

Software Engineering

Project: rAPPla

rAPPla
www.rappla.com

rAPPla

- Motivation
- Visionen
- Software Requirement Specification
- Use Cases
- Technical ability
- Project Methodology
- Quality

Motivation

- „Rapla“ als Vorlesungsplan der DHBW Karlsruhe
- Regelmäßig auftretende Serverausfälle
- Keine Kommunikation mit Studenten
- Support durch Google-Calendar mäßig

rAPPla

Visionen

- Bereitstellung des rapla Kalenders als Android App
- Kalender jederzeit verfügbar dank „rAPPLa Offline“
- Weitere nützliche Funktionen für Studenten

rAPPLa

Software Requirement Specification

- Rapla ist ein flexibles Multi-User System zur Planung und Organisation von Veranstaltungen
- rAppa soll intuitiv bedienbar sein und auf jedem Android Smartphone funktionieren
- Systemanforderung: aktuelle Version des Android Betriebssystems

rAPPla

Software Requirement Specification

- rAPPla ist durchgehend verfügbar und offline verwendbar
- kostenloser und umgehender „Extended Super Support“ - ESS
- IDE: Android SDK (Eclipse)

rAPPla

**IDE with multiple extensions
for improved work efficiency**

rAPPla

Java - Create final presentation - ADT - /Users/irtaza/Desktop/DHBW/Softwareengineering/GitHub/rAppla

Quick Access Java

Package Explorer rAppla

RAPPLA-44: Create final presentation

Issue RAPPLA-44

Create final presentation

Status: Open Created: Jun 12, 2014 Modified: Jun 12, 2014 10:42 AM
Reported by: Philipp Nitsche Assigned to:

Attributes

Project: rAppla Priority: Major
Type: Task Due Date: Jun 13, 2014
Estimate: Time Spent: 0m
Affects Versions: Components: 10504, 10505, UC1
Offline
Bereitstellung, UC3
Custom Alarms,

Private JIRA

Problems Javadoc Declaration Console LogCat Task Repositories Task List Tasks

Find All Activate...

- RAPPLA-28: Add method to see whether the rappla has changed
- RAPPLA-36: Make days scrolling
- RAPPLA-35: Create new background
- RAPPLA-30: View event details
- RAPPLA-41: Create Widget
- RAPPLA-44: Create final presentation
- RAPPLA-11: Fix rappla not updating correctly
- RAPPLA-15: Time and Day Bars and other Graphical objects for Use Cases
- RAPPLA-18: Setup Jenkins
- RAPPLA-23: Fix event name alignment
- RAPPLA-27: New icons for events
- RAPPLA-24: Fix alarm icons
- RAPPLA-20: Add Time and Date Bar
- RAPPLA-26: Get MSProject up to date
- RAPPLA-22: Refactoring HW

79M of 146M Android SDK Content Loader

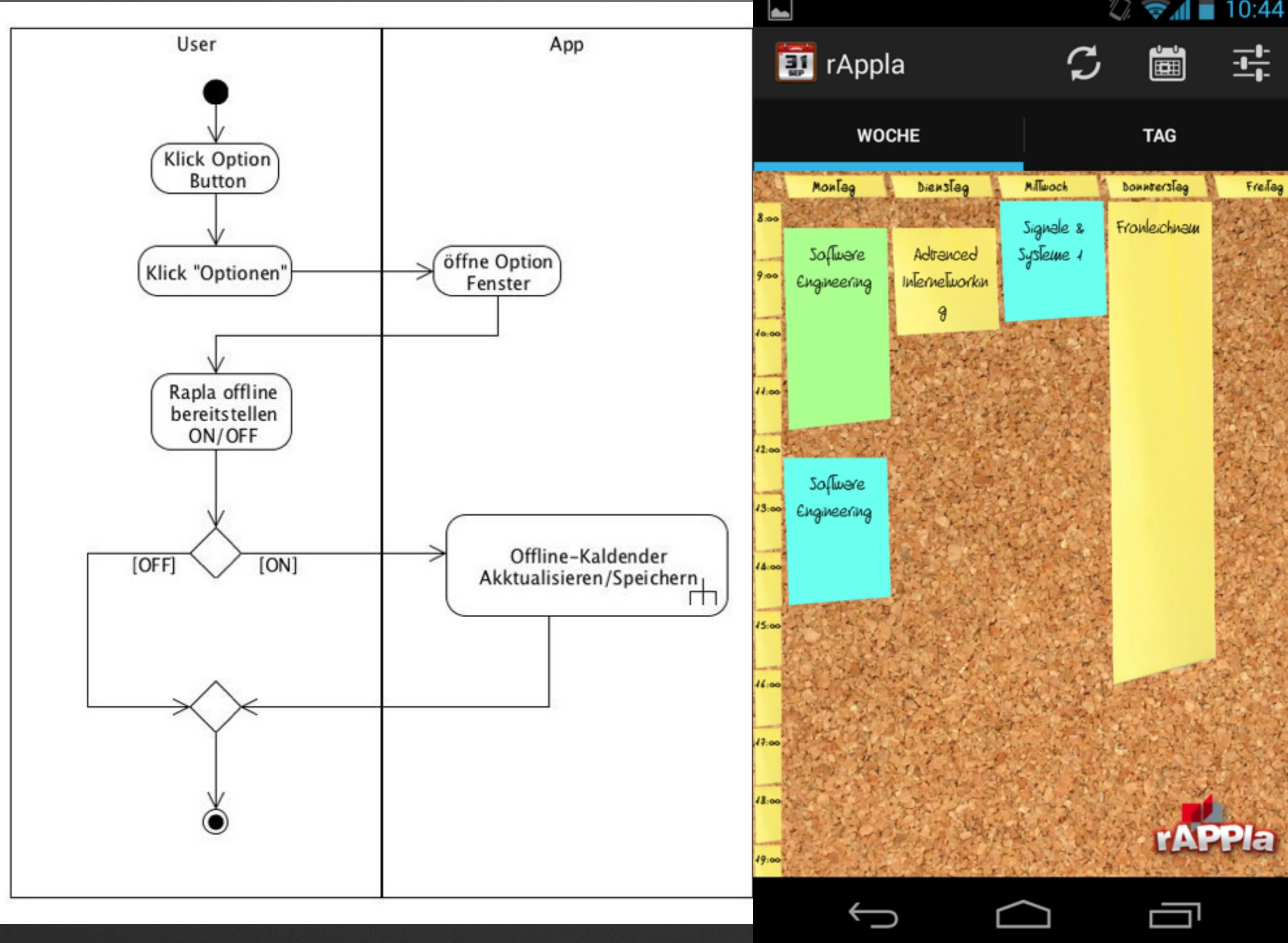
Use Cases

- Offline - Kalender Aktualisieren
- Notizen an Termine anfügen
- Alarme für Termine setzen
- rAppla widget für homescreen statt Bahnverbindungen
- Push-Benachrichtigungen bei Veränderung von Rapla statt Gmail - Kalender synchronisation

rAPPla

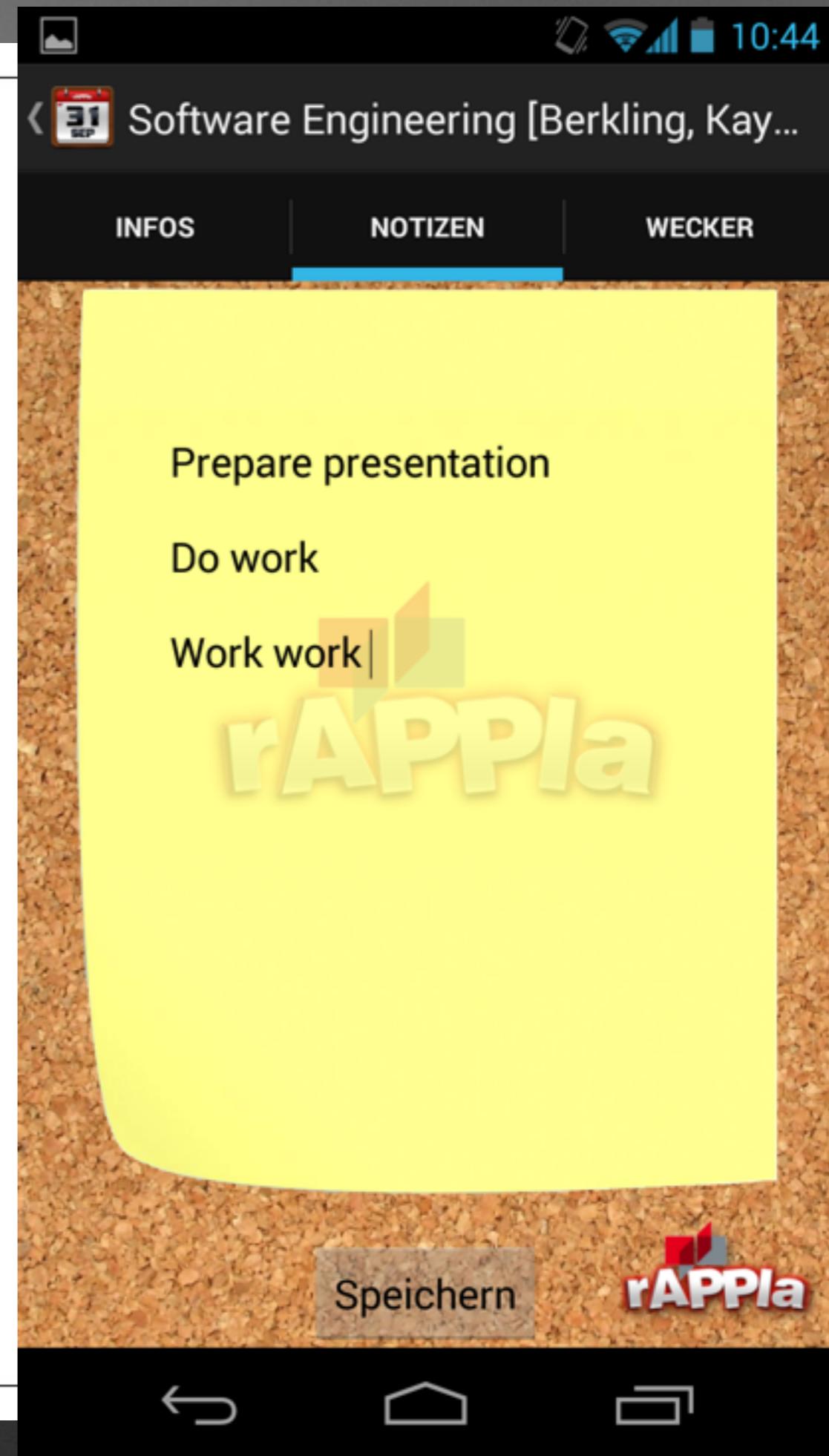
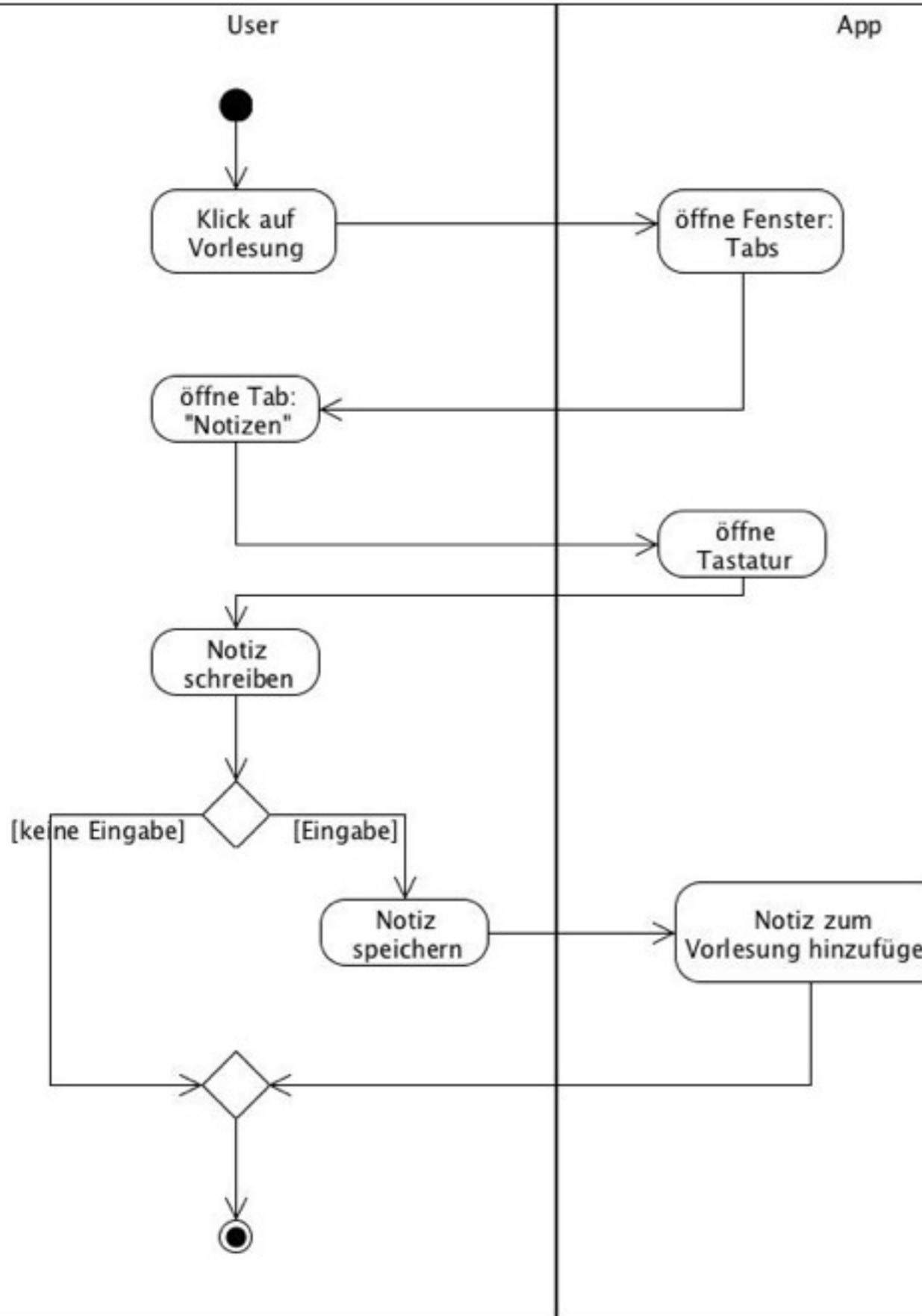
Offline - Kalender Aktualisieren

rAPPla



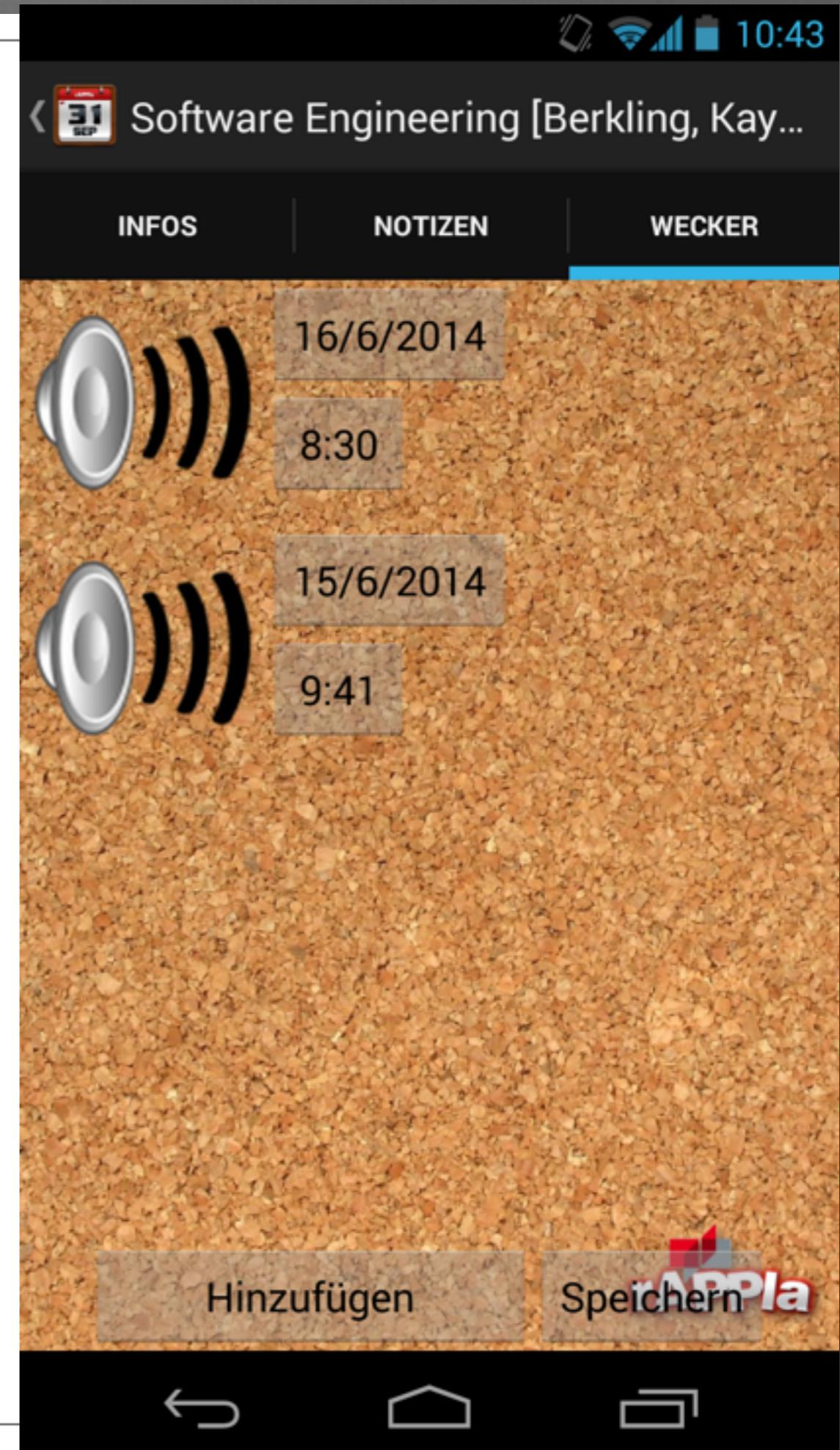
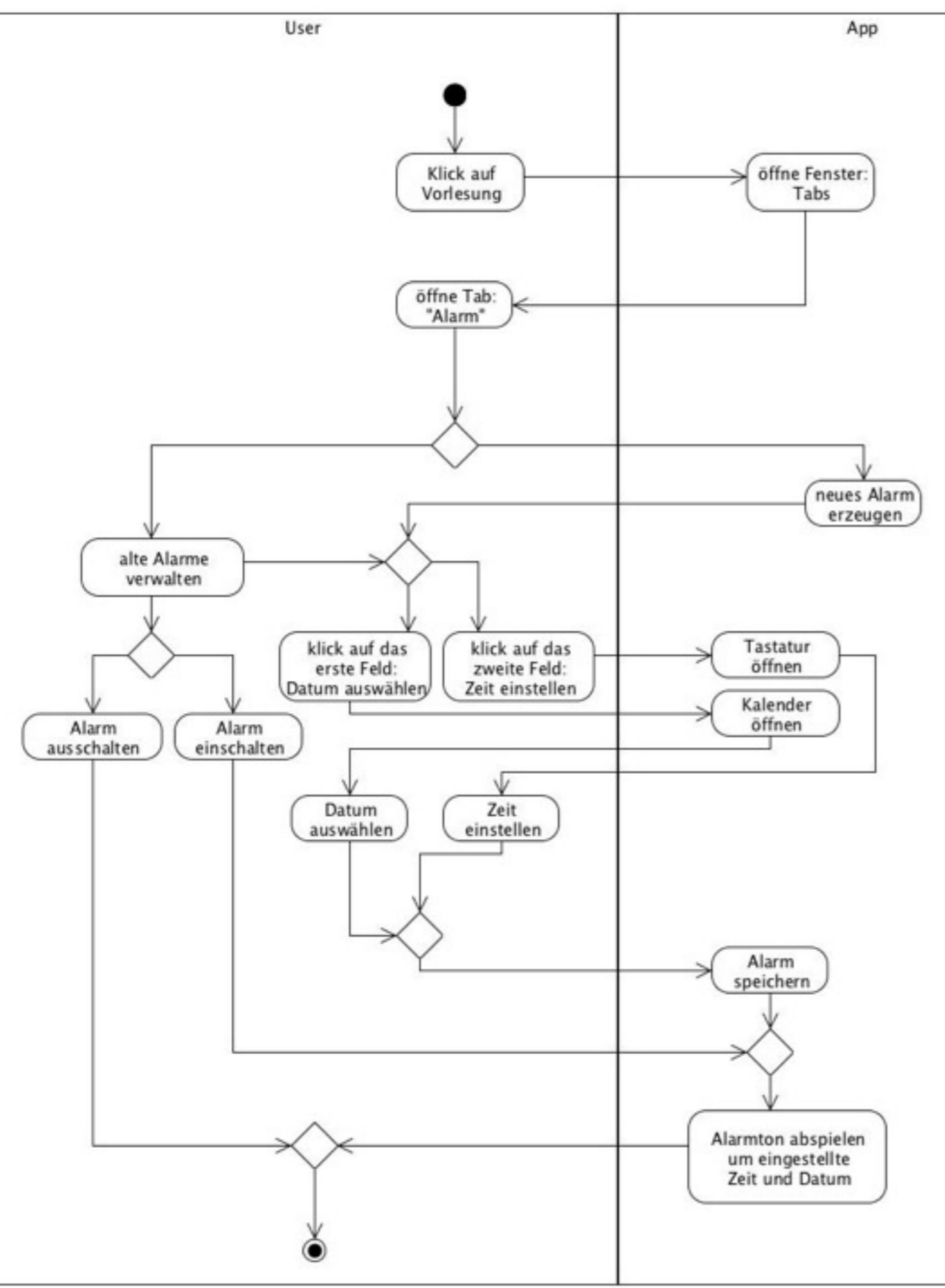
Notize an Termine anfügen

rAPPla



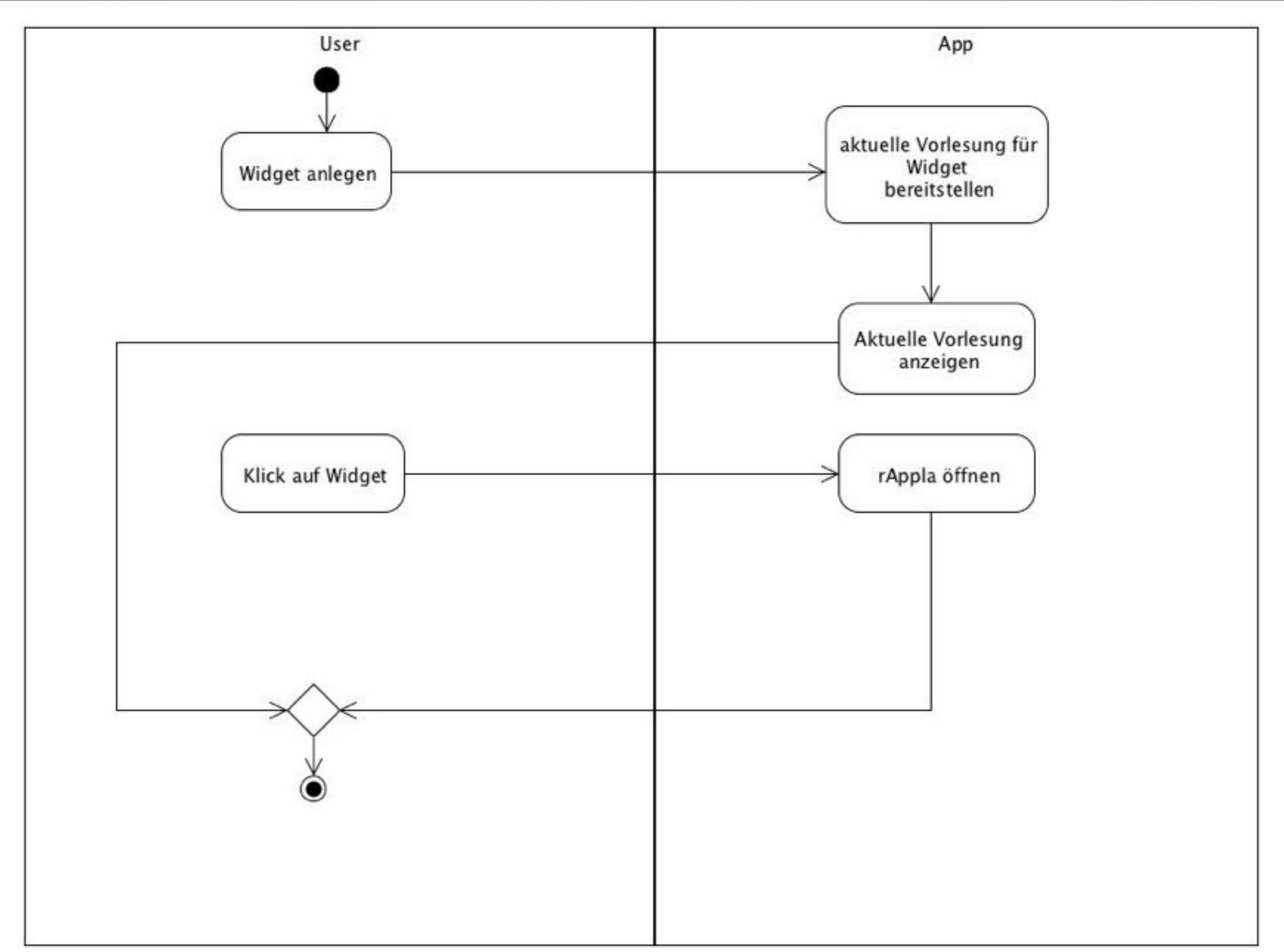
Alarme für Termine setzen

rAPPla

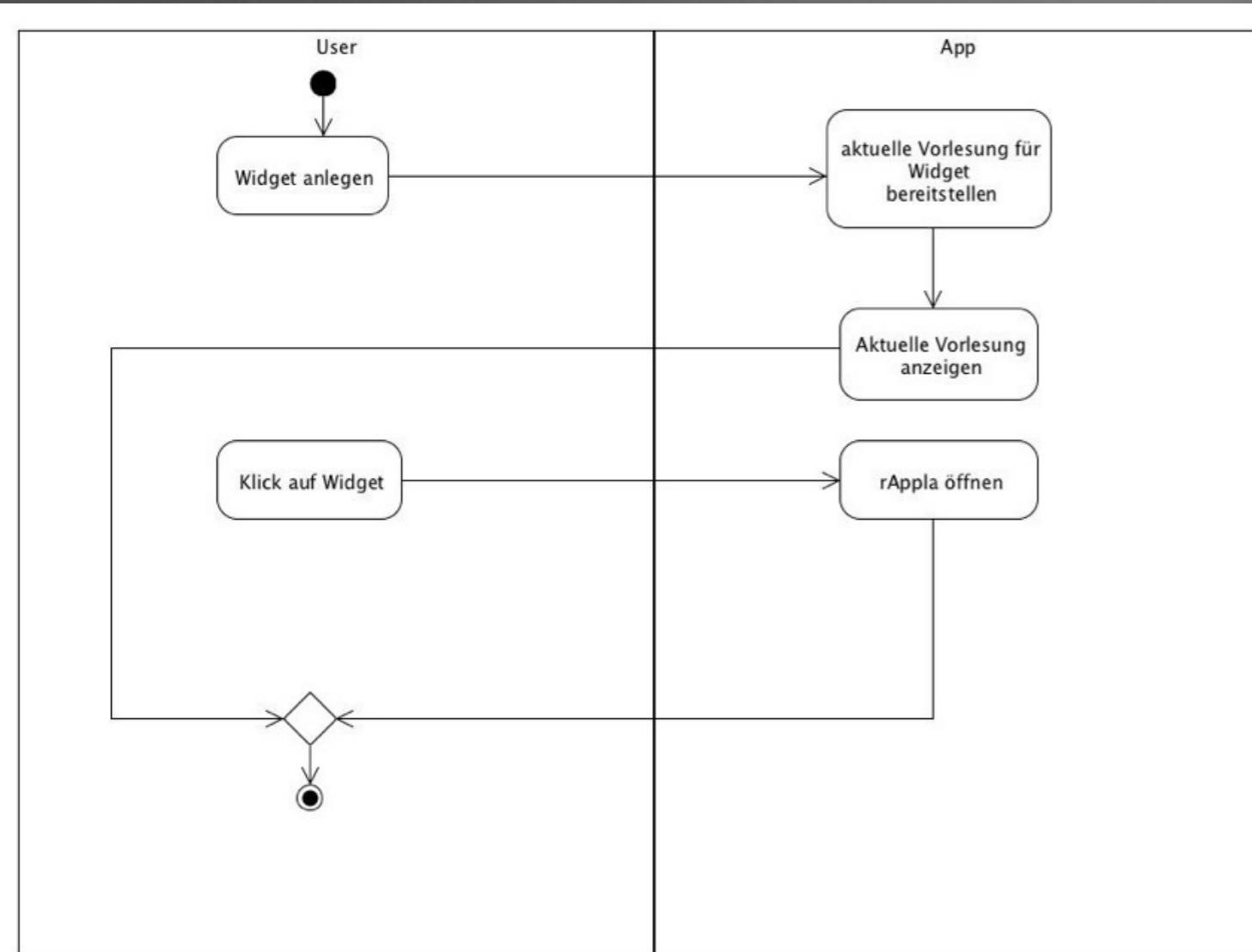


rAppla widget für Homescreen

rAPPla

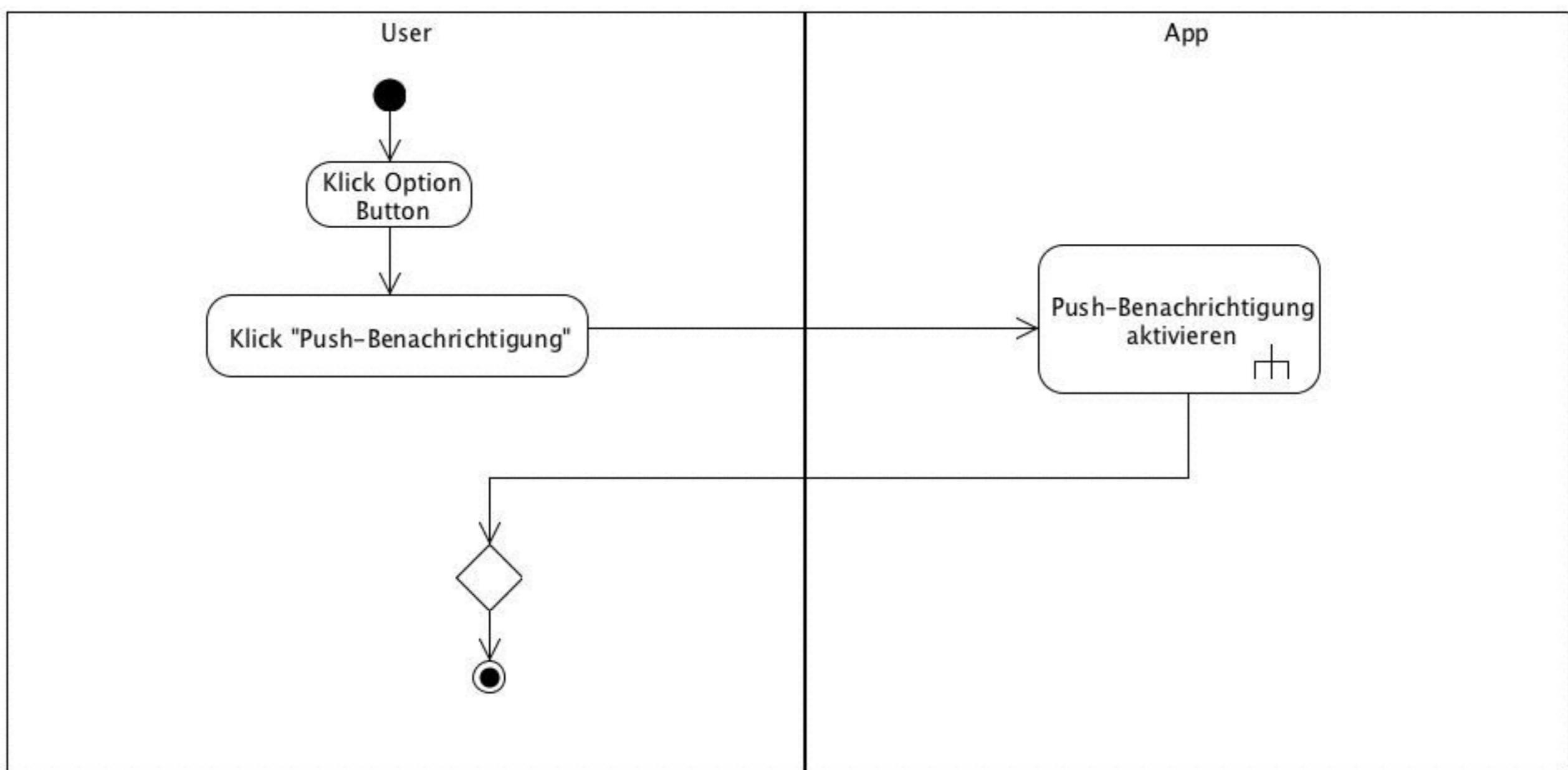


a



Push-Benachrichtigung bei Veränderung von Rapla

rAPPla



rAPPLA

 Einstellungen

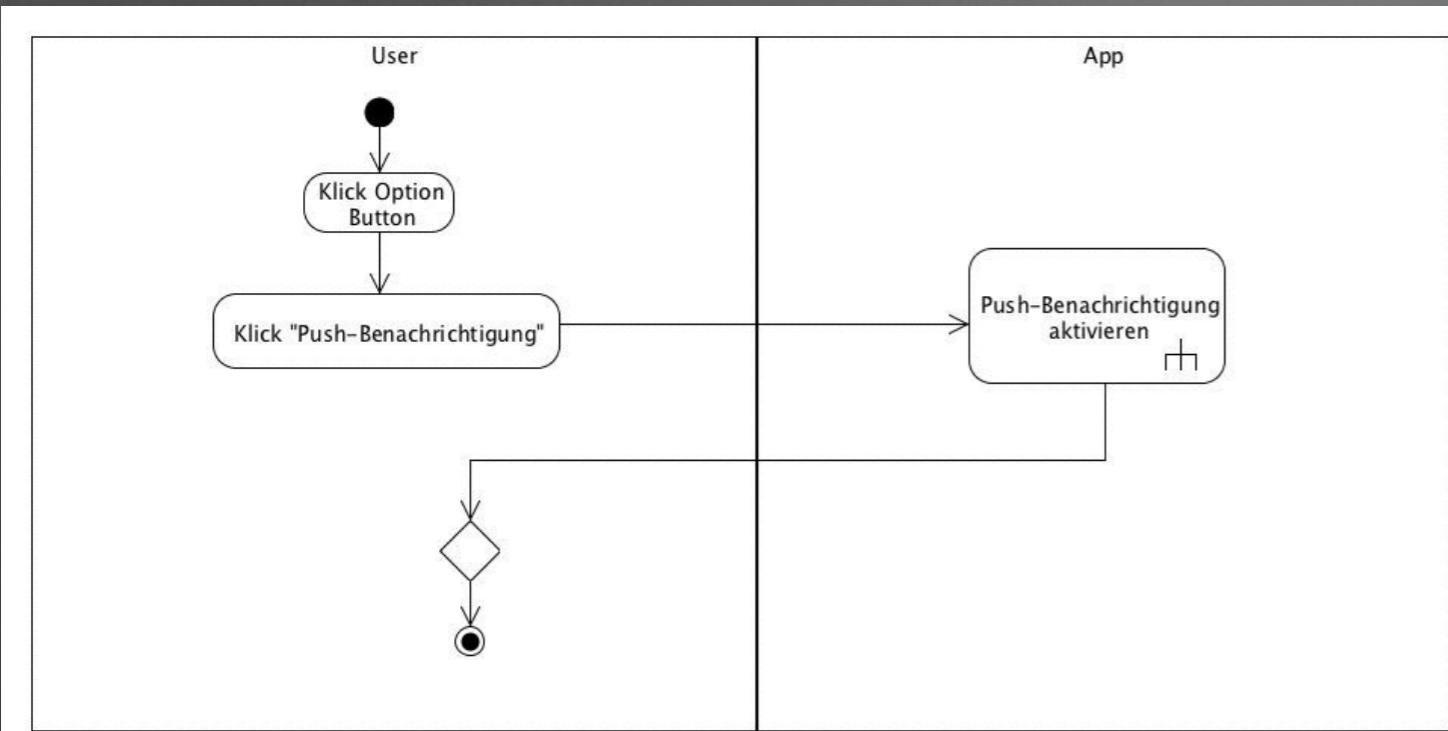
Kalender-URL

[https://rapla.dhbw-karlsruhe.de/
rapla?page=ical&user=vollmer&file=tinf12b3](https://rapla.dhbw-karlsruhe.de/rapla?page=ical&user=vollmer&file=tinf12b3)

Push-Benachrichtigungen Nur im Wifi aktualisieren

Aktualisierungsintervall

Der Rapla wird alle 1 d synchronisiert.



Technical ability

- Homescreen: 2 Tabs für Wochen - & Tagesansicht
- Click auf Vorlesung öffnet 3 weitere Tabs:
 - ◆ Infos des angeklickten Vorlesung
 - ◆ Notiz für die Vorlesung
 - ◆ Wecker für die Vorlesung hinzufügen
- rAppla Offline

rAPPLA

Technical ability

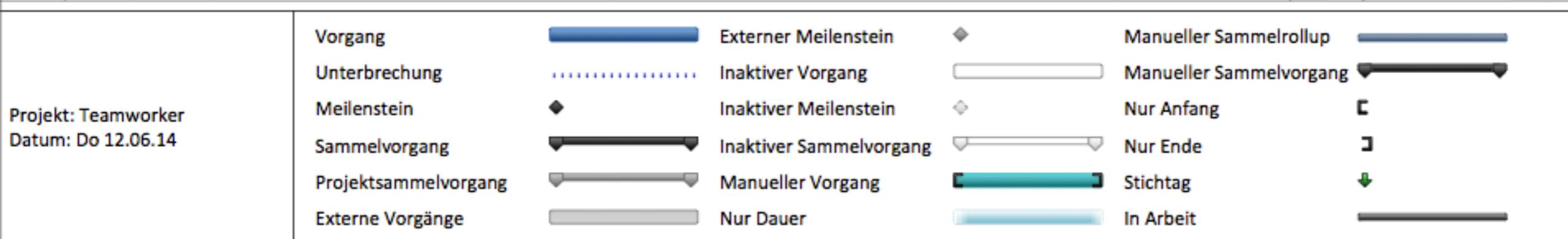
- Optionscreen:
 - ★ Link zum Rapla Kalender einfügen
 - ★ Push-Benachrichtigungen
 - ★ Nur im Wifi aktualisieren und Aktualisierungsintervall
- Aktualisierungsbutton und „Heute“ Button
- Icons und Graphische Elemente

rAPPla

Project Methodology - Project management

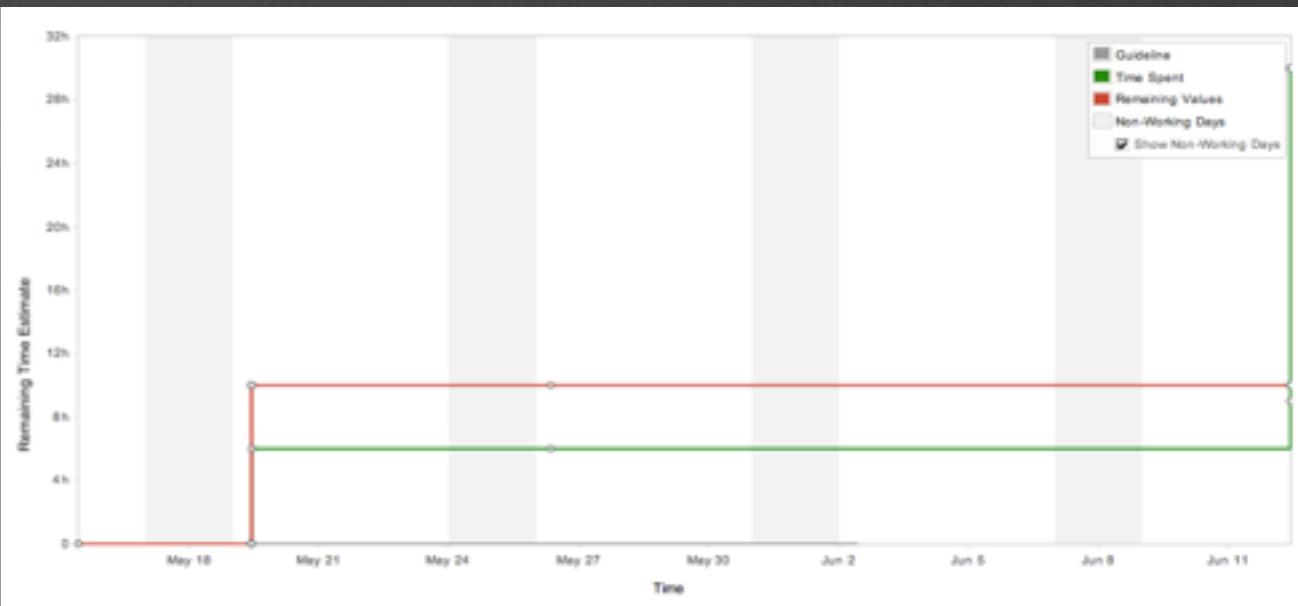
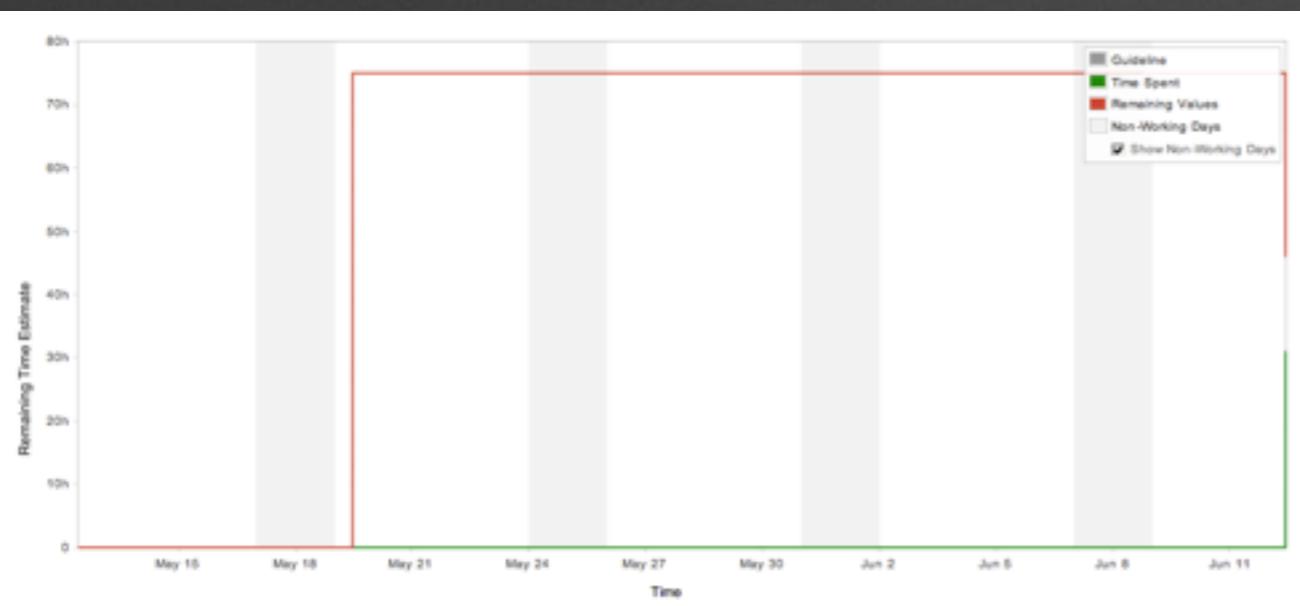
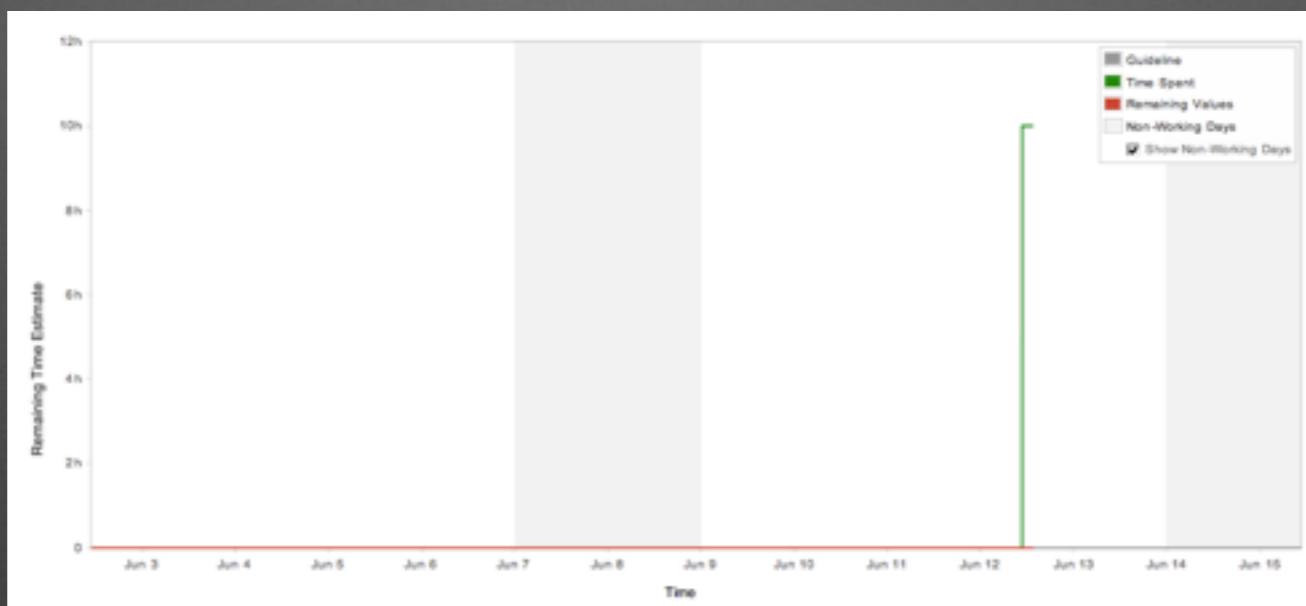
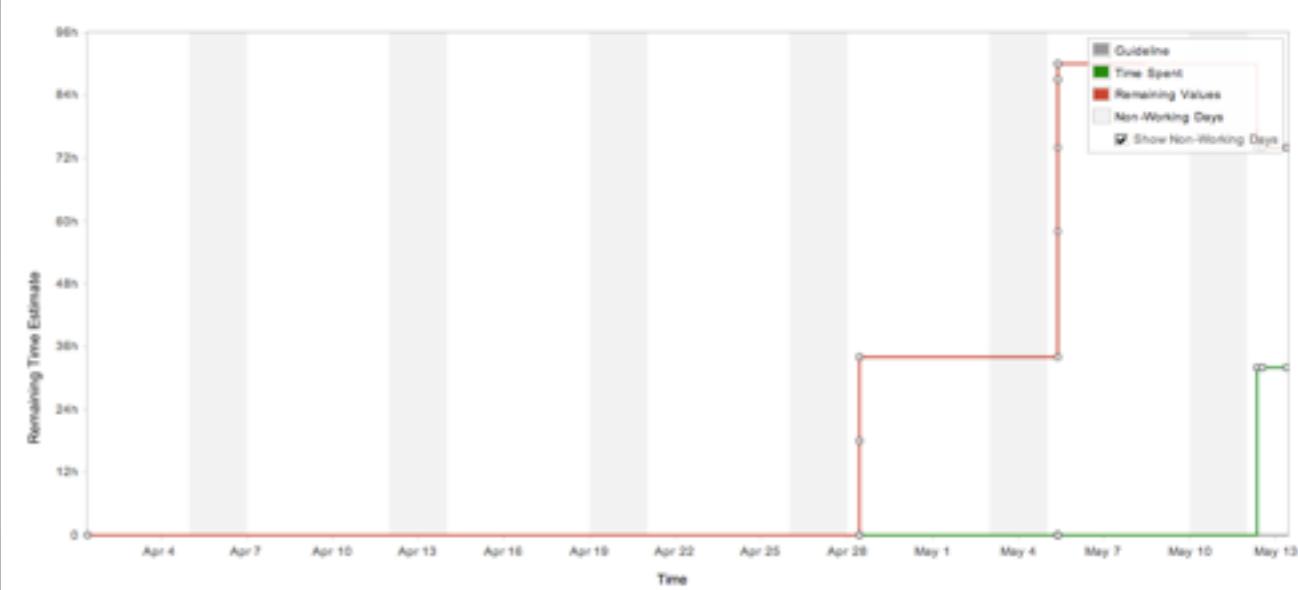
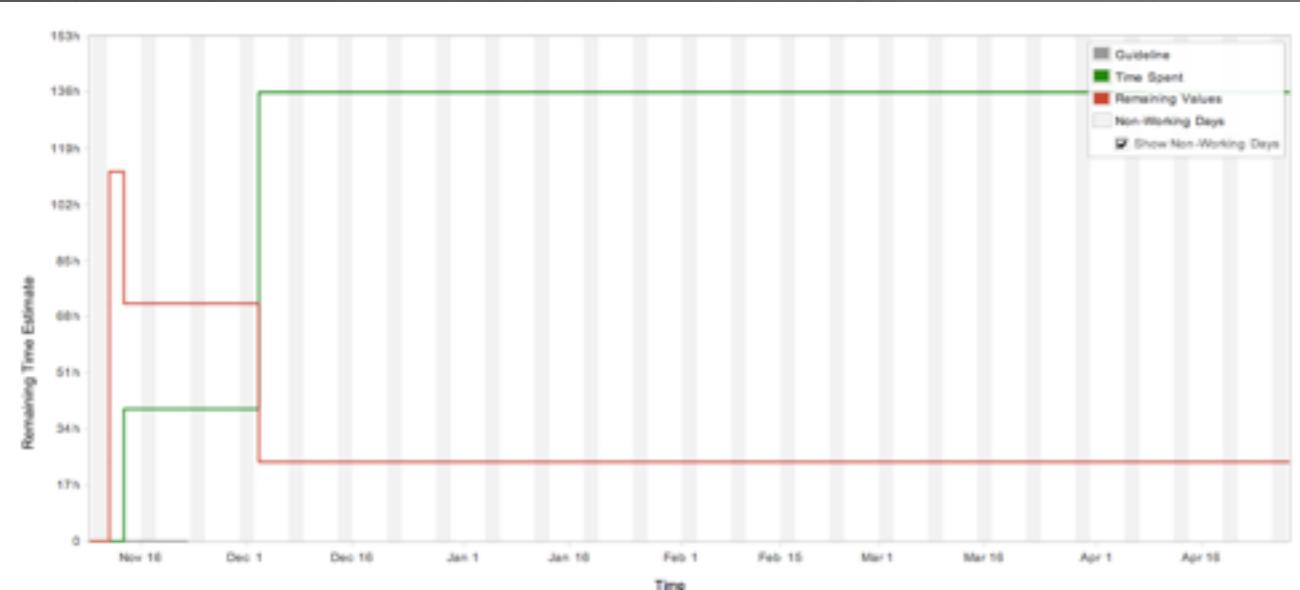
rAPPla

Nr.	Vorgang	Vorgangsname	Dauer	Anfang	Fertig stellen	Vorgänger	Ressourcennamen	07. Okt '13							
								S	M	D	M	D	F	S	S
1	✔	rAppa Inception	186 Tage	Di 08.10.13	Di 24.06.14										
2	✔	Business Modelling	2 Tage	Fr 18.10.13	So 20.10.13										
3	✓	Requirements	24 Std.	Do 10.10.13	Sa 12.10.13										
5	✓	Creating SRS	12 Std.	Do 10.10.13	Fr 11.10.13		Lorenzo Toso;Philipp N								
6	✓	Choosing the five main Use-Cases	0 Std.	Sa 12.10.13	Sa 12.10.13		Lorenzo Toso;Philipp N								
7	✓	Configuration & Change Management	0,25 Tage	Mo 28.10.13	Mo 28.10.13										
8	✓	Setting up a GitHub repository	2 Std.	Mo 28.10.13	Mo 28.10.13		Lorenzo Toso;Sebastian Hüther								
9	?	Project Management													
10	?	Group foundation	6 Std.	Di 08.10.13	Di 08.10.13		Lorenzo Toso;Philipp N								
11	?	Defining Group Roles	2 Std.	Di 08.10.13	Di 08.10.13		Lorenzo Toso;Philipp N								
12	?	Distributing Jobs	1 Std.	Fr 25.10.13	Fr 25.10.13		Irtaza Syed;Lorenzo Toso								
13	!	Creating the project plan	7 Std.	Do 31.10.13	Do 31.10.13		Lorenzo Toso								
14	!	Logging tasks	6 Std.	Fr 01.11.13	Fr 01.11.13		Lorenzo Toso								
15	✓	Environment	1 Tag	Mi 30.10.13	Mi 30.10.13										
16	✓	Setting up a cucumber environment	1 Tag	Mi 30.10.13	Mi 30.10.13		Sebastian Hüther								
17	?	Elaboration	6 Tage	Mo 28.10.13	Mo 04.11.13										
18	?	Business Modelling													
19	?	Requirements													
20	?	Analysis & Design	6 Tage	Mo 28.10.13	Mo 04.11.13										
21	?	Rapla mit Gmail synchronisieren	40 Std.	Mo 28.10.13	Fr 01.11.13										
22	?	Mockup erstellen	1 Std.	Mo 28.10.13	Mo 28.10.13		Lorenzo Toso								
23	?	UML-Activity Diagram erstellen	1 Std.	Di 29.10.13	Di 29.10.13		Irtaza Syed								

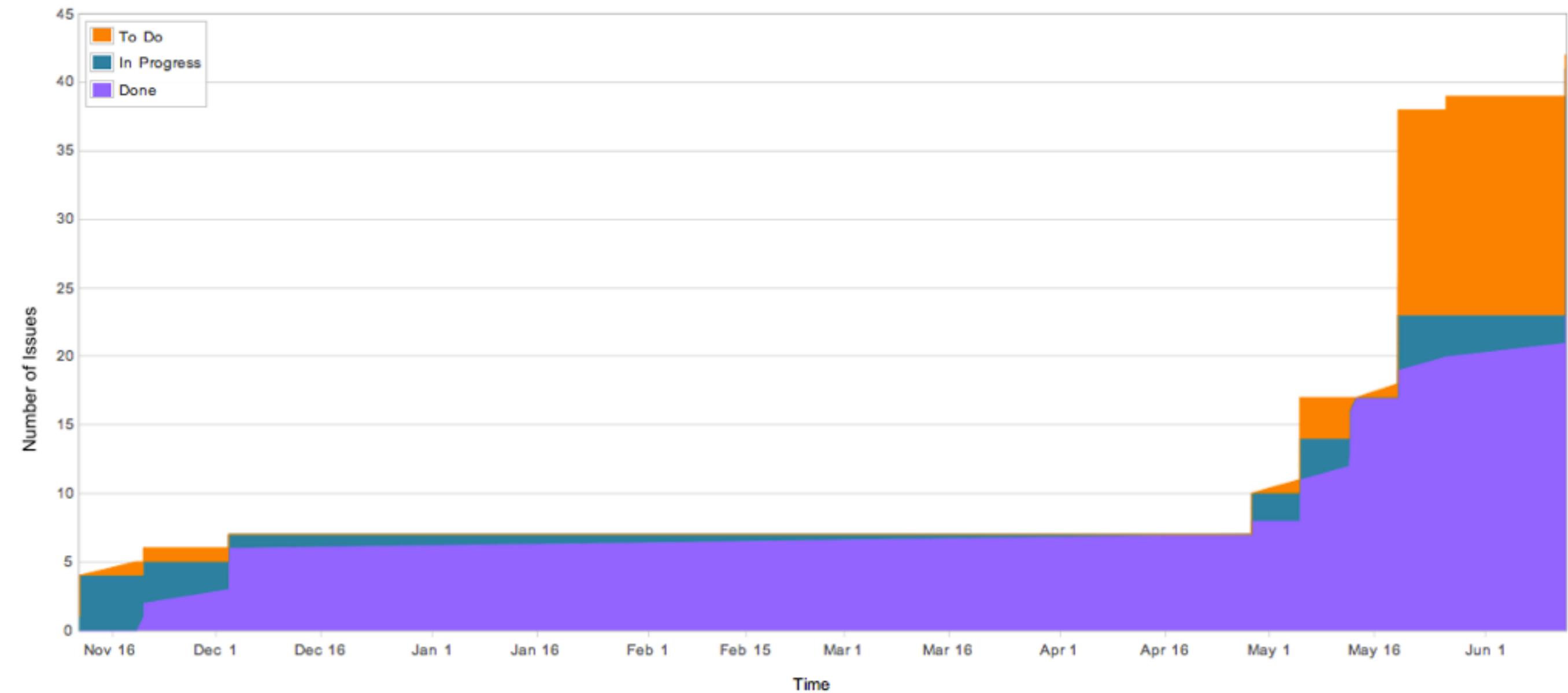


Project Methodology - Sprints

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rAPPLA

Entwurfsmuster

- Größtenteils allgemeingültige Entwurfsmuster
- Android - Listener
- Android - Model View Presenter
- Android - Nested Fragments
- Abstract Factory - Pattern
- Singleton - Pattern

rAPPLA

rAPPla

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rAPPia

DEMO

Quality

rAPPla

rAPPla

Quality - Automated testing

rAPPla

Qual

sting

APPla

Feature: Notes

The user can add notes to rapla events

Scenario: As a valid user I can add notes to events

Then I wait

Then I see "Software Engineering"

Then I press the "Software Engineering" Button

Then I press "Notizen"

Then I enter text "cucumbertest" into field with id "editText1"

Then I press "Speichern"

Then I go back

Then I wait

Then I see "Software Engineering"

Then I press the "Software Engineering" Button

Then I press "Notizen"

Then I see "cucumbertest"

Feature: Notes feature

```
  Scenario: As a valid user I can add notes to events # features\5
notes.feature:3
4314 KB/s (556621 bytes in 0.125s)
3692 KB/s (26166319 bytes in 6.919s)
    Then I wait
ndroid-0.4.21/lib/calabash-android/steps/progress_steps.rb:5 # calabash-a
    Then I see "Software Engineering"
ndroid-0.4.21/lib/calabash-android/steps/assert_steps.rb:5 # calabash-a
    Then I press the "Software Engineering" Button
ndroid-0.4.21/lib/calabash-android/steps/press_button_steps.rb:5 # calabash-a
    Then I press "Notizen"
ndroid-0.4.21/lib/calabash-android/steps/press_button_steps.rb:21 # calabash-a
    Then I enter text "cucunbertest" into field with id "editText1"
ndroid-0.4.21/lib/calabash-android/steps/enter_text_steps.rb:25 # calabash-a
    Then I press "Speichern"
ndroid-0.4.21/lib/calabash-android/steps/press_button_steps.rb:21 # calabash-a
    Then I go back
ndroid-0.4.21/lib/calabash-android/steps/navigation_steps.rb:1 # calabash-a
    Then I wait
ndroid-0.4.21/lib/calabash-android/steps/progress_steps.rb:5 # calabash-a
    Then I see "Software Engineering"
ndroid-0.4.21/lib/calabash-android/steps/assert_steps.rb:5 # calabash-a
    Then I press the "Software Engineering" Button
ndroid-0.4.21/lib/calabash-android/steps/press_button_steps.rb:5 # calabash-a
    Then I press "Notizen"
ndroid-0.4.21/lib/calabash-android/steps/press_button_steps.rb:21 # calabash-a
    Then I see "cucunbertest"
ndroid-0.4.21/lib/calabash-android/steps/assert_steps.rb:5 # calabash-a

1 scenario (1 passed)
12 steps (12 passed)
0m59.069s
```

Quality - Metrics

rAPPla

Java - rAppa/gen/app/rappla/R.java - ADT

File Edit Refactor Source Navigate Search Project Run Window Help

Quick Access Java Debug

Package Explorer Type Hierar... Git Repository

main.xml basicTests.java SettingsAct... Rule.java R

rAppa gen app.rappla R id RelativeLayout1 : int

```

public static final int event=0x7f020004;
public static final int event_landscape=0x7f020005;
public static final int ic_action_refresh=0x7f020006;
public static final int ic_action_settings_light=0x7f020007;
public static final int ic_launcher=0x7f020008;
public static final int stickynote=0x7f020009;
}
public static final class id {
    public static final int RelativeLayout1=0x7f080000;
    public static final int action_refresh=0x7f08001f;
    public static final int action_settings=0x7f080020;
    public static final int alarmHolder=0x7f080009;
    public static final int beginView=0x7f08000b;
    public static final int btnAdd=0x7f080007;
    public static final int btnSave=0x7f080006;
}

```

Outline

- SF id**
 - SF RelativeLayout1**
 - SF action_refresh**
 - SF action_settings**
 - SF alarmHolder**
 - SF beginView**
 - SF btnAdd**
 - SF btnSave**
 - SF button1**
 - SF button2**
 - SF dateView**
 - SF editText1**
 - SF editText2**
 - SF editText3**

Javadoc Declar... Search Console Prog... LogCat Metrics... Call Hi... Error L... History

Metric	Total	Mean	Std. Dev.	Maxim...	Resource causing Maximum
Number of Parameters (avg/max per method)		0,924	1,179	10	/rAppa/src/app/rappla/calendar/Date.j...
Number of Static Attributes (avg/max per type)	149	2,129	5,446	33	/rAppa/gen/app/rappla/R.java
gen	93	8,455	10,866	33	/rAppa/gen/app/rappla/R.java
app.rappla	93	8,455	10,866	33	/rAppa/gen/app/rappla/R.java
src	56	0,949	2,078	9	/rAppa/src/app/rappla/calendar/Date.j...
Efferent Coupling (avg/max per packageFragment)	3,667	2,944		11	/rAppa/src/app/rappla/ui/fragments
Specialization Index (avg/max per type)		0,167	0,371	1,667	/rAppa/src/app/rappla/activities/Setting
Number of Classes (avg/max per packageFragment)	70	7,778	8,599	30	/rAppa/src/app/rappla/calendar
Number of Attributes (avg/max per type)	158	2,257	3,392	17	/rAppa/src/app/rappla/calendar/Event,
Abstractness (avg/max per packageFragment)		0,034	0,065	0,182	/rAppa/src/app/rappla/ui/fragments

98M of 242M

MSPS of M88

**Vielen Dank für ihre
Aufmerksamkeit**

rAPPla

rAPPia

