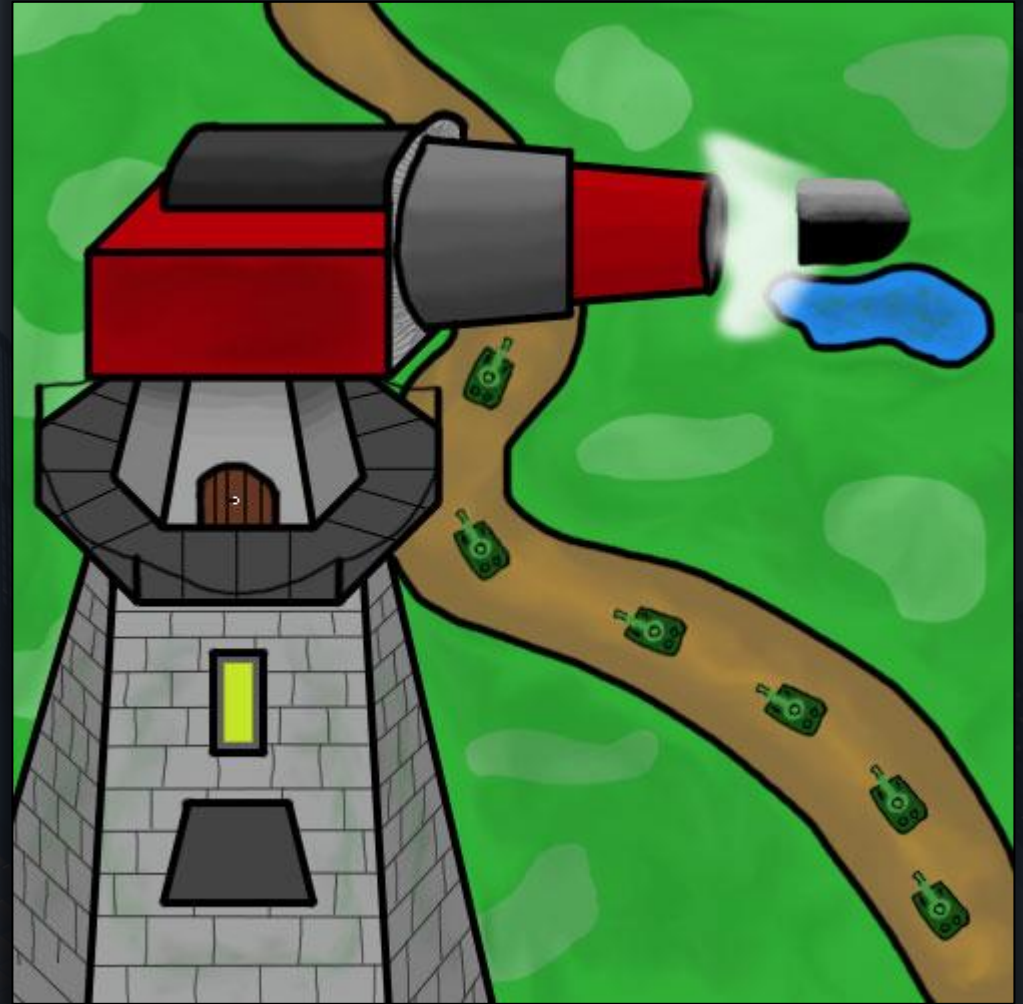


# Tower Defense

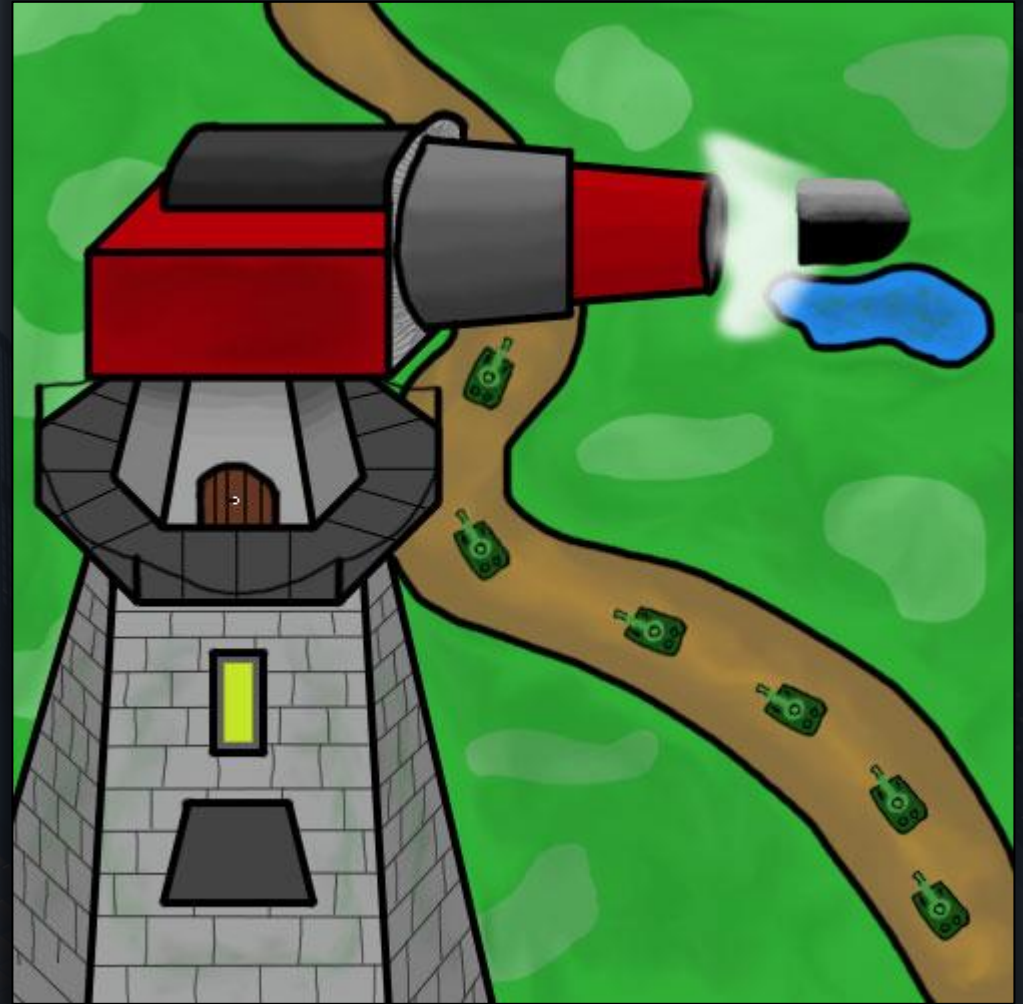
The Next Generation





# Tower Defense

The Next Generation



# Content

## 1. Project Overview

- Vision
- Estimation
- Project Management

## 2. Architecture

## 3. Development

- Game Engine
- Testing & CI/CD
- Technology

## 4. Demo



# Project Overview



Project Overview

Architecture

Development

Demo

End

# The Project Vision

Define Analyse Implement Review Publish Maintain



- self-developed engine
- Multiple difficulties
- customized
  - designs
  - effects
  - music



- RUP terminology used
- PM using Scrum and Jira
- technology according to current standards

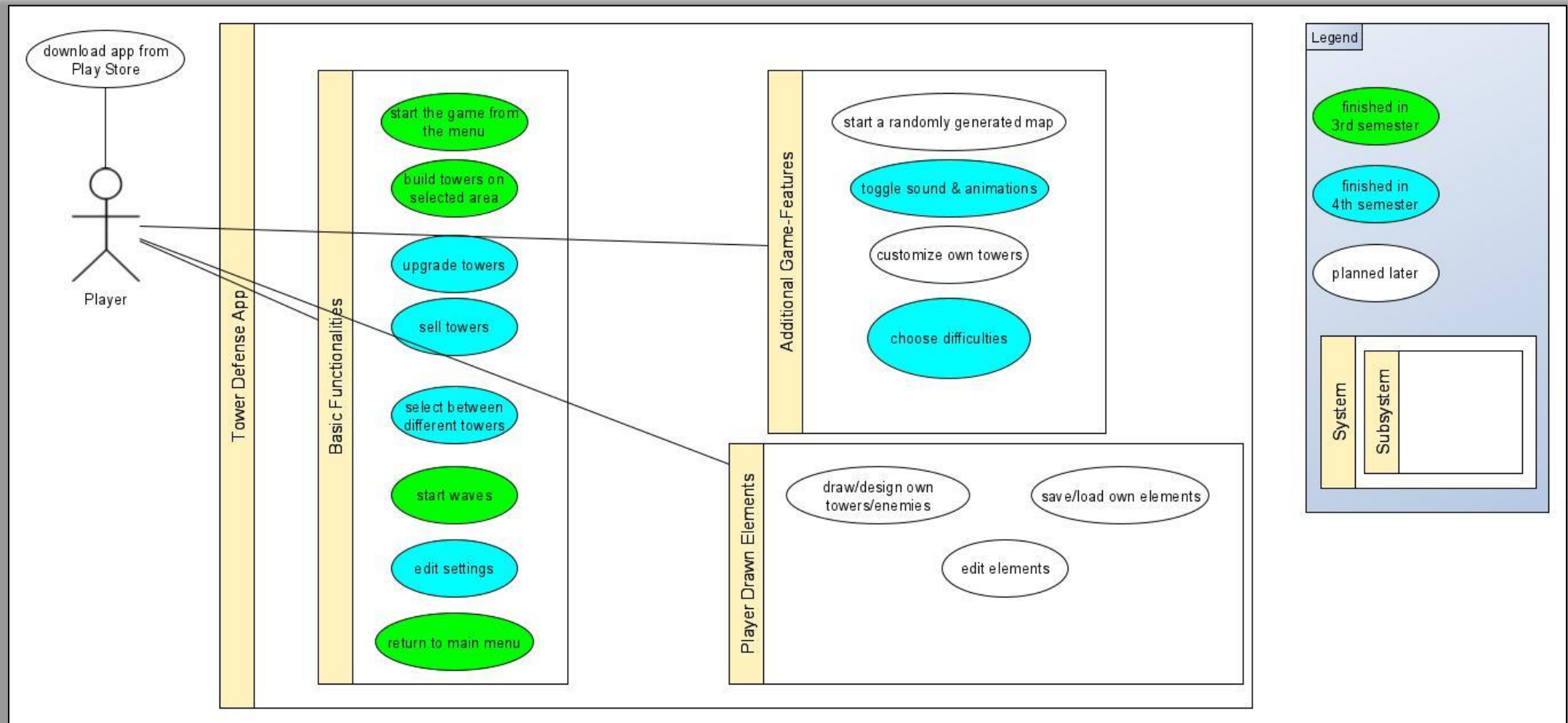


- unique game-concept
- creation of a community
- potential for high user amount after months

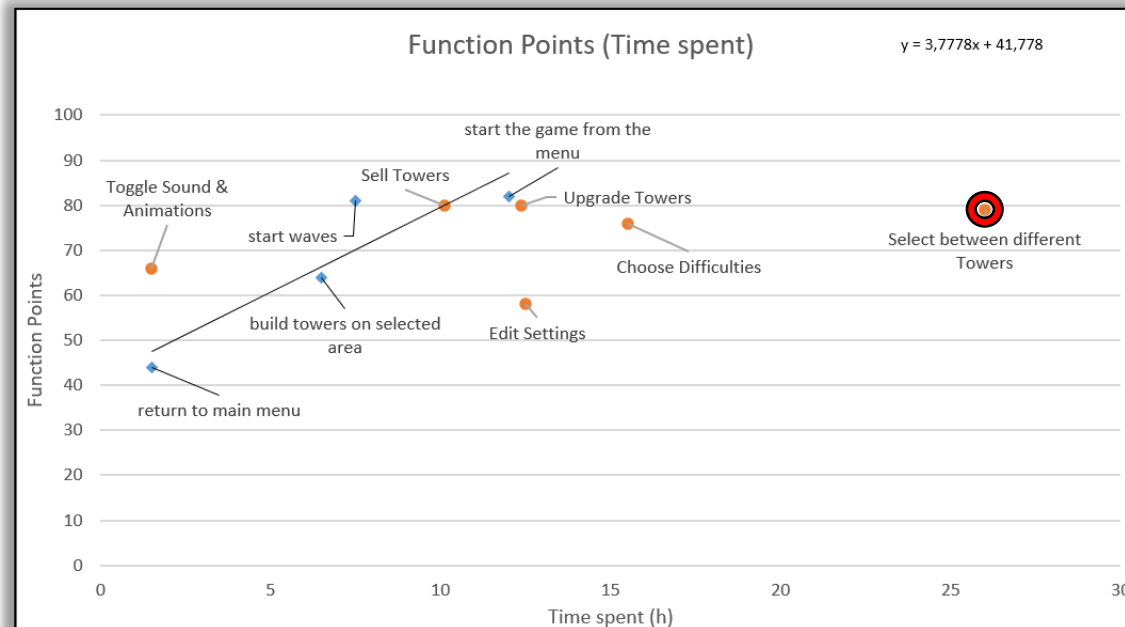
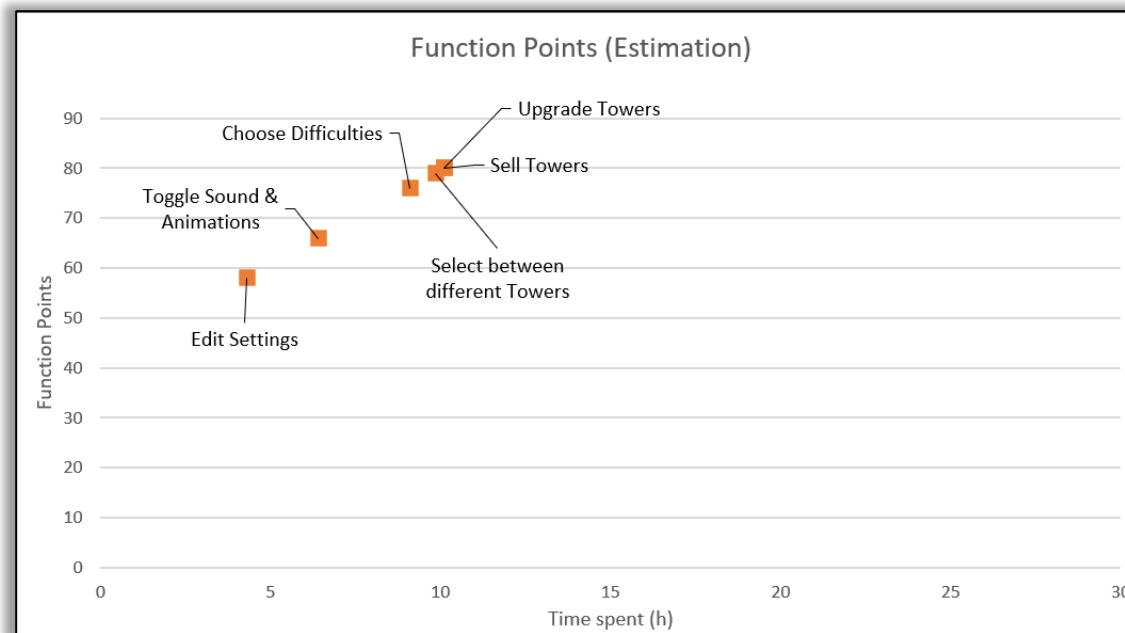




# Use Case Diagram



# Estimation





# Scrumming on Jira



## PLAN, TRACK, REPORT

Jira is one of the most often used tool for agile project-management purposes. Due to its simple way of planning, tracking and reporting, Jira provides a great scope of functions.



## ITERATIVE PROCESS

Especially, external conditions in the development-environment can change very quickly. Therefore, working iteratively is one of the most important aspects while developing.



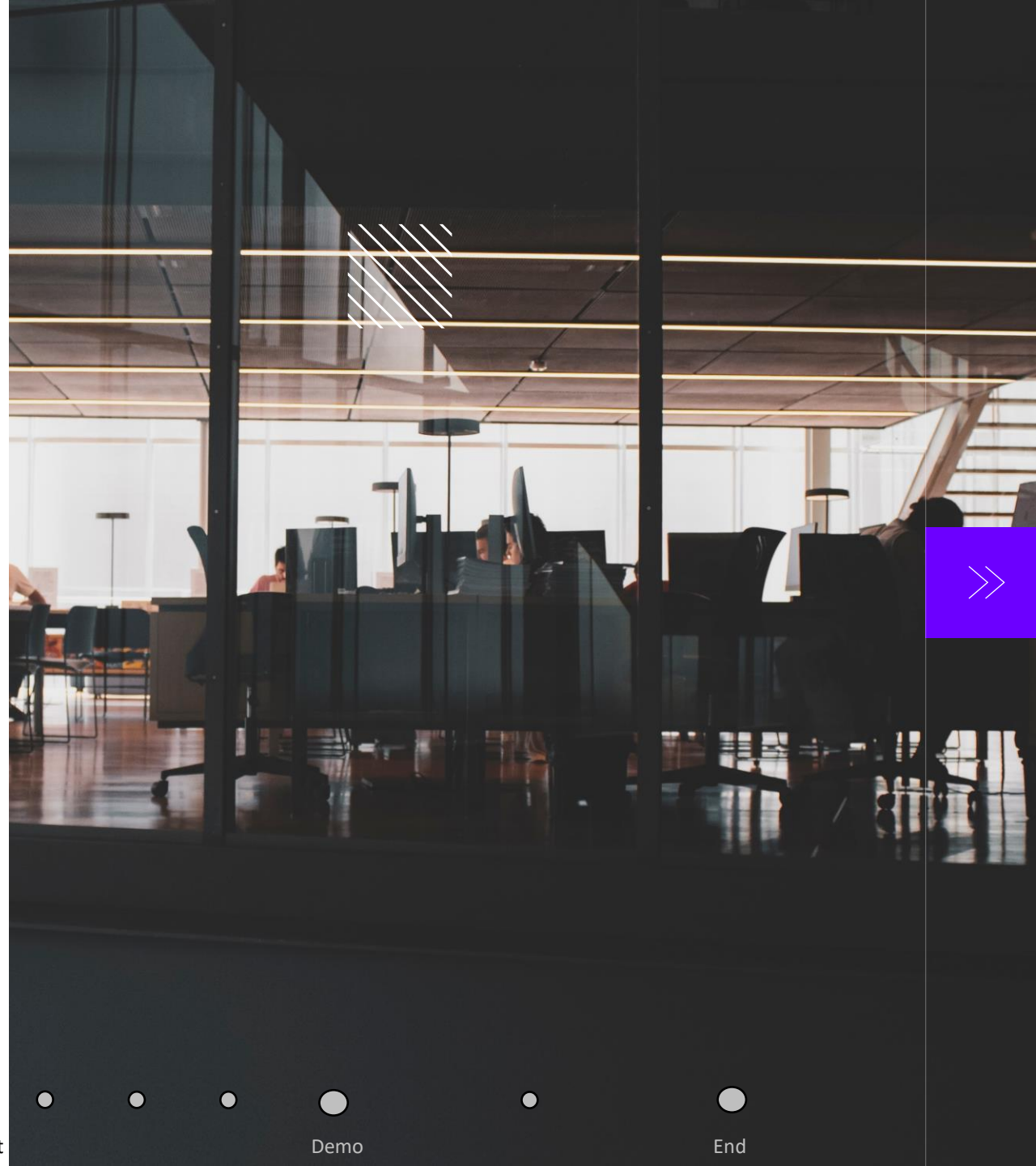
## TIME-TRACKING

In times of efficiency, there is a need of time-tracking in order to optimize several processes.



## CUSTOMIZATION

Jira supports more than 3000 additional plugins to adapt to specific needs. On top, this provides the ability to live Scrum after own adjustments.



Jira Software

Startseite

Projekte

Vorgänge

Boards

Worklogs

Erstellen

Suche

3 Tage übrig

Sprint abschließen

Board

DHTD Board

DHTD Sprint Week 10

SCHNELL-FILTER: Nur meine Vorgänge

Zuletzt aktualisiert

TODO

IN PROGRESS

REVIEW/TEST

DONE

DHTD-52

Write Comments to other groups

1h

DHTD-51

Blog Entry Week 10

6h

DHTD-53

create the presentation for midterm exam

1d 5h 30m

DHTD-46

Create UCS for UC "build towers on selected area"

1h 15m

DHTD-47

Create UCS for UC "Return to main menu"

45m

DHTD-54

create handout for midterm presentation

1h 30m

DHTD-38

GE: Build towers when a button is clicked

0m

DHTD-49

GE: remove Tower on click

0m

DHTD-50

GE: spawn wave button

0m

DH-TowerDefense / DHTD-38

GE: Build towers when a button is clicked

Schätzung: 2h

Verbleibend: 0m

Arbeit protokollieren

Details

Status: FERTIG

(Arbeitsablauf anzeigen)

Priorität: Medium

Komponente(n): Keine

Stichwörter: Keine

betrifft: Keine

Version(en):

Lösungsversion(en): Keine

Epic-Verknüpfung: Keine

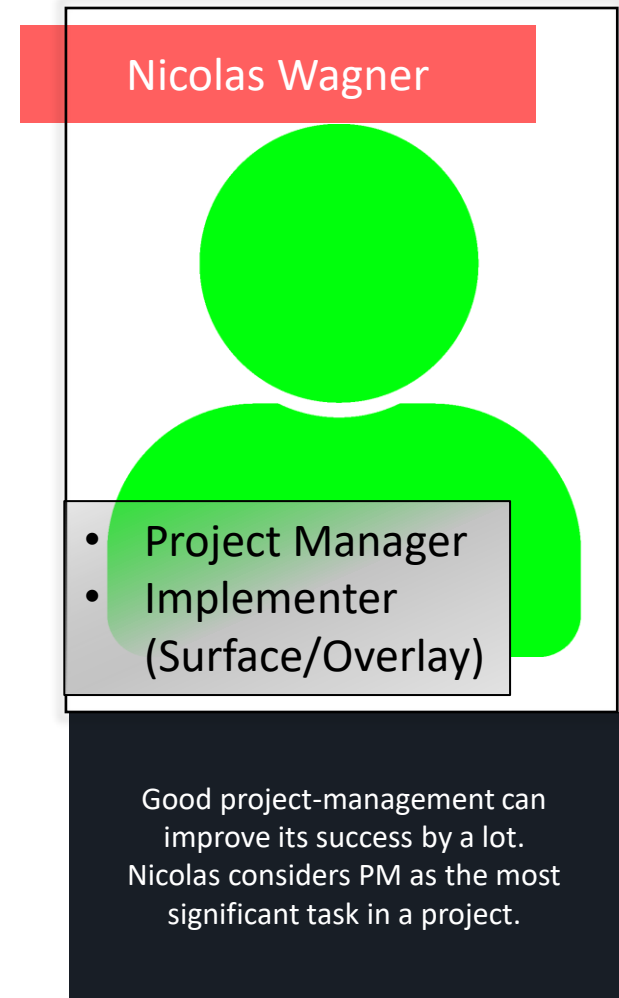
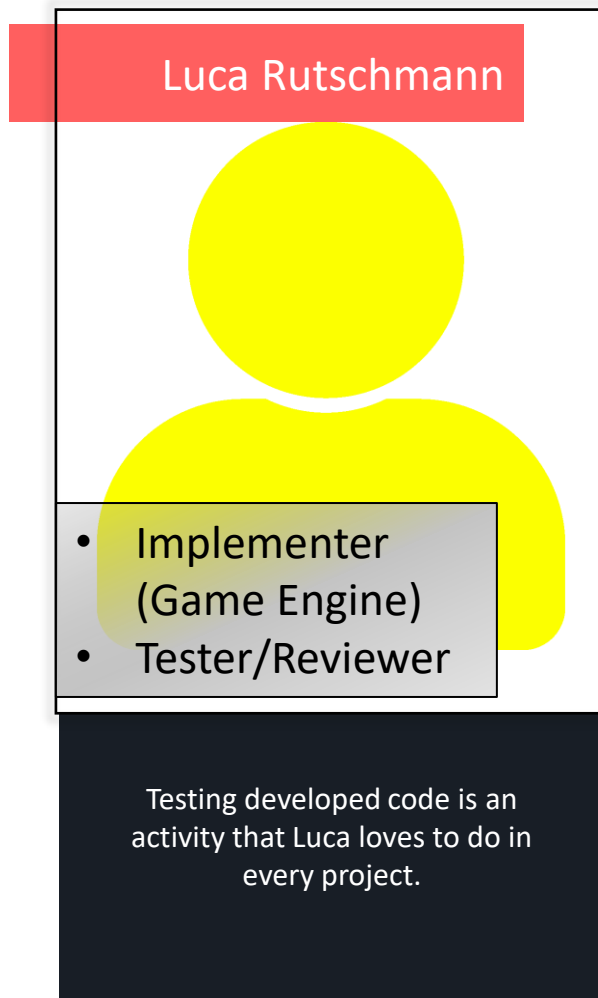
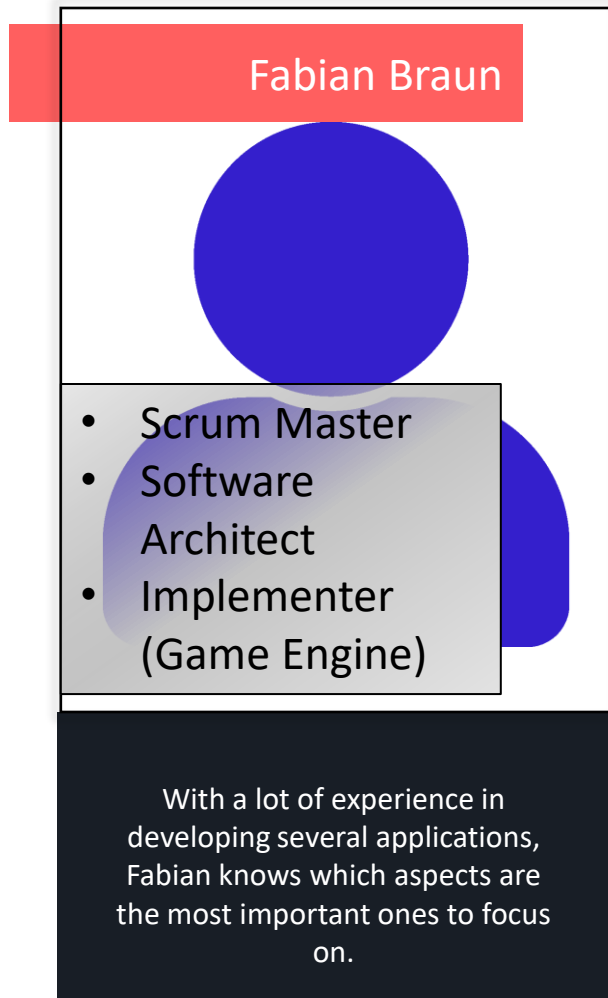
Personen

Autor: Nicolas Wagner

Bearbeiter: Fabian Braun

Mir zuweisen

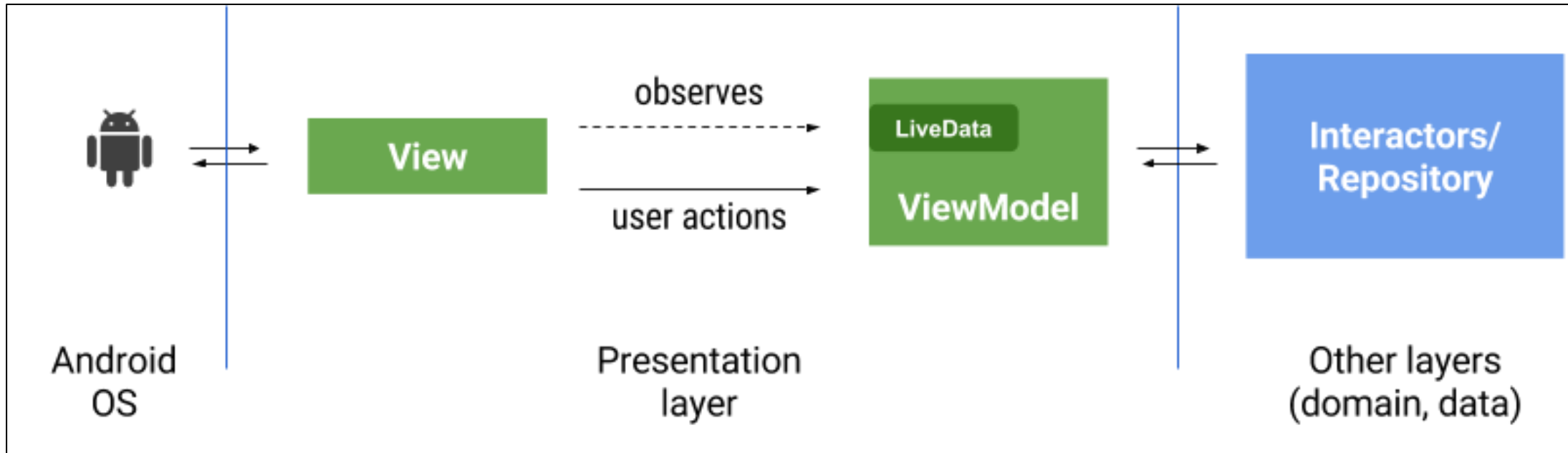
## OUR TEAM



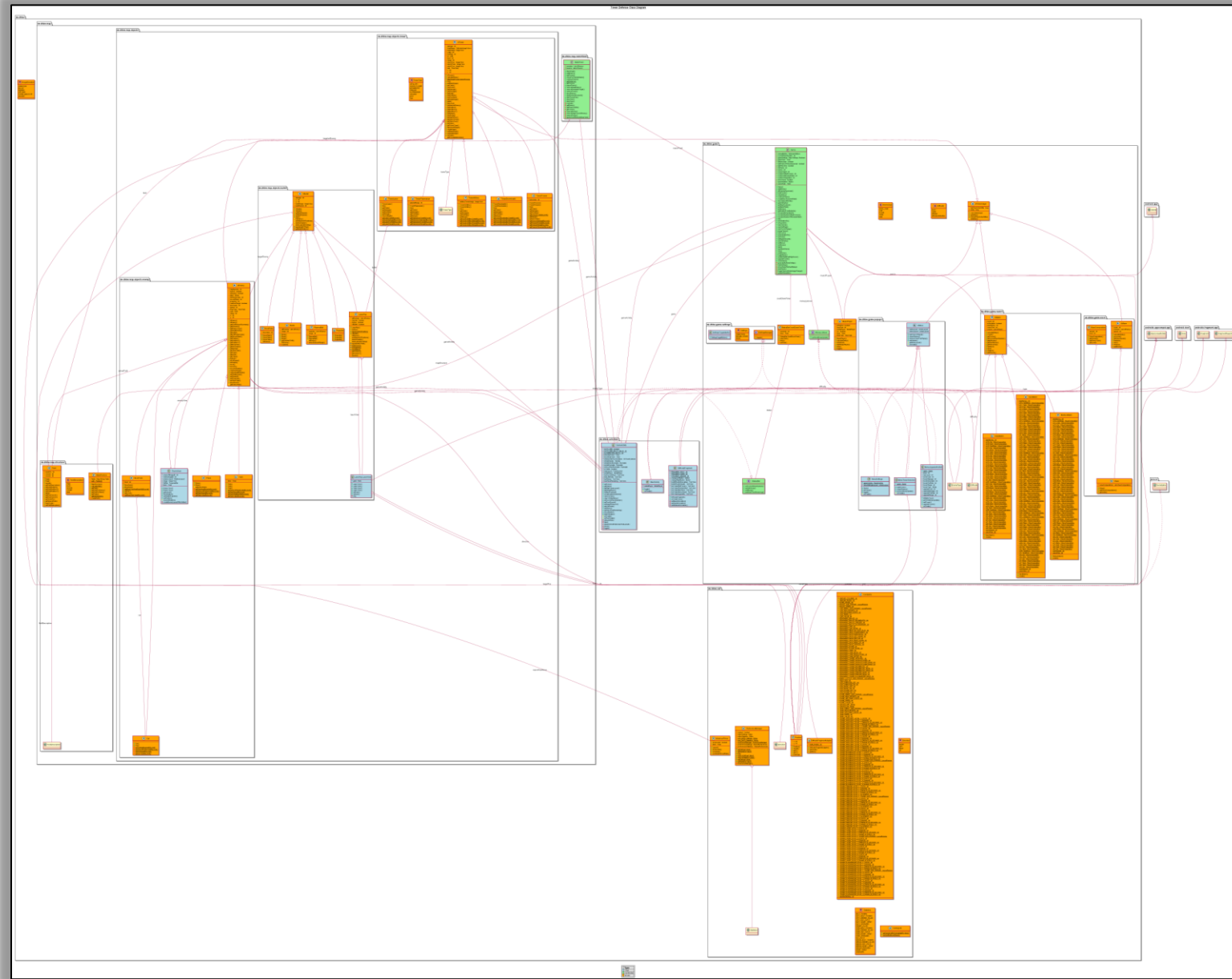
# Architecture



# Android MVC



# Project MVC

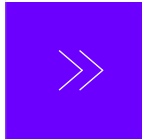
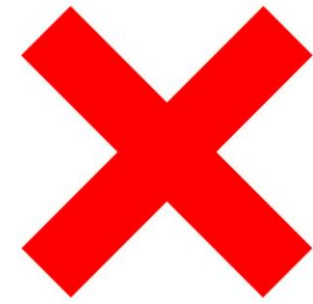


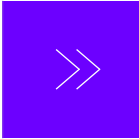
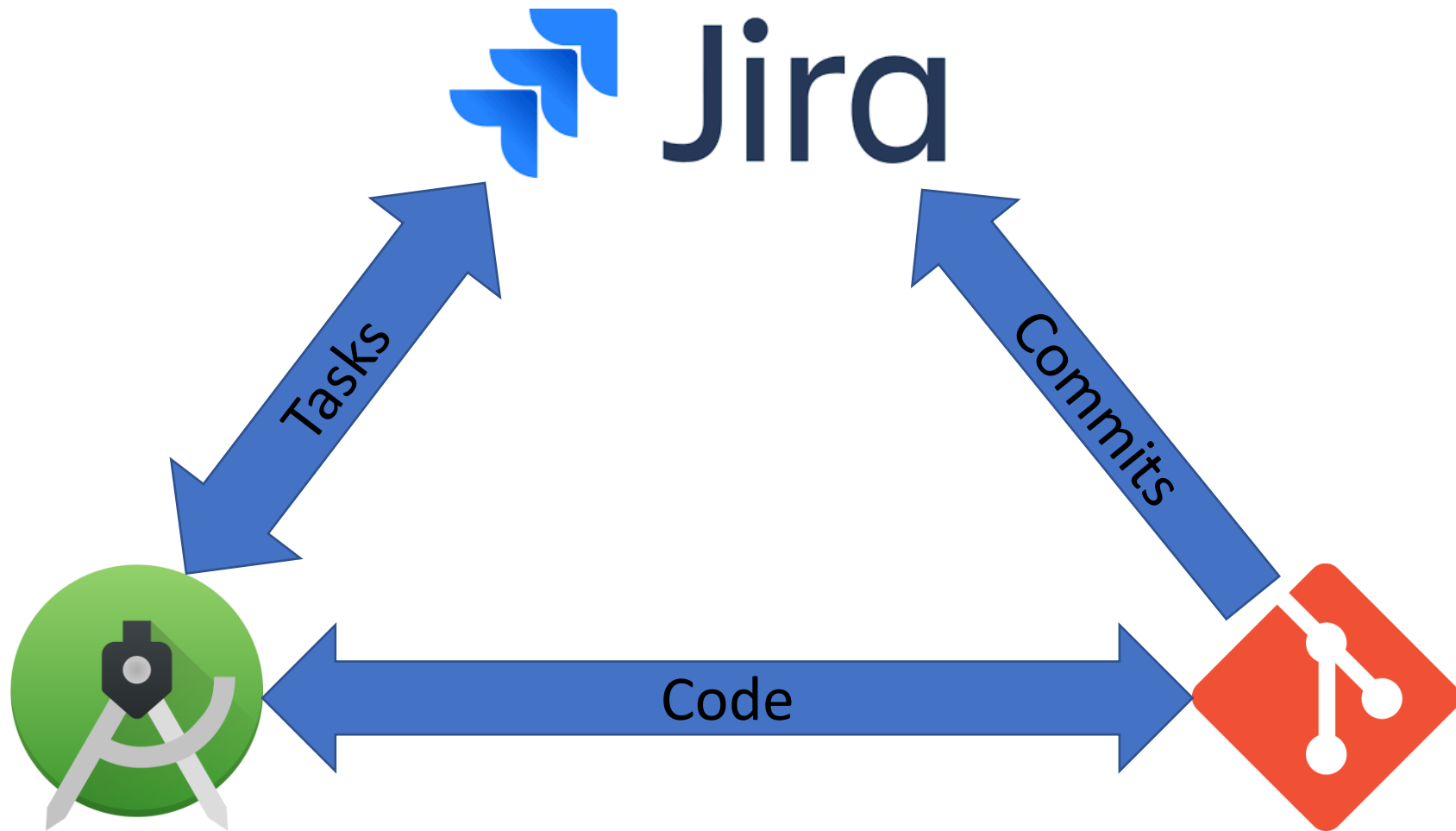


**Factory**

**Abstract Factory**

**Object Pool**

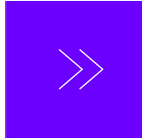
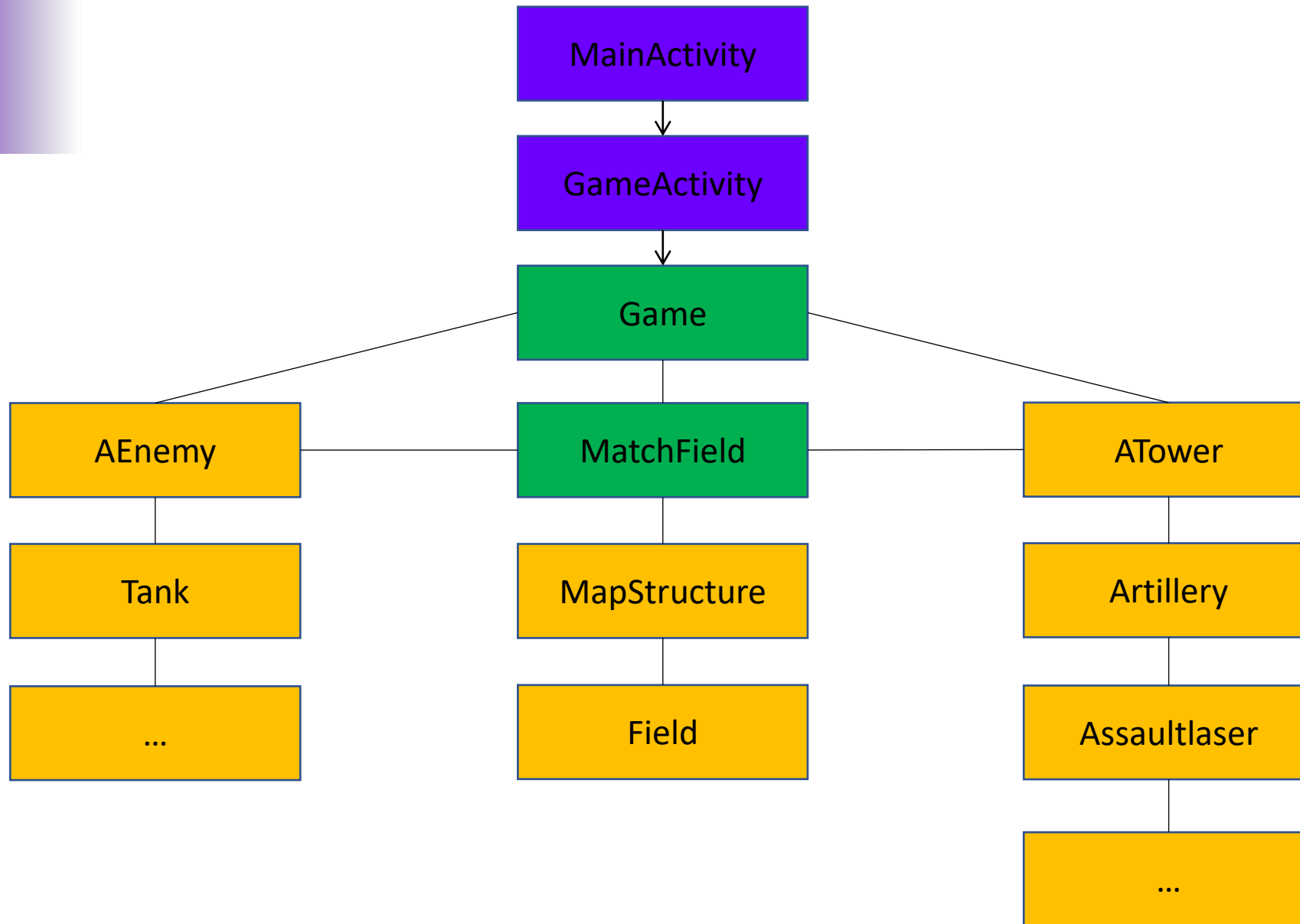




# Development



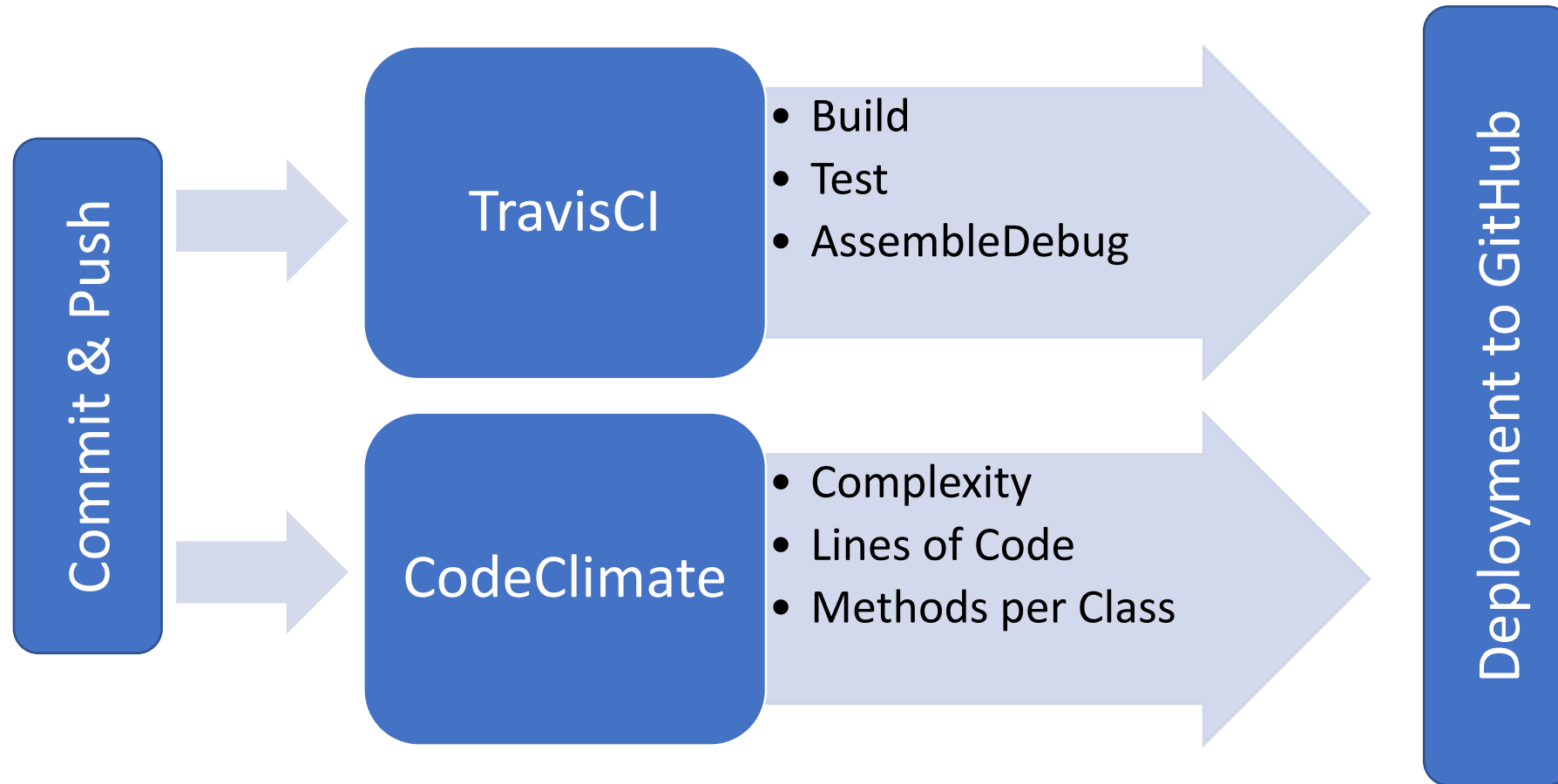
# Game Engine



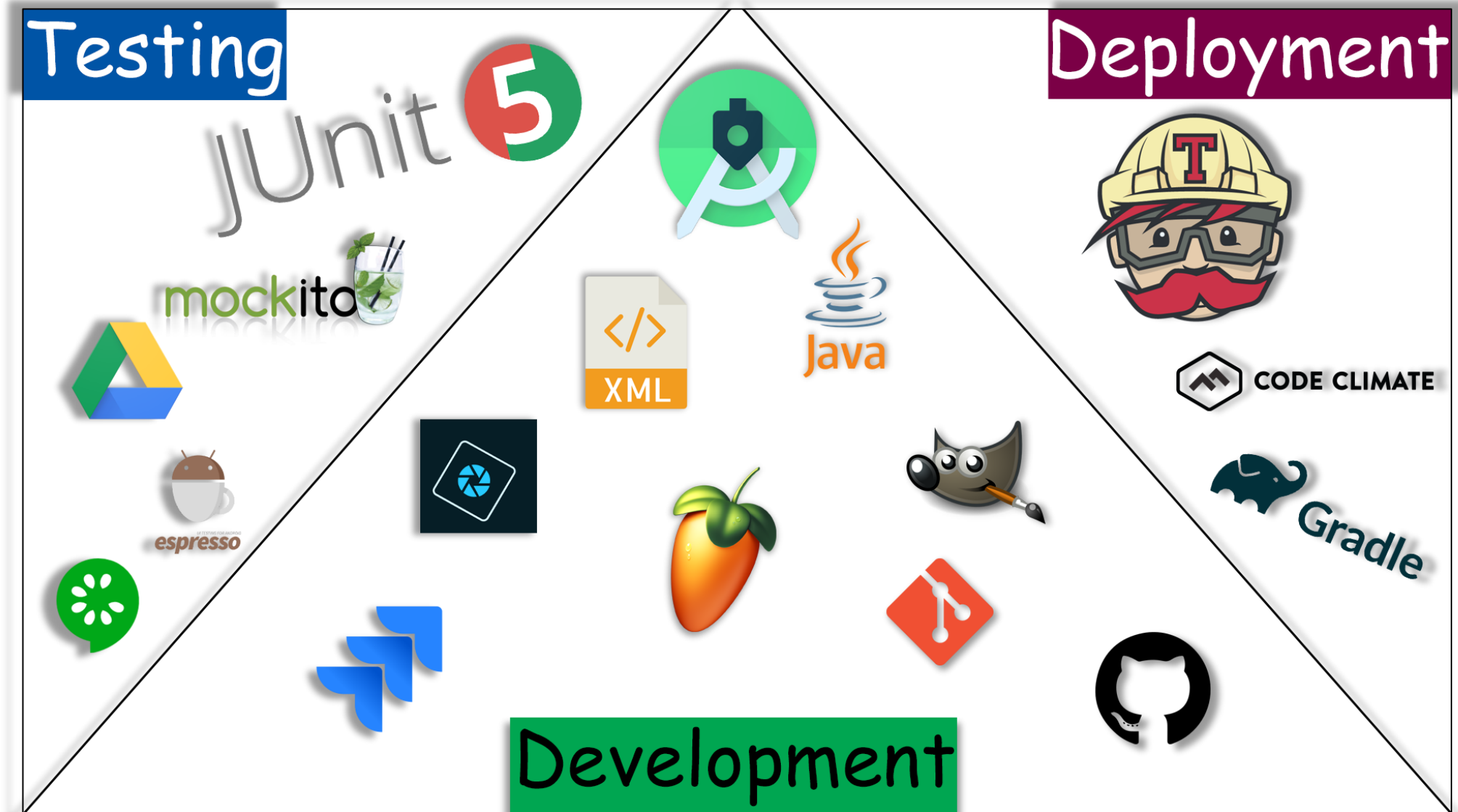
# Testing

- **UI** testing with *Cucumber*
  - Feature Files executed with Espresso & GreenCoffee
- **Logical** testing with *JUnit*
  - testing of calculations, operations and more
- **UX** testing with external testers









# DEMO



Project Overview

Architecture

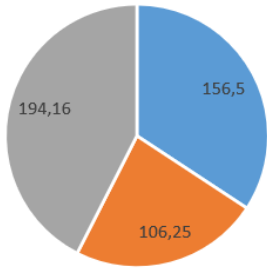
Development

Demo

End

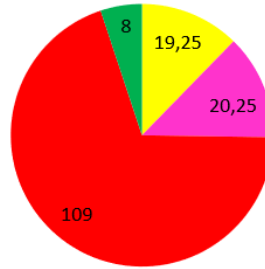
# Time Sheet

Overall Time spent by Member



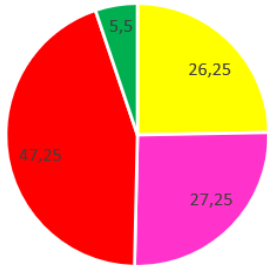
■ Fabian ■ Luca ■ Nicolas

Fabian



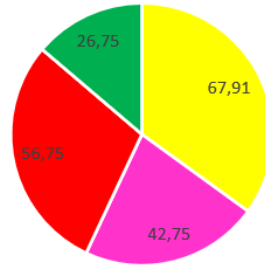
■ Project Management ■ Analysis & Design ■ Implementation ■ Testing

Luca



■ Project Management ■ Analysis & Design ■ Implementation ■ Testing

Nicolas



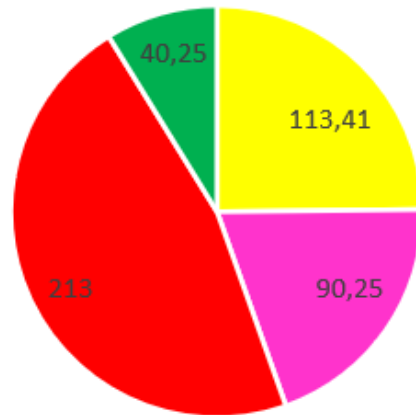
■ Project Management ■ Analysis & Design ■ Implementation ■ Testing

The numbers and data of the charts are automatically tracked by Jira which enables a detailed evaluation of the work done so far.



# Time Sheet

Overall Time spent by Type (h)



■ Project Management ■ Analysis & Design ■ Implementation ■ Testing

The numbers and data of the charts are automatically tracked by Jira which enables a detailed evaluation of the work done so far.





# THANK YOU

If You would like to create and work with us, please contact us  
using the mail addresses below or visit our blog at:  
<https://www.dh-towerdefense.de>



Fabian Braun  
fabian.braun@dh-towerdefense.de

Luca Rutschmann  
luca.rutschmann@dh-towerdefense.de

Nicolas Wagner  
nicolas.wagner@dh-towerdefense.de

