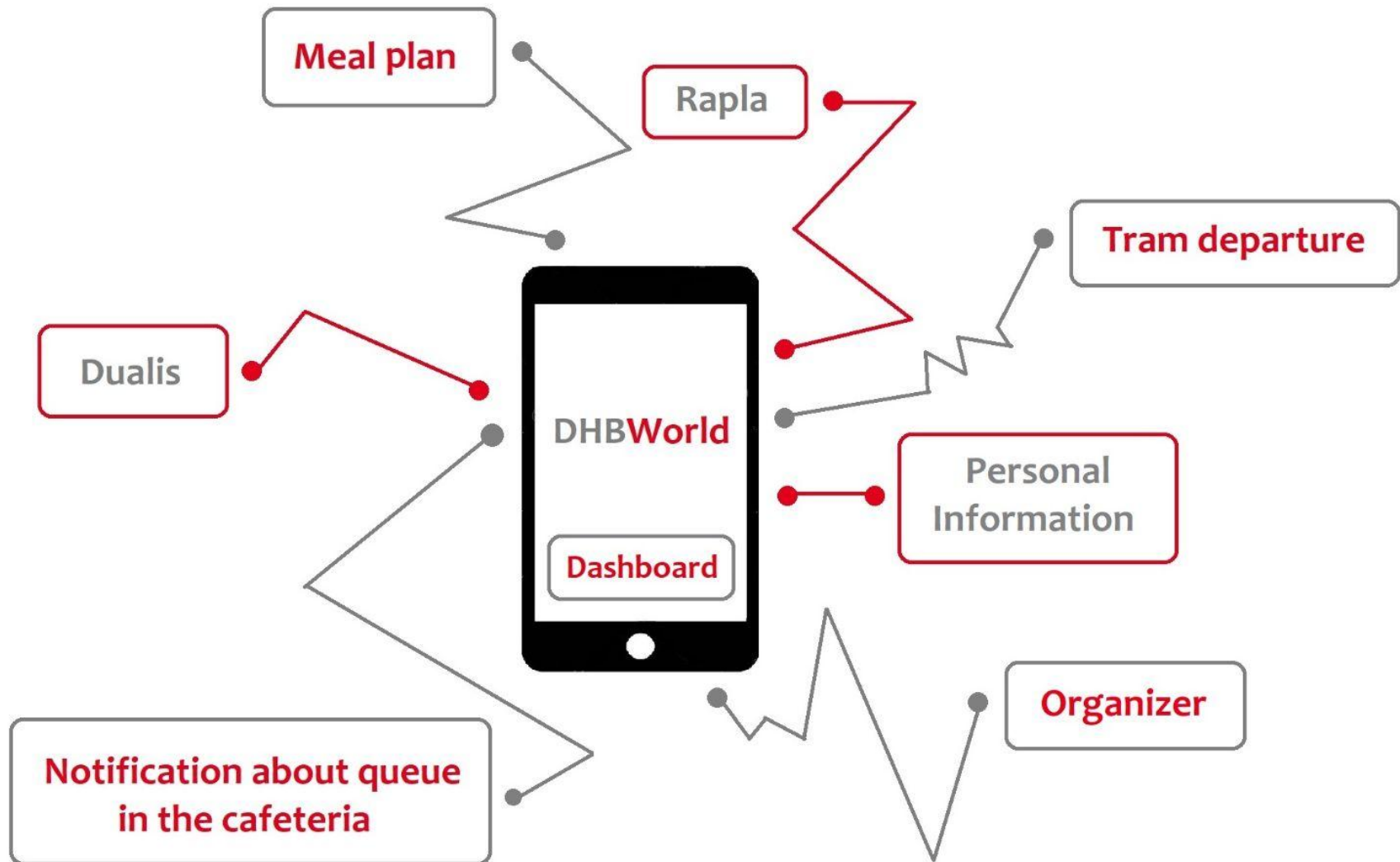


# DHBWorld

The All-in-One DHBW App



# Team



Linus Pust

Tool Specialist  
Change Control Manager  
Test Designer  
Implementer



Christian Zäske

Configuration Manager  
Deployment Manager  
Test Designer  
Implementer

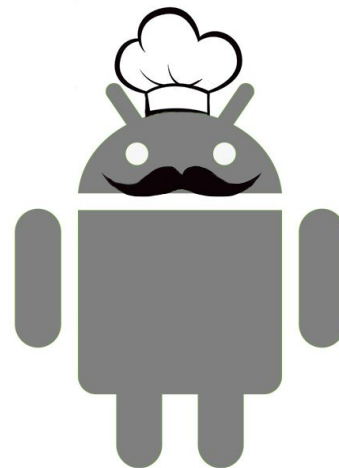


Daria Kodolova

Project Manager  
Requirements Specifier  
Designer  
Implementer

# Agenda

- Project Management
- Development
- Testing
- **Demo**
- Code Quality
- Conclusion



# Project Management - Organization

# Use Cases

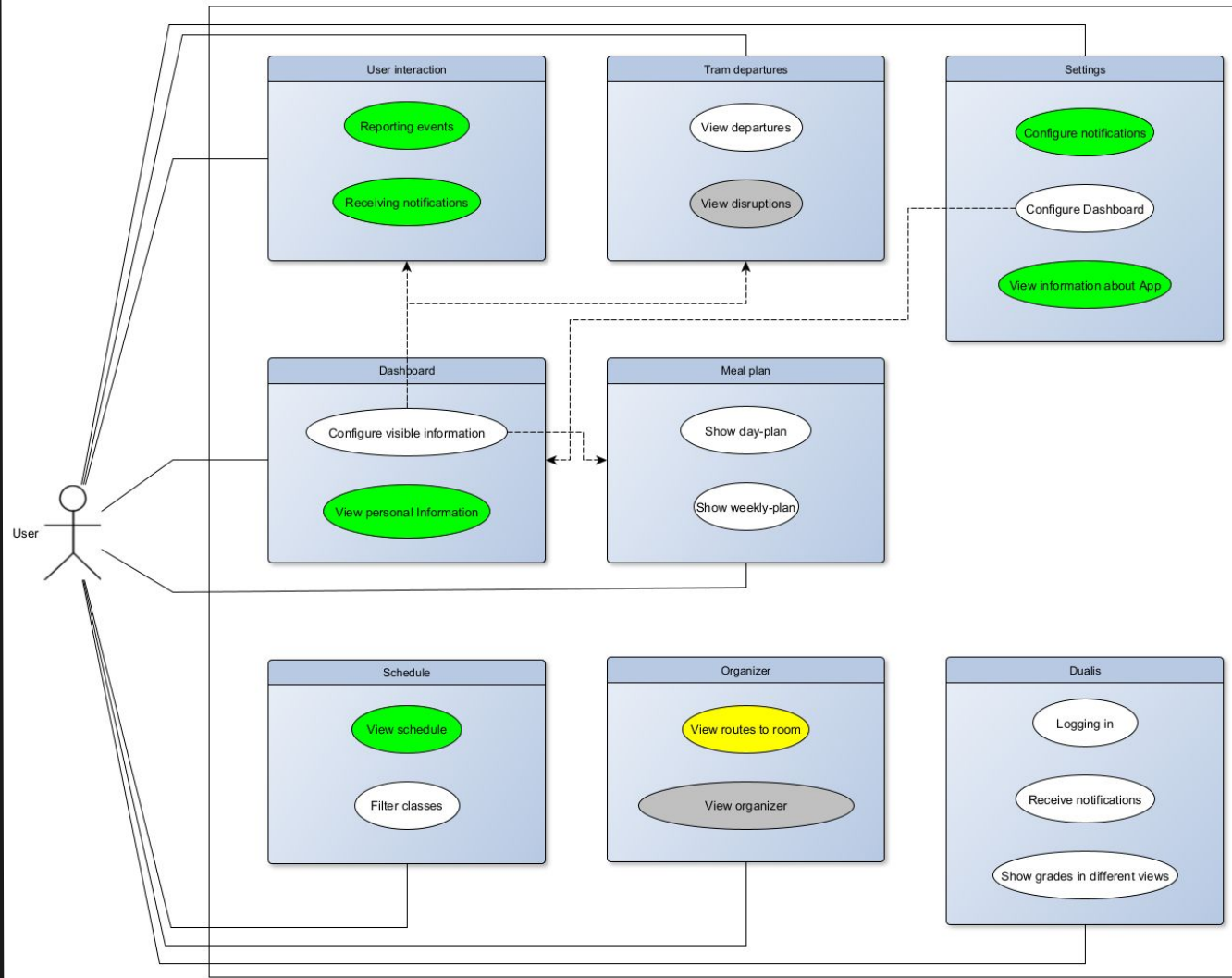
Legend UC:

implemented  
in 1. sem

implemented  
in 2. sem

insert in 2. sem  
(implemented)

nicht  
implemented



# Tools

## Development



Firebase

## Code quality



MetricsReloaded

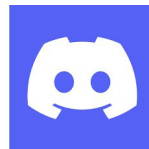
## Testing



Google Play



## Organization



## Documentation



yEd



miro



GitHub

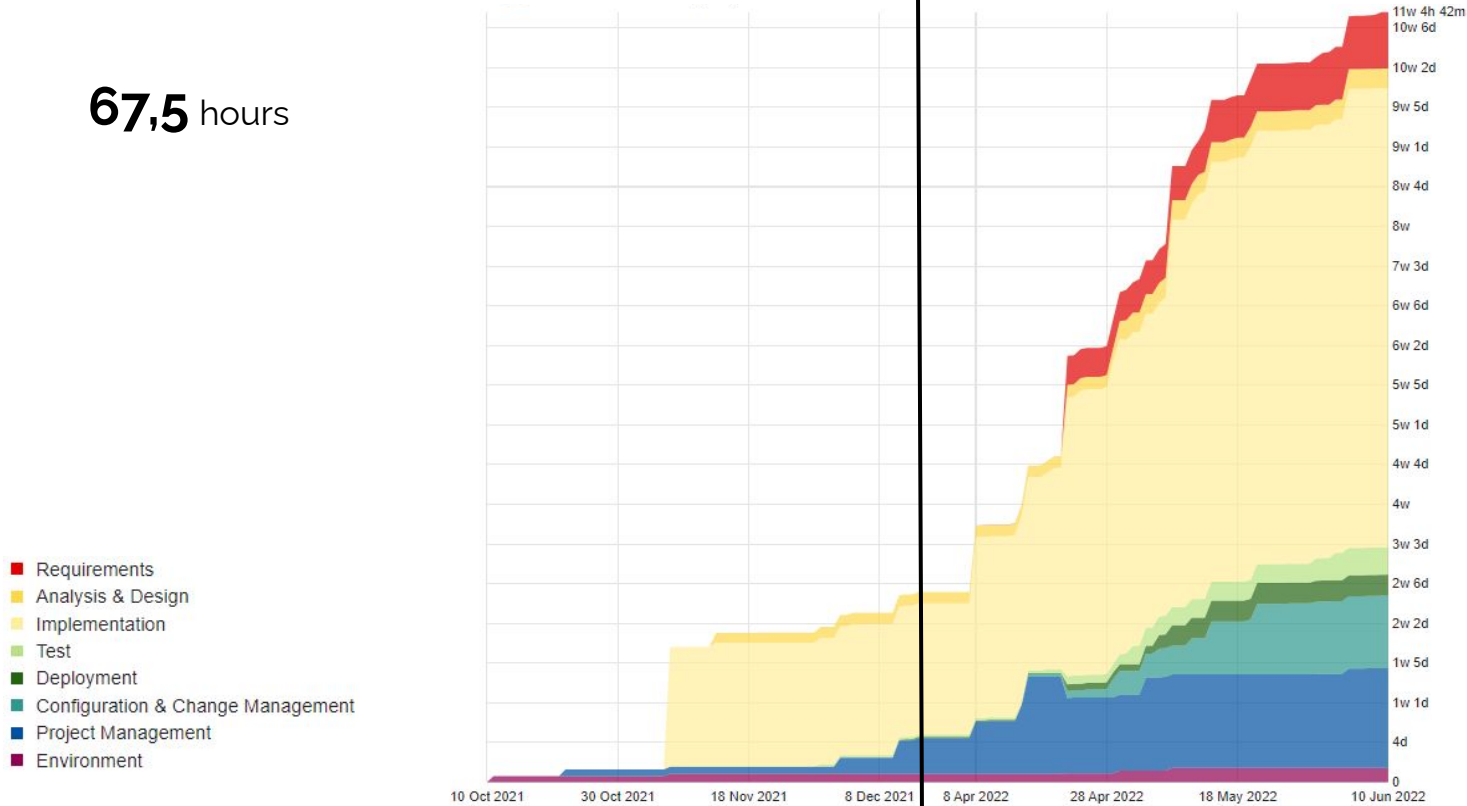
# Project Management

# First semester

**67,5** hours

## Second semester

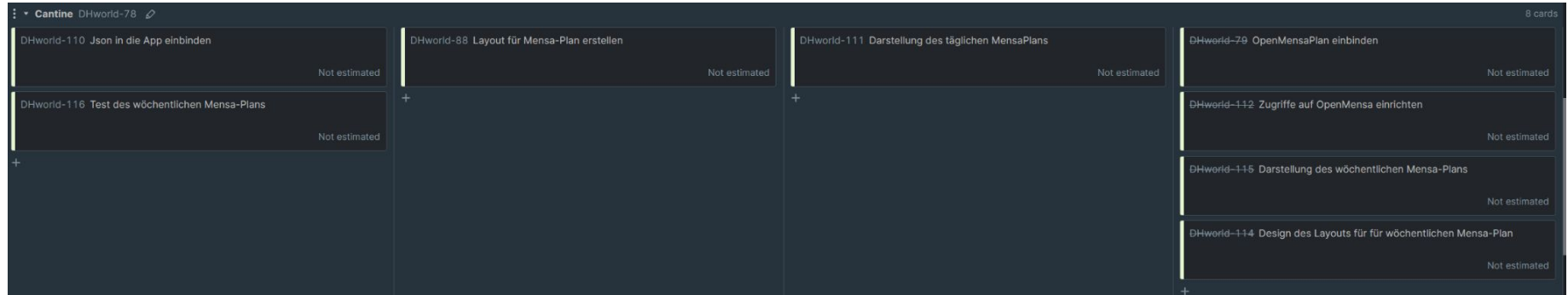
**265,5** hours





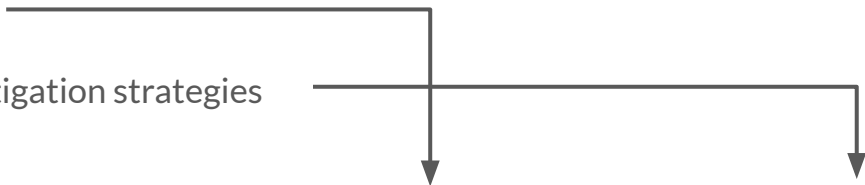
# SCRUM - Why use it?

- SCRUM is essential part of project
- YouTrack as All-in-One tool for SCRUMing
- New sprints every two weeks



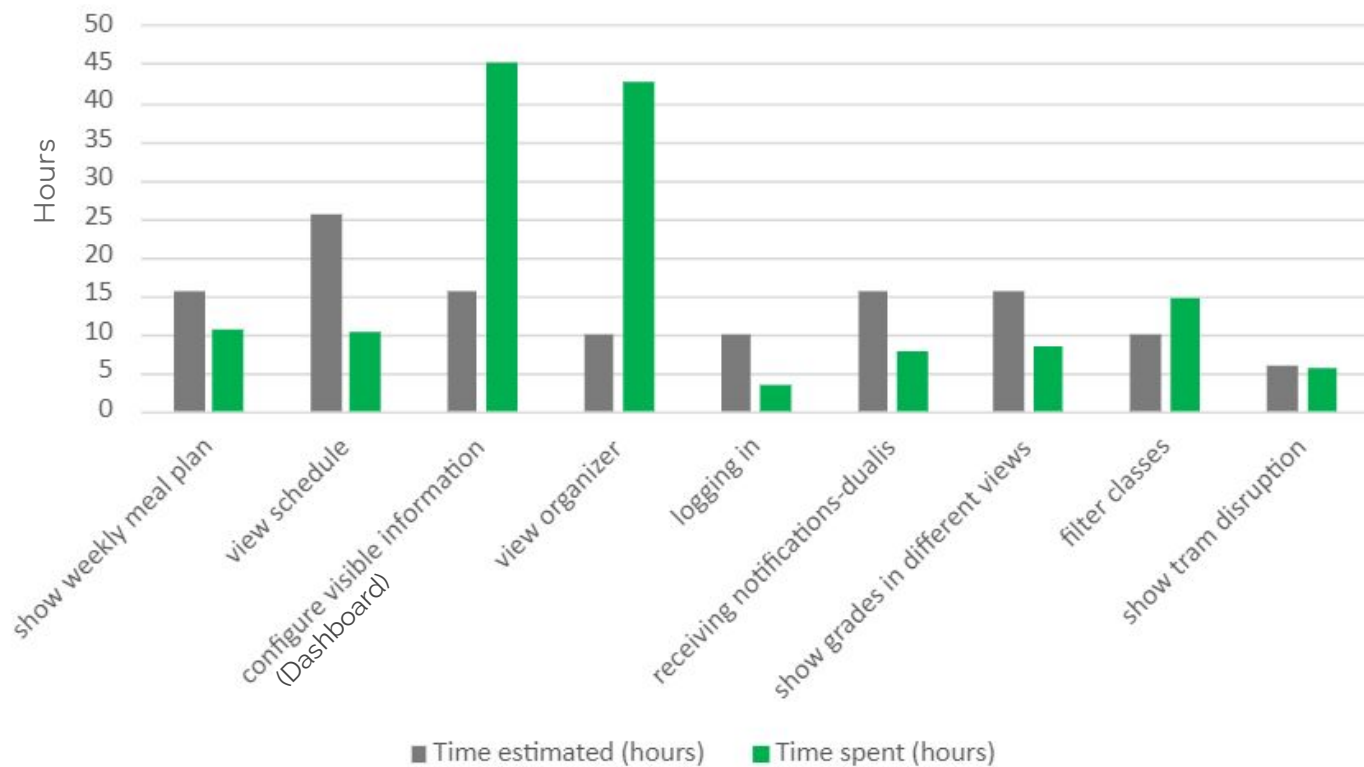
# Risk Management

- Focus on high-risk items
- Adhesion to determined mitigation strategies
- Regular check for new risks



Risks	Mitigation strategy	Risk Factor
Problems with code	Make consistent rules for all members. Code-Review of others code.	480
Inaccurate deadlines	Good project management regularly redefine deadlines.	280

# Time Estimation

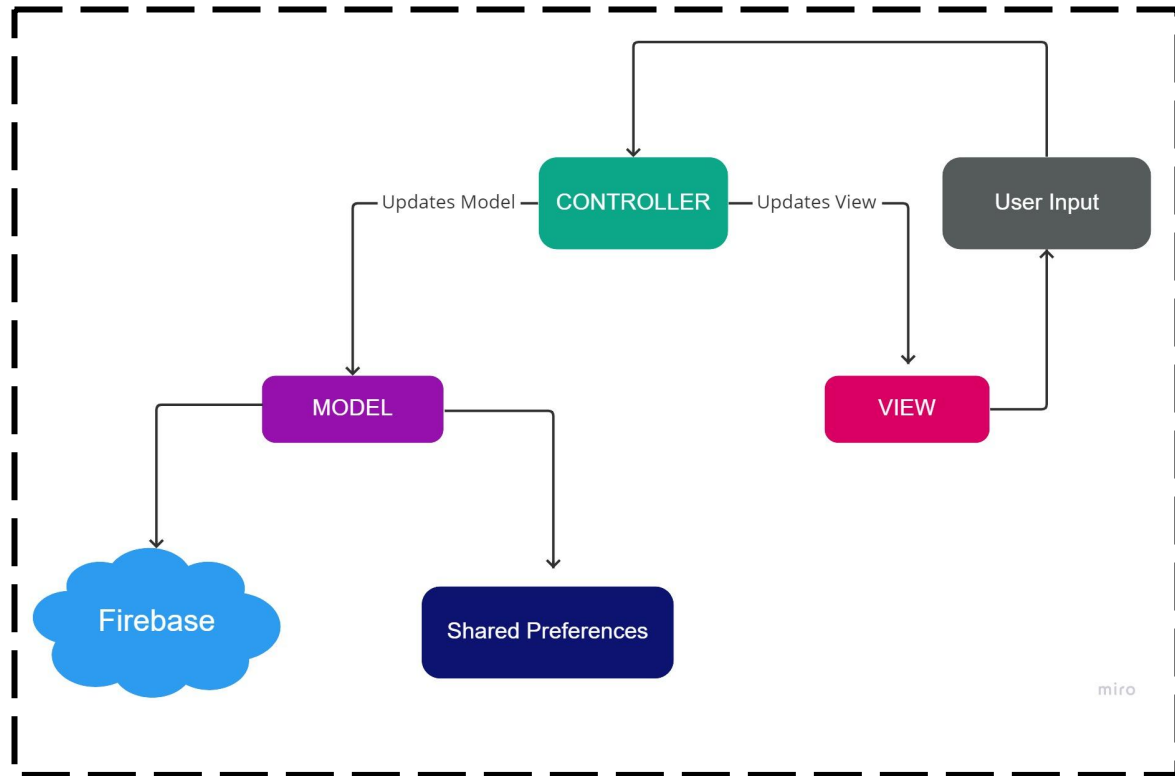


The funniest part of our project was . . .

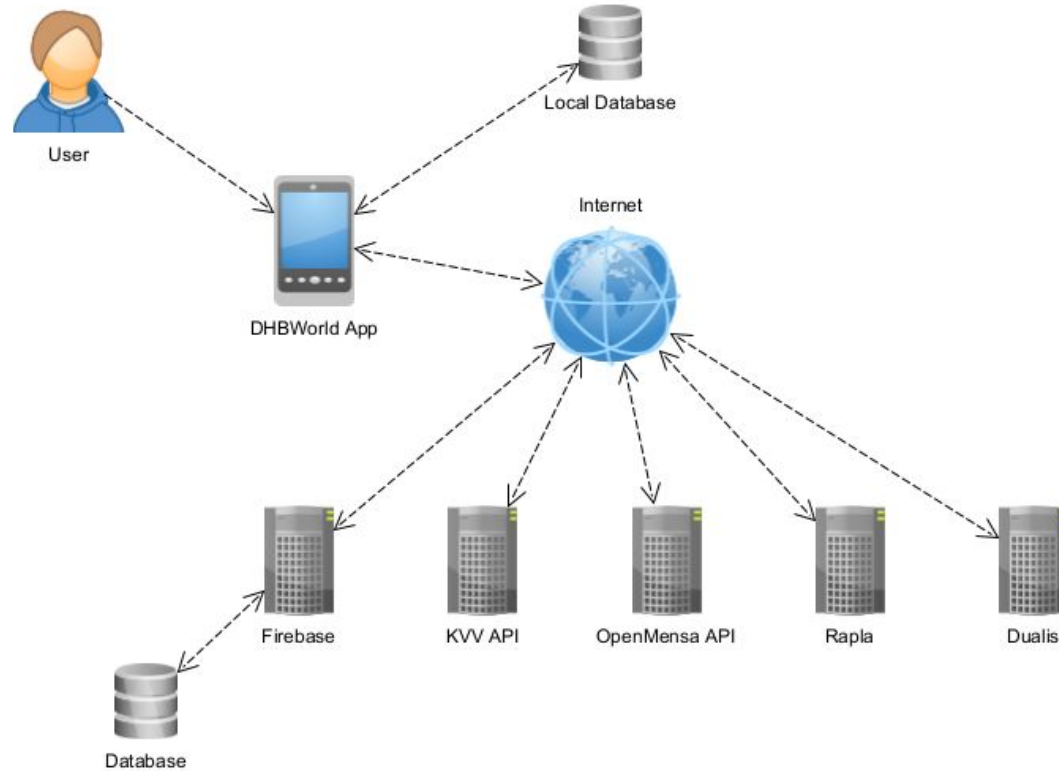
# Development

# Architecture

- MVC pattern
- Android Studio native
- Logic: Java
- Layout: XML
- Database: Firebase



# Deployment View



During the development, we tried to keep the functional quality of our app with the help of ...

# Testing

# Testing

## Functional Test

➡ .feature files



**Feature:** Meal plan

as a User  
I want to see the meal plan for the current day and week

**Scenario:** User has no internet

**Given** The app is opened

**When** The user opens the meal plan page

**And** The user has no connection to the internet

**Then** The meal plan page will show an error message

## Unit Test

➡ AndroidJUnit



-----  
--- Android Test Report Action ---  
-----

Test Summary		
23	tests	
1	failures	
18.156s	duration	
95%	successful	

## User Test

➡ Google Play



**DHBWorld (Early Access)**

Blitzdose

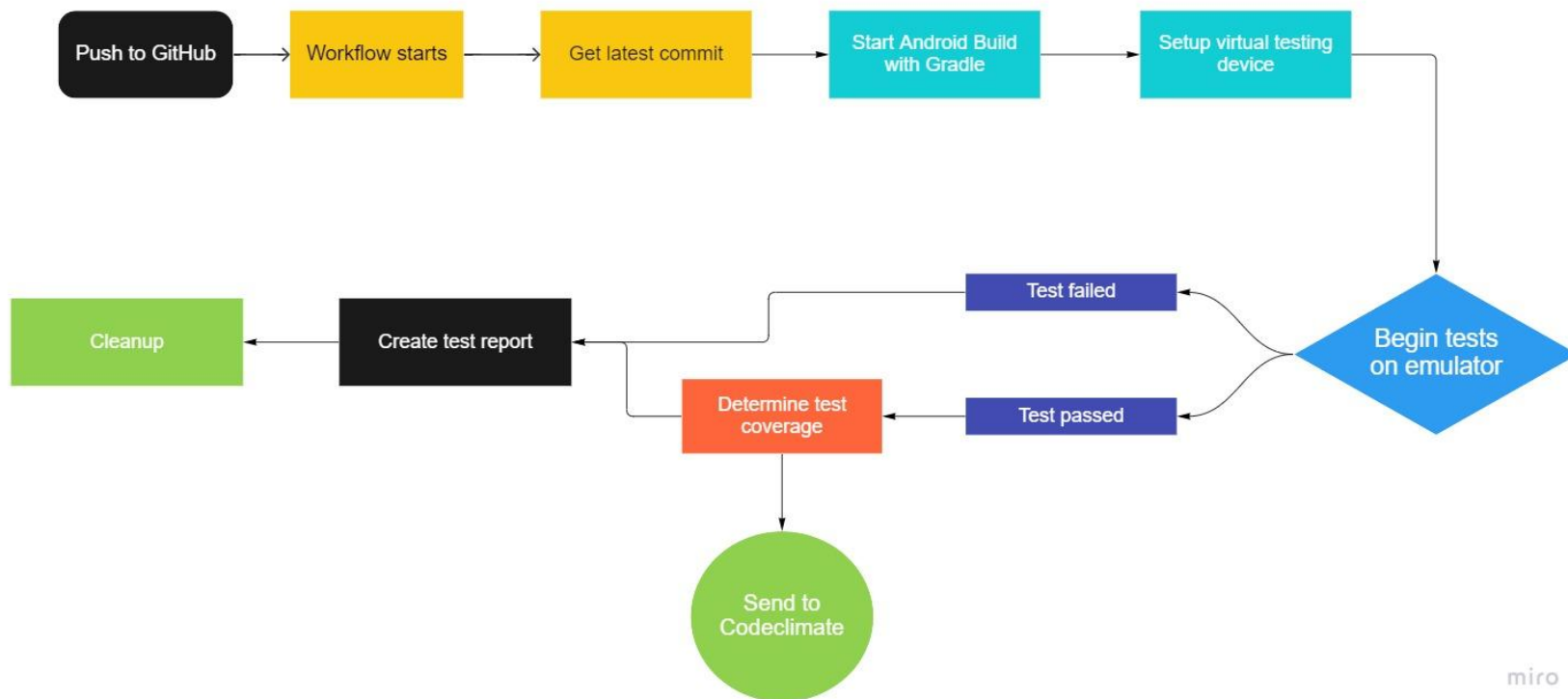
Deinstallieren

Öffnen

ⓘ Du hast auf diese App Vorabzugriff. Gib Feedback, damit der Entwickler diese App optimieren kann. [Details anzeigen](#)



# Testing Workflow (Unit tests)





**SCAN ME**

**DEMO**

After the main functions of our app were completed, we  
thought about . . .

# Code Quality

# Code improvement

We improved our code quality with:

- Code refactoring
- Design Pattern

## Private Class Data Pattern

com.main.dhbworld.KVV

Uses ArrayList of Departures  
instead of just one departure object

KVVActivity

```
△ departures : ArrayList<Departure>
△ localDateTime : LocalDateTime
△ progressIndicator : CircularProgressIndicator
△ recyclerView : RecyclerView
△ refreshButton : MaterialButton
△ textViewDepartureDateSelect : TextView
△ textViewDepartureTimeSelect : TextView
△ tramDepartureDateSelectCardView : MaterialCardView
△ tramDepartureTimeSelectCardView : MaterialCardView
△ tramDisruptionCardView : MaterialCardView
△ tramDisruptionTitle : TextView

● onDataLoaded()
◆ onCreate()
■ dateSelectClick()
■ initViews()
■ refresh()
■ setupAdapter()
■ setupClickListeners()
■ setupTextViews()
■ timeSelectClick()
```

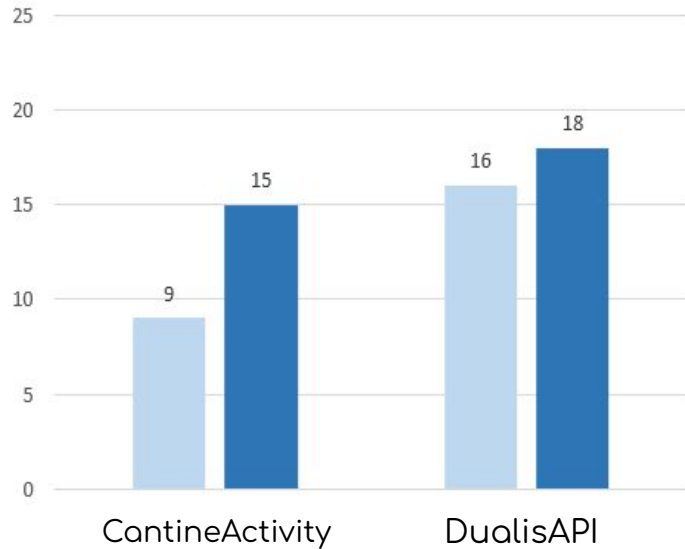
Departure

```
□ attribute : String
□ departureTime : LocalDateTime
□ destination : String
□ line : String
□ notServiced : boolean
□ platform : String

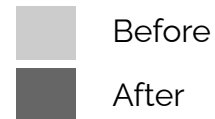
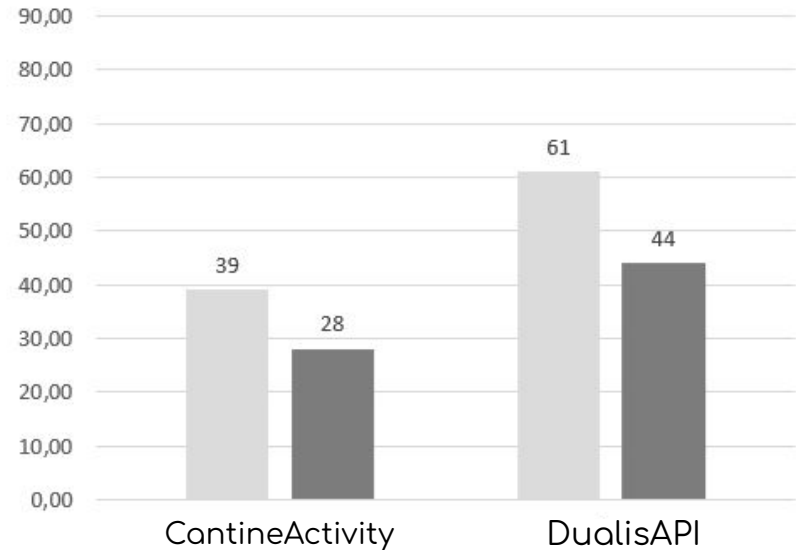
● Departure()
● getAttribute()
● getDepartureTime()
● getDestination()
● getLine()
● getPlatform()
● isNotServiced()
```

# Metrics - Code Quality

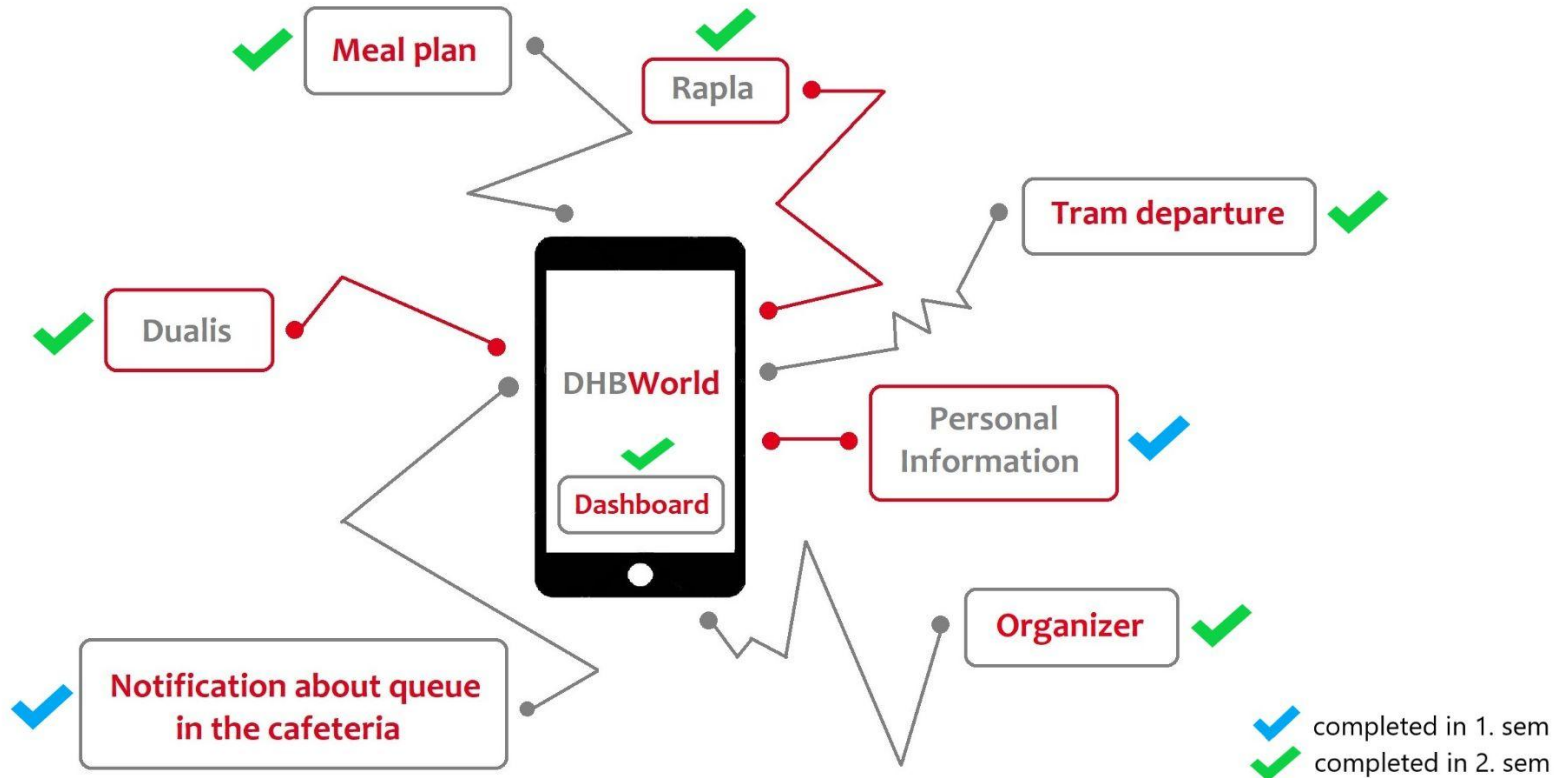
Coupling between object classes



Weighted methods for class



# Our progress - Conclusion



# Do you have any questions?

