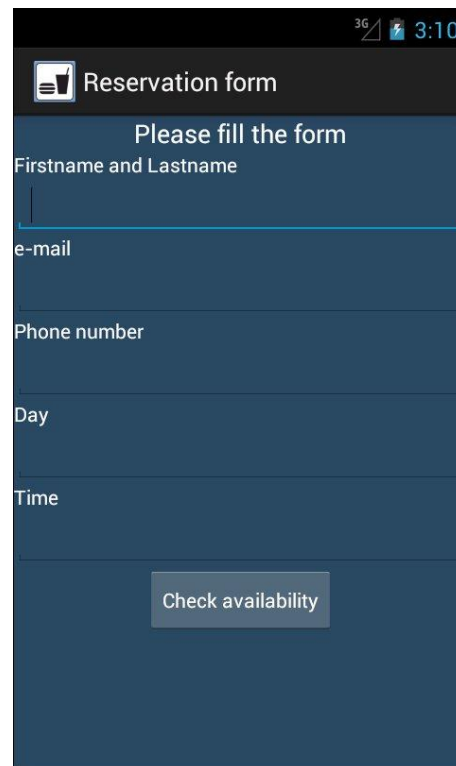
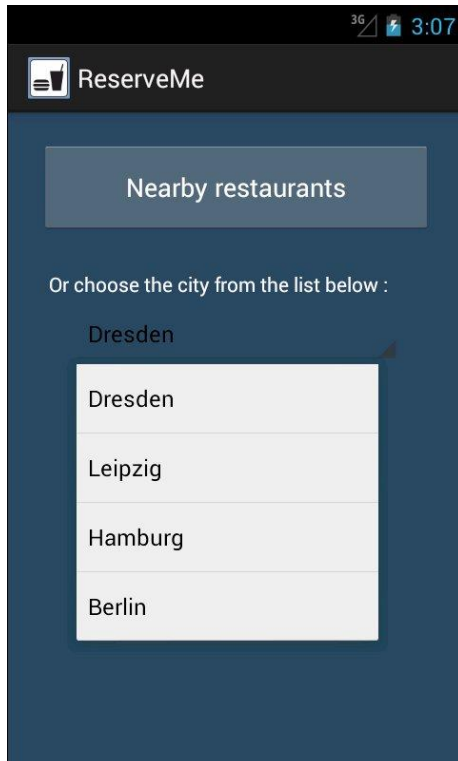
Technologies: Architecture





Technologies: Sequence Diagram





- Device resources:

- Adopt GUI to small screen of mobile device
{automatic support of four generalized densities: ldpi (low), mdpi (medium), hdpi (high), and xhdpi (extra high) ; use dp for images}
- Differentiation of supporting devices: from Android 3.0 (with min SDK version 11).

- Connectivity:

- Provide independence from the Internet connection by using **client-side caching**
- Reduce Internet traffic by using **JSON**

- Adaptation:

- Using **Google Maps** for geolocation and pinpointing nearby restaurants

- How to communicate with backend server?
 - Use **RESTful** interface
example: *GET http://server:8182/reserverest/cities*
 - **Restlet 2.0** facilities development both on server and on client side
 - Use **Json** to forward objects and lists
- 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)

- Figure out better user interface
- Provide reservation of a table without Internet connection
 - Caching on client
 - Synchronization with server when client becomes online
- Bind our app with Google Maps
- Test and deploy
- Prepare for final presentation