

Advanced Aspects of Object-Oriented Programming (SS 2015)

Practice Sheet 12 (Hints and Comments)

Exercise 1 RMI-Chatsystem

See provided sources.

Exercise 2 Mobile Code with RMI

See provided sources.

Exercise 3 Swing

a) See provided sources.

b) The execution of a `SwingWorker` involves three threads:

- Current thread: The `execute()` method is called on this thread.
- Worker thread: The `doInBackground()` method is called on this thread.
- Event Dispatch Thread: All Swing related activities occur on this thread. Specifically, the methods `process()` and `done()` are invoked on this thread.

Typically, the interface between the worker and the GUI is very broad: The `process()` method, which is part of the worker and updates the state of the GUI, will access most of the elements of the GUI directly. Great care has to be taken that this access is thread-safe. Thread-safety can be accomplished by relocating all access to the GUI elements to the Event Dispatch Thread using `SwingUtilities.invokeLater` or `SwingUtilities.invokeAndWait` or the `process` and `done` methods of `SwingWorkers`.