TECHNISCHE UNIVERSITÄT DRESDEN

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

Application Development for Mobile and Ubiquitous Computing

AUDITORIUM Mobile

Notification Service

GroupNo. 14
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Detailed concept

Components

Mobile Device	The device runs the Android and uses GCM with the **version of Android 2.2**
3rd-party Application Server	An application server (in our case **Tomcat 7.0**) that developers set up as part of implementing GCM in their applications. The 3rd-party application server sends data to an Android application on the device via the GCM server.
GCM Servers	The Google servers involved in taking messages from the 3rd-party application server and sending them to the device. In case the device is offline Gcm will store the message and will forward it when the device will be online
Database	We used a simple DB testing like **SQLite (vs.2.0 b1)** to store the data of the user on the server and the RegistrationId

Credentials

Sender ID	A project number you acquire from the API console. The sender ID is used in the registration process to identify an Android application.
Registration ID	An ID issued by the GCM servers to the Android application that allows it to receive messages. Once the Android application has the registration ID, it sends it to the 3rd-party application server, which uses it to identify each device that has registered to receive messages for a given Android application.
Google User Account	In order to GCM works, the mobile device must have a Google account synchronized.
Sender Auth Token	An API key that is saved on the 3rd-party application server that gives the application server authorized access to Google services.

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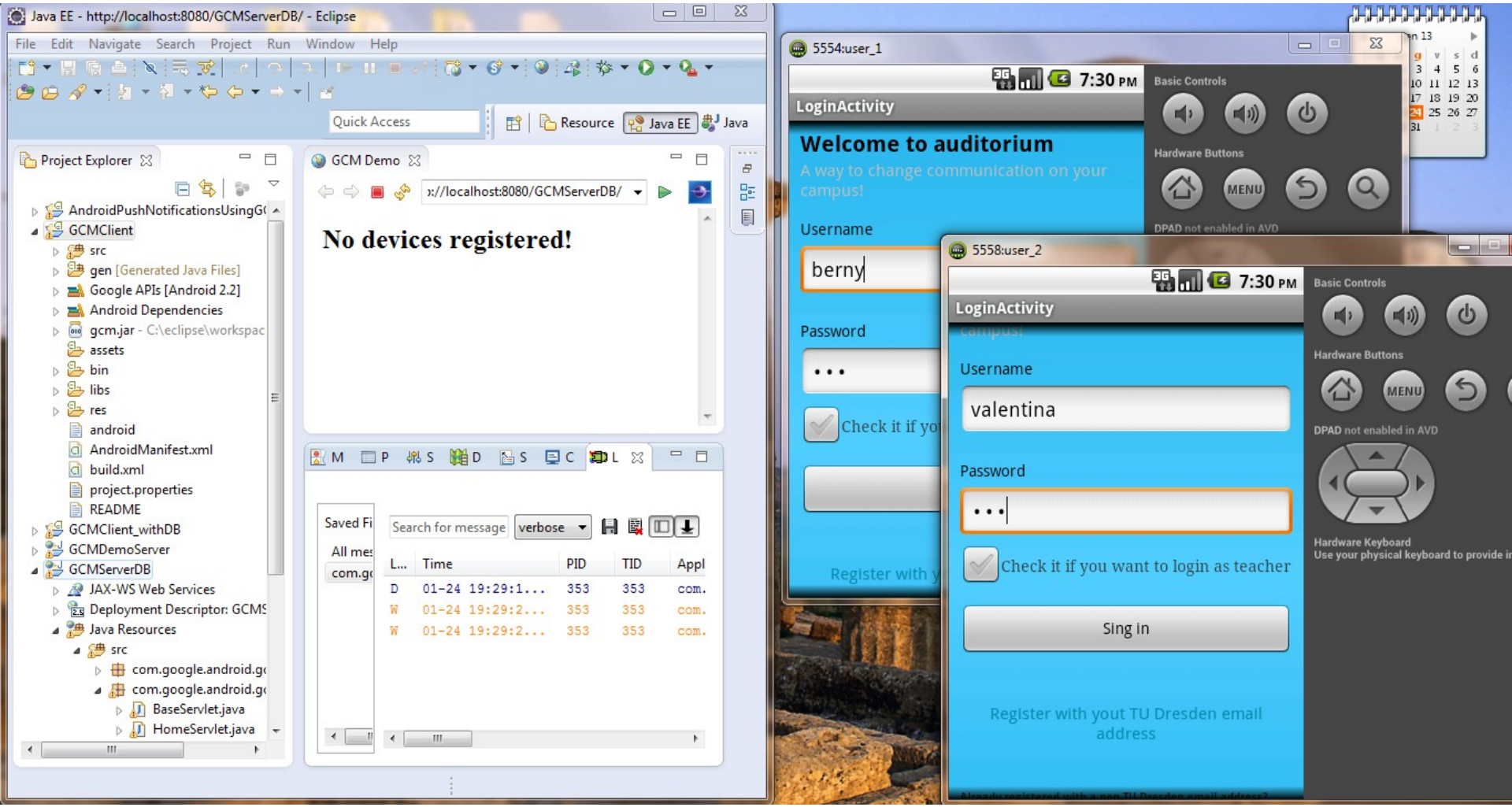
Use case: First Login



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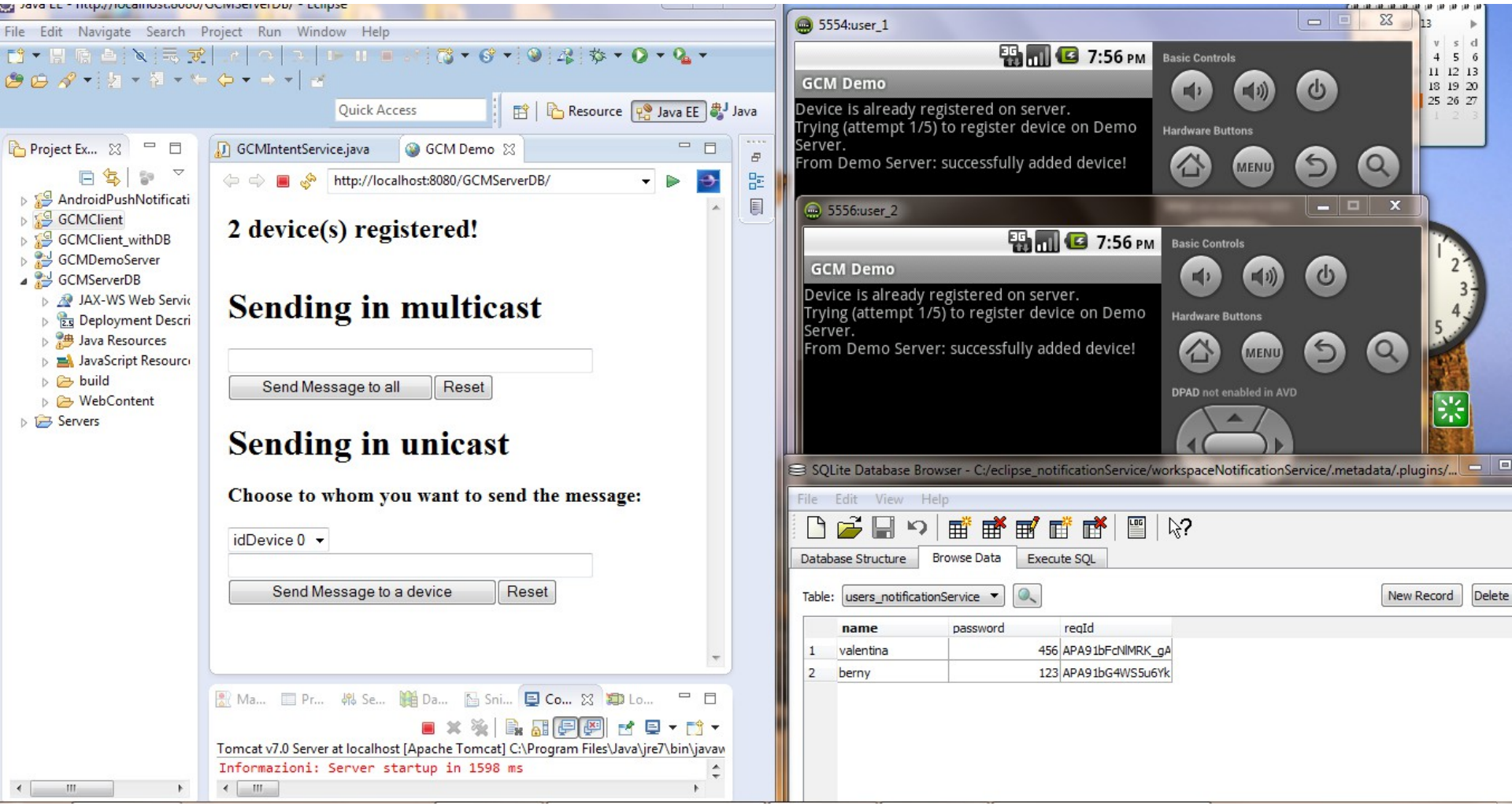
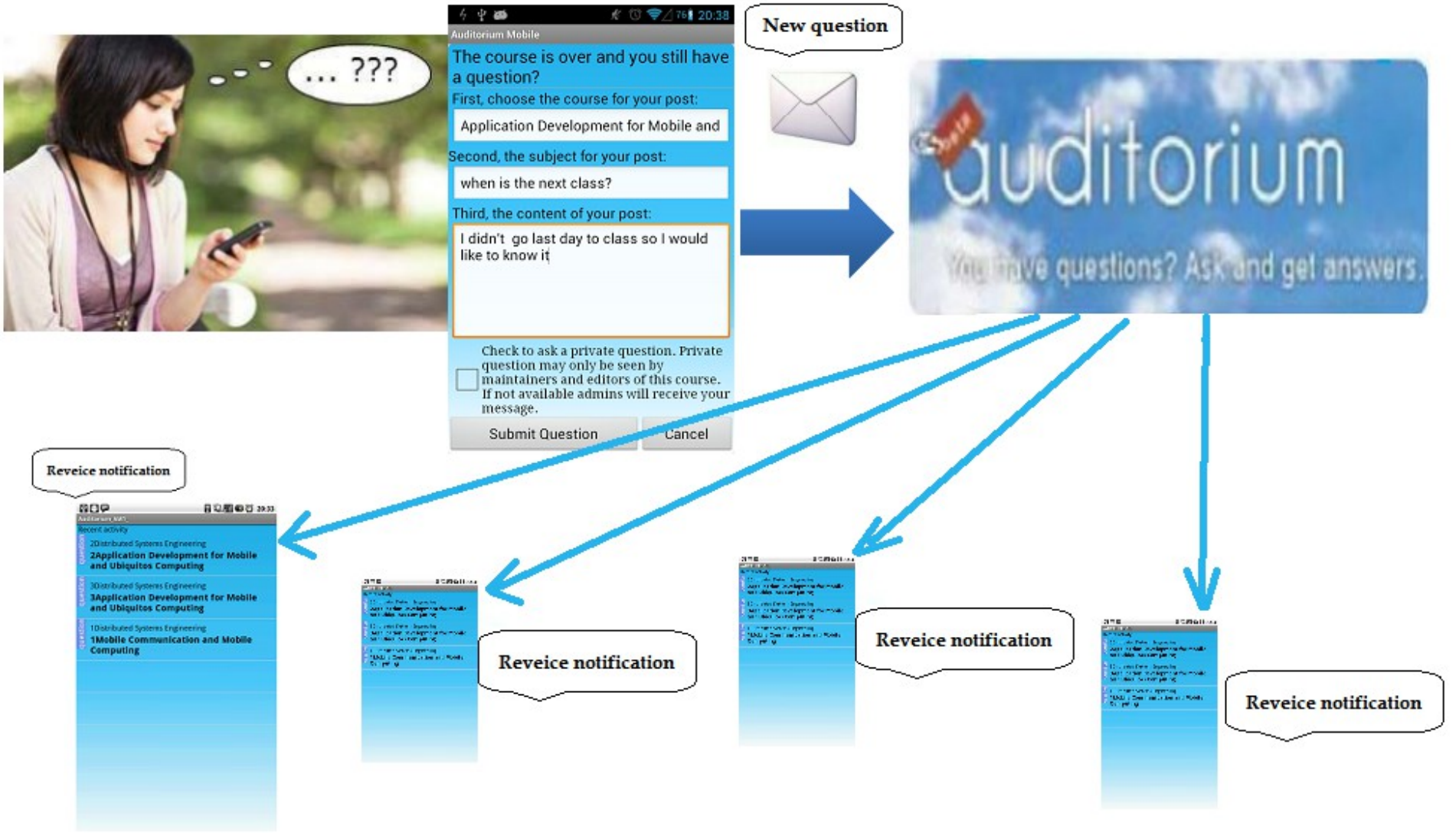


Use case: Message in Multicast



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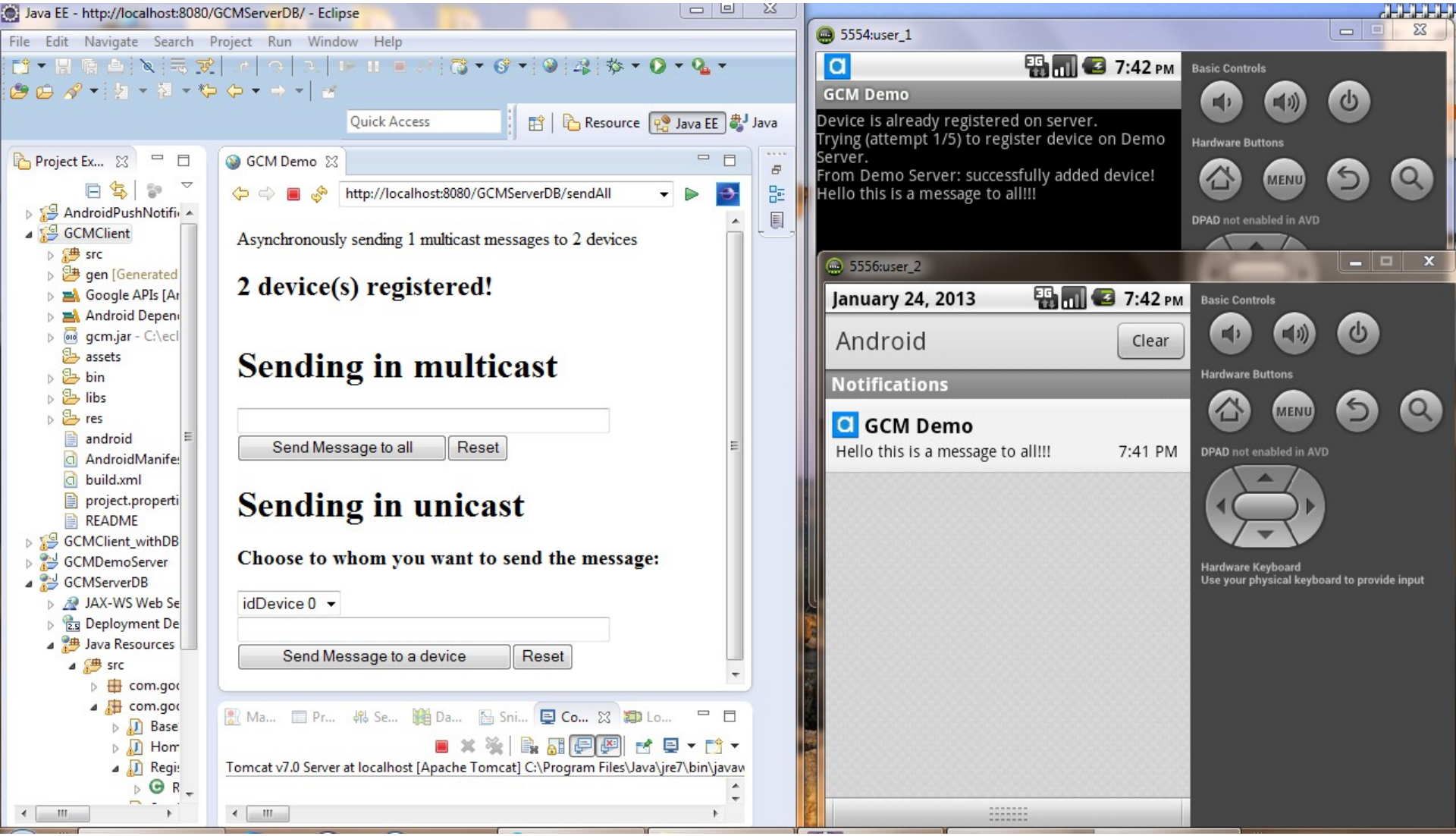
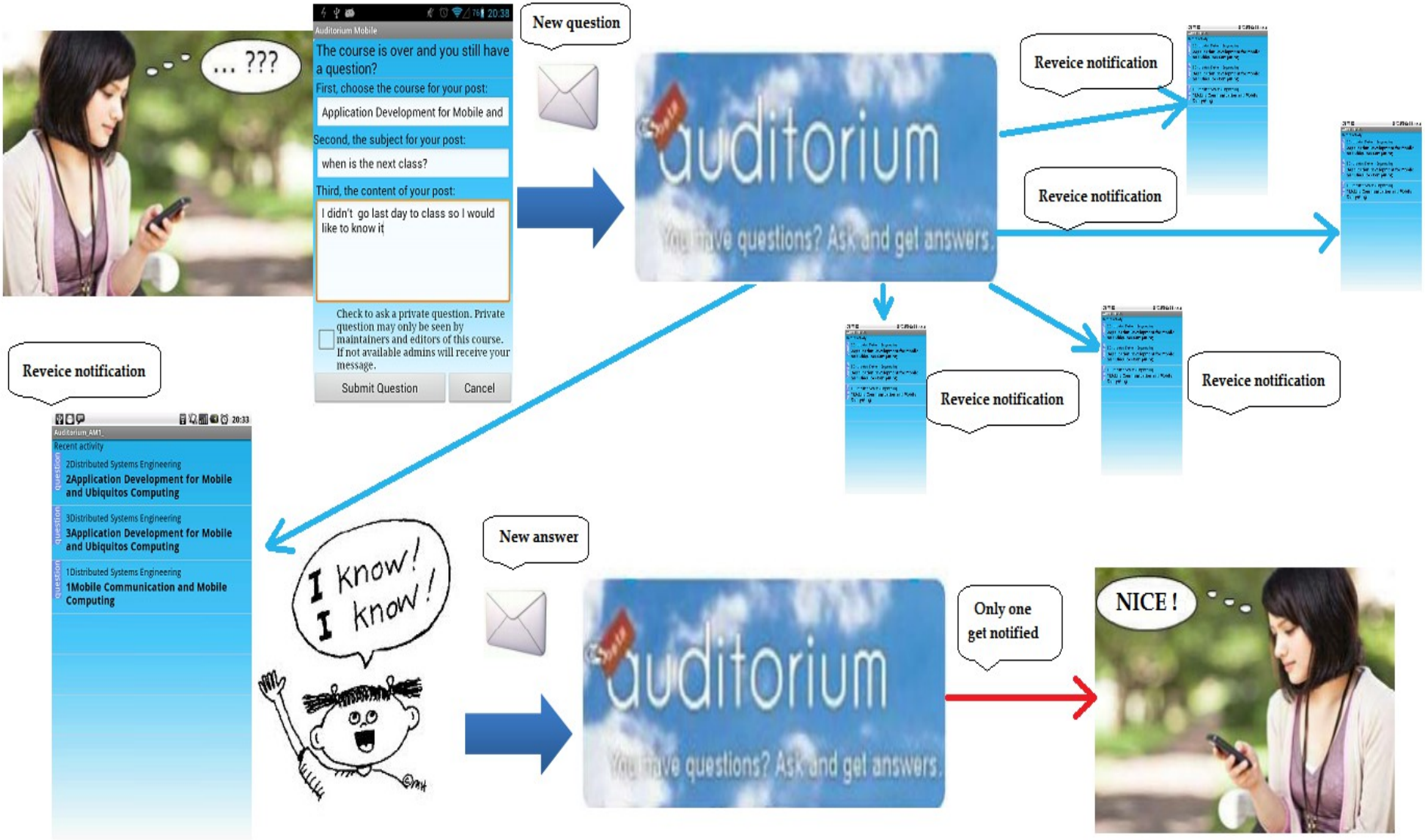
Use case: Message in Multicast



Use case: Message in Unicast



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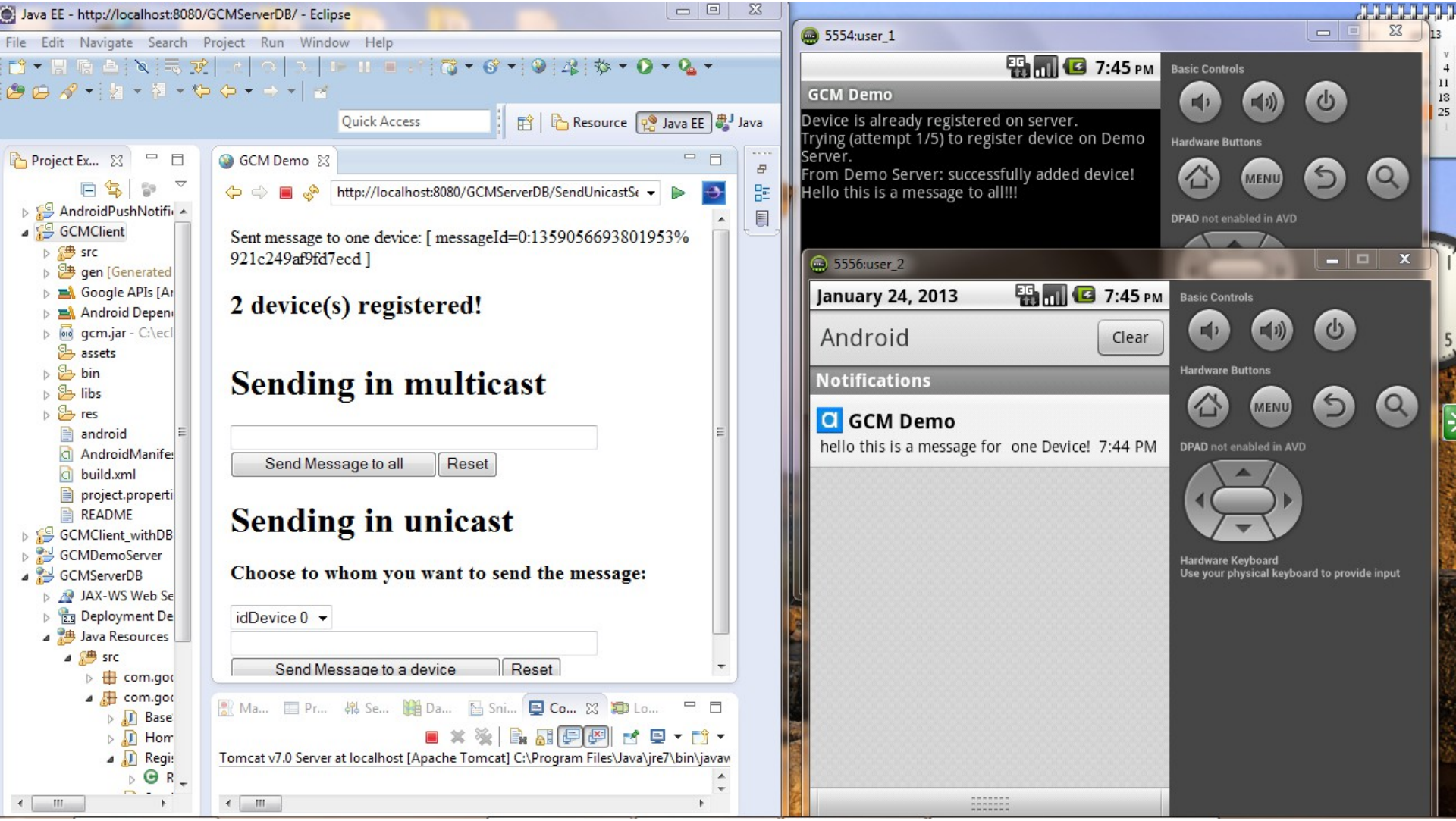
Use case: Message in Unicast



Discussion/Assessment

- Ubiquitous:
  - Many user at the same time.
  - From different devices
- Usability:
  - Intuitive.
  - Easy to use.
  - Battery efficient.

Discussion/Assessment

- Integration with XMPP is not a good idea.
- Http/XMPP problems
- Solution could be used in the future
  - By another application that used http protocol.
  - By Auditorium Mobile thought the help of BOSH (for Bidirectional streams Over Synchronous HTTP).
  - In this moment there are no so much example to use it.

Questions?

You can add them in Auditorium Mobile

Thanks for your attention.
Grazie per la vostra attenzione.
Gracias por su atención.
Danke für Ihre Aufmerksamkeit.