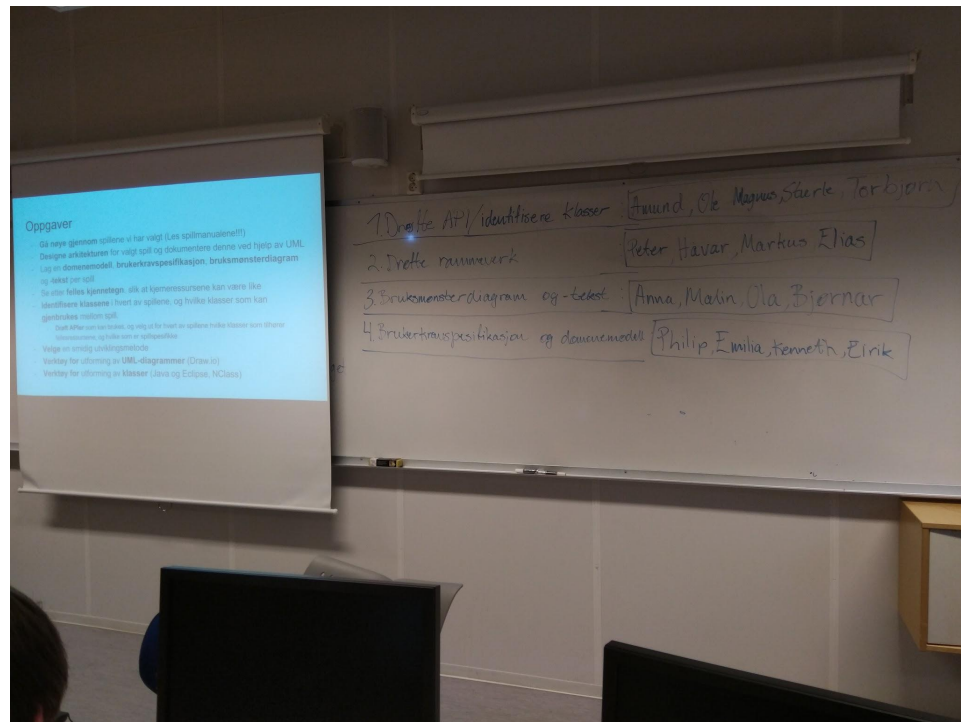


INF112 -TeamD<sub>ank</sub>

# Planlegging

- Introduksjon
  - Organisering av oblig3
    - Risikoanalyse
- Valg av spill
  - Hvordan vi kom frem til spillene
    - Strawpoll
- Identifiserte oppgavene
- Delte oss i mindre teams
  - API
  - Rammeverk/bibliotek
  - Bruksmønsterdiagram og -tekst
  - Brukerkrav og Designmodeller
- Kriseteam



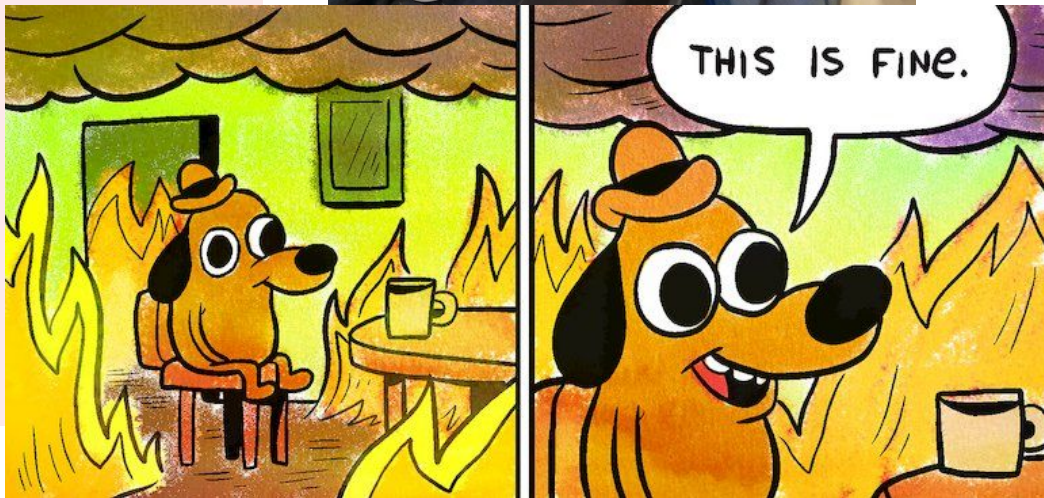
# Kriasehåndtering

Project Activity **Repository** Pipelines Graphs Issues 0 Merge Req

Showing 241 changed files with 758 additions and 2882 deletions

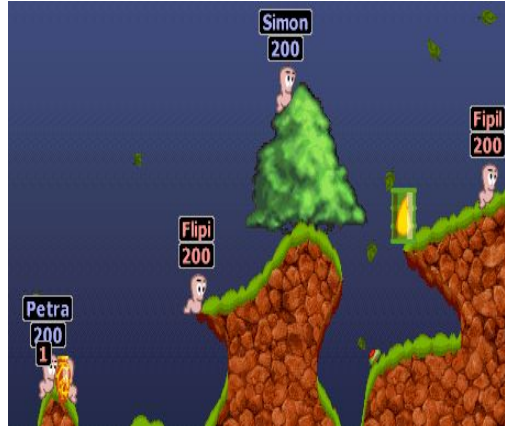
▼ .gitignore

```
...    ...    @@ -45,20 +45,3 @@ desktop.ini
45    45    # Kom en .out og .toc fil når jeg opprettet .pdf fra .tex:
46    46    *.out
47    47    *.toc
48
49    - # Java
50    - .class
51    -
52    - # Eclipse
53    - bin/
54    - .settings/
55    - .classpath
56    - .project
57    -
58    - # IntelliJ
59    - .idea
60    - .iml
61    -
62    - # Gradle
63    - .gradle/
64    - build/
```








# Valgte spill

- Bilspill
  - (Car Game)
- Matkrig
  - (Food Feud)
- TD-Uteliv
  - (Nightlife)
- Spooks



# Programmeringsmiljø

- Java 8 til Linux/MacOS/Windows
- Fem delprosjekter
  - Fire spill
  - Felles kode
- Gradle
  - Avhengighetsstyring (intern og ekstern)
  - Automatisering av tester, eksportering, osv...
- IDE: Eclipse eller IntelliJ
  - Støtter Gradle
  - Likt for alle → Færre problemer

- >  teamdank-cargame
- >  teamdank-common
- >  teamdank-foodfeud
- >  teamdank-nightlife
- >  teamdank-spooks



# Rammeverk og bibliotek

- LibGDX (spillrammeverk)
- Box2D
- GSON
- SLF4J

**libGDX**

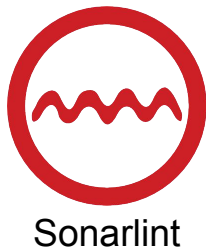




# Testing

- JUnit
- Mockito
- FindBugs
- Sonarlint (plugin)

JUnit



# Konvensjoner

- Filtyper
- Filnavn
- Kodestil



- All Classes
- Packages
- uib.teamdank.cargame
  - uib.teamdank.cargame.gui
  - uib.teamdank.common
  - uib.teamdank.common.gui
  - uib.teamdank.common.util
  - uib.teamdank.foodfeud
  - uib.teamdank.foodfeud.gui
  - uib.teamdank.nightlife
  - uib.teamdank.nightlife.gui
  - uib.teamdank.spooks
  - uib.teamdank.spooks.gui

- GameScreen
- Generator
- HighscoreMenuScreen
- HighscoreMenuScreen
- HighscoreMenuScreen
- HighscoreMenuScreen
- Hole
- Inventory
- Item
- ItemContainer
- ItemHolder
- ItemRecipe
- Layer
- NightlifeGame
- PauseMenuScreen
- PauseMenuScreen
- PauseMenuScreen
- PauseMenuScreen
- PauseMenuScreen
- Pedestrian
- Player
- Player
- Player
- Player
- Puddle
- Room
- Score
- SpooksGame
- StartMenuScreen
- StartMenuScreen
- StartMenuScreen
- StartMenuScreen
- StartMenuScreen
- Tower
- Upgrade
- Upgradeable
- Weapon
- WeatherData
- WeatherData.WeatherType

OVERVIEW

PACKAGE

CLASS

TREE

DEPRECATED

INDEX

HELP

PREV

NEXT

FRAMES

NO FRAMES

# inf112api API

Packages

Package	Description
uib.teamdank.cargame	
uib.teamdank.cargame.gui	
uib.teamdank.common	Interfaces and classes to describe common game elements.
uib.teamdank.common.gui	Graphical user interface classes and LibGDX Screens.
uib.teamdank.common.util	Miscellaneous useful and common classes.
uib.teamdank.foodfeud	
uib.teamdank.foodfeud.gui	
uib.teamdank.nightlife	
uib.teamdank.nightlife.gui	
uib.teamdank.spooks	
uib.teamdank.spooks.gui	

OVERVIEW

PACKAGE

CLASS

TREE

DEPRECATED

INDEX

HELP

PREV

NEXT

FRAMES

NO FRAMES

## All Classes

### Packages

uib.teamdank.cargame  
uib.teamdank.cargame.gui  
uib.teamdank.common  
uib.teamdank.common.gui  
uib.teamdank.common.util  
uib.teamdank.foodfeud  
uib.teamdank.foodfeud.gui  
uib.teamdank.nightlife  
uib.teamdank.nightlife.gui  
uib.teamdank.spooks  
uib.teamdank.spooks.gui

GameScreen

Generator

HighscoreMenuScreen

HighscoreMenuScreen

HighscoreMenuScreen

HighscoreMenuScreen

HighscoreMenuScreen

Hole

Inventory

Item

ItemContainer

ItemHolder

ItemRecipe

Layer

NightlifeGame

PauseMenuScreen

PauseMenuScreen

PauseMenuScreen

PauseMenuScreen

PauseMenuScreen

Pedestrian

Player

Player

Player

Player

Puddle

Room

Score

SpooksGame

StartMenuScreen

StartMenuScreen

StartMenuScreen

StartMenuScreen

StartMenuScreen

Tower

Upgrade

Upgradeable

Weapon

WeatherData

WeatherData.WeatherType

## Hierarchy For All Packages

### Package Hierarchies:

uib.teamdank.cargame, uib.teamdank.cargame.gui, uib.teamdank.common, uib.teamdank.common.gui, uib.teamdank.common.util, uib.teamdank.foodfeud, uib.teamdank.foodfeud.gui, uib.teamdank.nightlife, uib.teamdank.nightlife.gui, uib.teamdank.spooks, uib.teamdank.spooks.gui

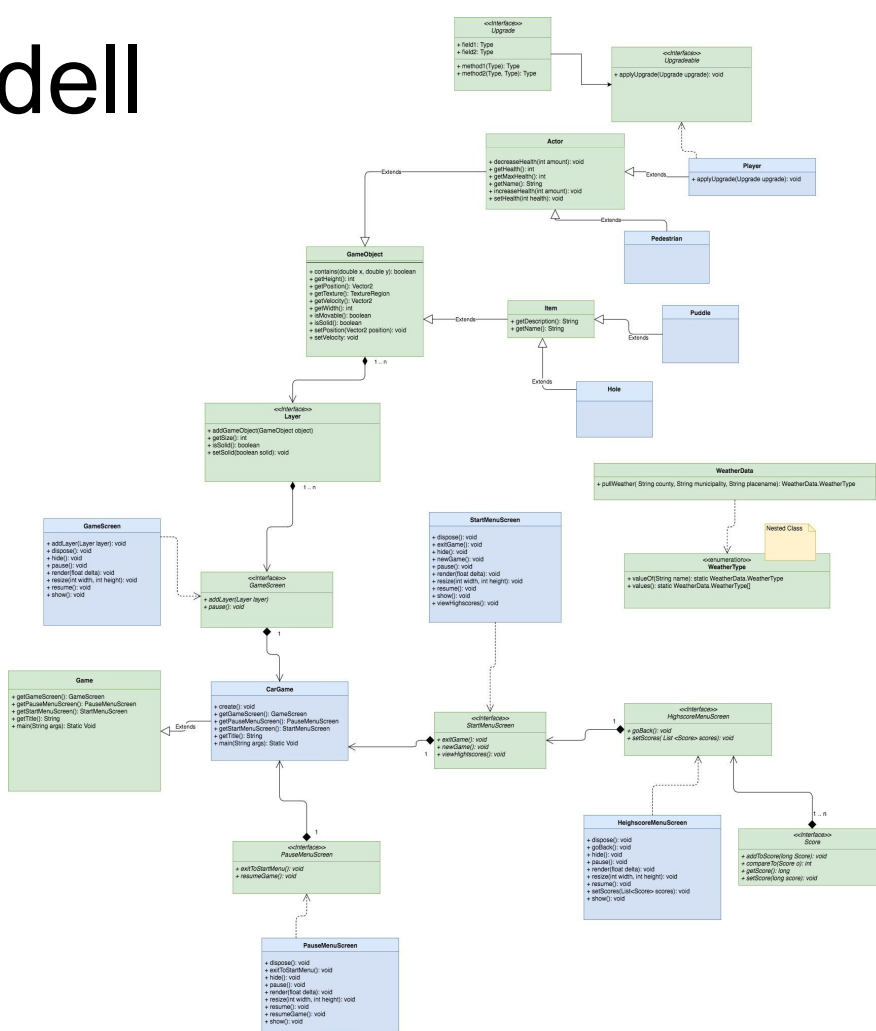
### Class Hierarchy

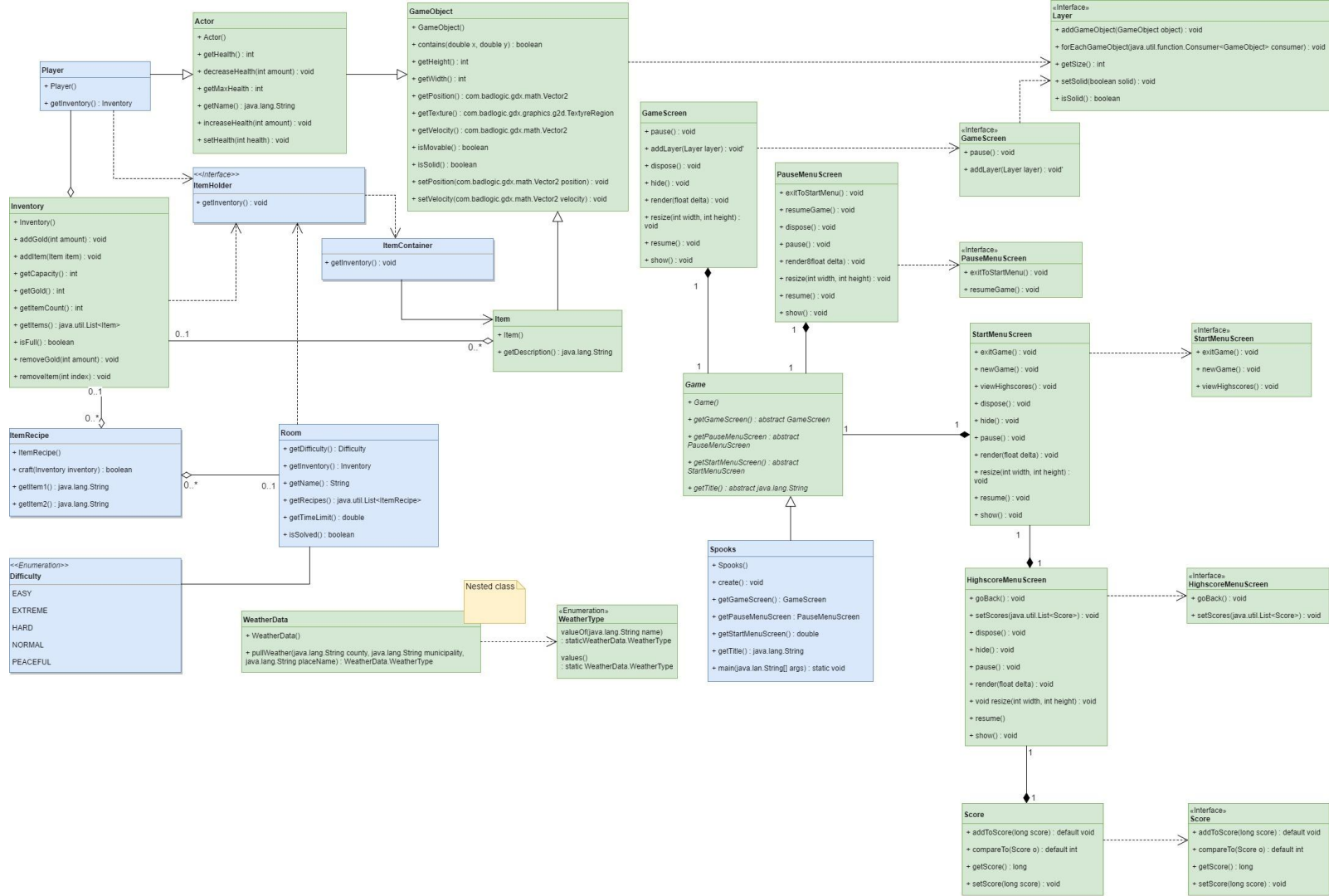
- java.lang.Object
  - com.badlogic.gdx.Game (implements com.badlogic.gdx.ApplicationListener)
    - uib.teamdank.common.Game
      - uib.teamdank.cargame.CarGame
      - uib.teamdank.foodfeud.FoodFeud
      - uib.teamdank.nightlife.NightlifeGame
      - uib.teamdank.spooks.SpooksGame
  - uib.teamdank.common.GameObject
    - uib.teamdank.common.Actor
      - uib.teamdank.nightlife.Drunk
      - uib.teamdank.cargame.Pedestrian
      - uib.teamdank.cargame.Player (implements uib.teamdank.common.Upgradeable)
      - uib.teamdank.foodfeud.Player (implements uib.teamdank.common.ItemHolder)
      - uib.teamdank.nightlife.Player
      - uib.teamdank.spooks.Player (implements uib.teamdank.common.ItemHolder)
    - uib.teamdank.common.Item
      - uib.teamdank.cargame.Hole
      - uib.teamdank.spooks.ItemContainer (implements uib.teamdank.common.ItemHolder)
      - uib.teamdank.cargame.Puddle
      - uib.teamdank.nightlife.Tower (implements uib.teamdank.common.Upgradeable)
      - uib.teamdank.foodfeud.Weapon
  - uib.teamdank.cargame.gui.GameScreen (implements uib.teamdank.common.gui.GameScreen)
  - uib.teamdank.foodfeud.gui.GameScreen (implements uib.teamdank.common.gui.GameScreen)
  - uib.teamdank.nightlife.gui.GameScreen (implements uib.teamdank.common.gui.GameScreen)
  - uib.teamdank.spooks.gui.GameScreen (implements uib.teamdank.common.gui.GameScreen)
  - uib.teamdank.cargame.gui.HighscoreMenuScreen (implements uib.teamdank.common.gui.HighscoreMenuScreen)
  - uib.teamdank.foodfeud.gui.HighscoreMenuScreen (implements uib.teamdank.common.gui.HighscoreMenuScreen)
  - uib.teamdank.nightlife.gui.HighscoreMenuScreen (implements uib.teamdank.common.gui.HighscoreMenuScreen)
  - uib.teamdank.spooks.gui.HighscoreMenuScreen (implements uib.teamdank.common.gui.HighscoreMenuScreen)
  - uib.teamdank.common.Inventory
  - uib.teamdank.common.ItemRecipe
  - uib.teamdank.cargame.gui.PauseMenuScreen (implements uib.teamdank.common.gui.PauseMenuScreen)
  - uib.teamdank.foodfeud.gui.PauseMenuScreen (implements uib.teamdank.common.gui.PauseMenuScreen)
  - uib.teamdank.nightlife.gui.PauseMenuScreen (implements uib.teamdank.common.gui.PauseMenuScreen)
  - uib.teamdank.spooks.gui.PauseMenuScreen (implements uib.teamdank.common.gui.PauseMenuScreen)
  - uib.teamdank.spooks.Room (implements uib.teamdank.common.ItemHolder)
  - uib.teamdank.cargame.gui.StartMenuScreen (implements uib.teamdank.common.gui.StartMenuScreen)
  - uib.teamdank.foodfeud.gui.StartMenuScreen (implements uib.teamdank.common.gui.StartMenuScreen)
  - uib.teamdank.nightlife.gui.StartMenuScreen (implements uib.teamdank.common.gui.StartMenuScreen)
  - uib.teamdank.spooks.gui.StartMenuScreen (implements uib.teamdank.common.gui.StartMenuScreen)
  - uib.teamdank.common.util.WeatherData

### Interface Hierarchy

- java.lang.Comparable<T>
  - uib.teamdank.common.Score
- uib.teamdank.common.util.Generator<T>

# Designmodell





# Bruksmønsterdiagram og -tekst

## Bruksmønsteretekst:

**Tittel:** Eliminere motstanderne

**Aktører:** Spiller, System

**Primæraktør:** Spiller

**Tid:** 45 sekunder før fiender genereres, runden varer frem til alle fiendene er av brettet eller en fiende overlever siste utested

**Mål:** Skyte flasker og lignende på alle motstandere slik at de dør

**Pre-conditions:** Spillet er startet på en datamaskin

## Hovedflyt:

1. Systemet viser hovedmeny
2. Spiller velger å starte spillet
3. Systemet genererer bane
4. Spiller kan velge sette ut tårn og oppgradere dem
5. Spiller prøver å sette ut tårn
6. Systemet beregner om spiller har råd til å sette ut tårn
7. Systemet plasserer tårn der spiller ønsker
8. Spiller oppgraderer tårn
9. Systemet beregner om spiller har råd til å oppgradere tårn
10. Systemet oppgraderer tårn
11. Spiller velger å starte runden (slik at fiendene kommer)
12. Systemet genererer fiender som prøver å komme seg til målet
13. Systemet beregner skaden til fiende(ne) utgjort av de forskjellige tårnenes våpen
14. Systemet beregner fiendens helse om fiende ble truffet

15. Systemet eliminerer fiender med helse mindre enn 1

16. Spillers tårn har drept alle fiendene

17. Spiller har vunnet runden

18. Systemet forteller spiller at spiller har vunnet runden

*Steg 4-16 går i loop til x antall runder er vunnet*

19. Spiller har vunnet x antall runder

20. Systemet forteller at spiller har vunnet alle rundene

21. Systemet viser hovedmeny

## Alternative handlinger:

A (1.) @1 Spiller velger å avslutte spillet

(2.) Systemet avslutter spillet

B (1.) @2 Spiller velger å pause spillet

(2.) Systemet pauser spillet

(3.) Systemet viser pausemeny

C (1.) @6 Systemet beregner at spiller ikke har råd til å sette ut tårn

(2.) Systemet setter ikke ut tårn

(3.) Gjenoppta @4

(1.) @9 Systemet beregner at spiller ikke har råd til å oppgradere tårn

(2.) Systemet oppgraderer ikke tårn

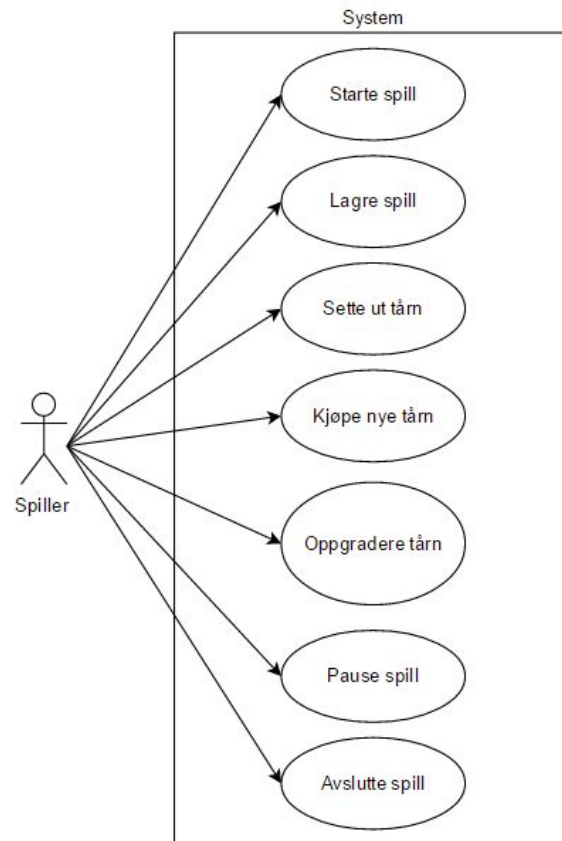
(3.) Gjenoppta @4

D (1.) @16 En eller flere fiender overlever

(2.) Spiller har tapt spillet

(3.) Systemet forteller at spiller har tapt spillet

(4.) Gjenoppta @1



# Refleksjonsdel

- Hva formålet med denne oppgaven er ut fra et læringsperspektiv.
- Hva arbeidslaget trodde intensjonen var (hva dere la vekt på i arbeidet).
- Hva dere faktisk har lært av oppgaven.



# Neste fase: Organisering og planlegging

- Scrum
- Grupper
- Risiko
- Burn-down chart
- Felles ressurser
- Planning poker

# Kilder

Side 2

[http://www.planetsourcecode.com/Upload\\_PSC/ScreenShots/PIC2006713920339971.jpg](http://www.planetsourcecode.com/Upload_PSC/ScreenShots/PIC2006713920339971.jpg)

<http://www.casualgirlgamer.com/assets/images/top-30-online-tower-defense-games/gemcraft.jpg>

<http://game-game.com/images/tags/images-tag/f2739cfcf5b25db1f11a5ed9a72bdf81.png>

Side 3:

[https://www.3pillarglobal.com/wp-content/uploads/2016/03/java8\\_600x600-300x300.png](https://www.3pillarglobal.com/wp-content/uploads/2016/03/java8_600x600-300x300.png)

[https://pbs.twimg.com/profile\\_images/803204448675856388/6eqoPNuy.jpg](https://pbs.twimg.com/profile_images/803204448675856388/6eqoPNuy.jpg)

<https://www.eclipse.org/eclipse.org-common/themes/solstice/public/images/logo/eclipse-800x188.png>

<http://gradle.wpengine.netdna-cdn.com/wp-content/uploads/2015/10/gradle-logo-horizontal2.svg>

Side 4:

[https://static01.nyt.com/images/2016/08/05/us/05onfire1\\_xp/05onfire1\\_xp-master768-v2.jpg](https://static01.nyt.com/images/2016/08/05/us/05onfire1_xp/05onfire1_xp-master768-v2.jpg)

[http://www.planetsourcecode.com/Upload\\_PSC/ScreenShots/PIC2006713920339971.jpg](http://www.planetsourcecode.com/Upload_PSC/ScreenShots/PIC2006713920339971.jpg)

<http://www.casualgirlgamer.com/assets/images/top-30-online-tower-defense-games/gemcraft.jpg>

<http://game-game.com/images/tags/images-tag/f2739cfcf5b25db1f11a5ed9a72bdf81.png>

Side 5:

[https://www.3pillarglobal.com/wp-content/uploads/2016/03/java8\\_600x600-300x300.png](https://www.3pillarglobal.com/wp-content/uploads/2016/03/java8_600x600-300x300.png)

[https://pbs.twimg.com/profile\\_images/803204448675856388/6eqoPNuy.jpg](https://pbs.twimg.com/profile_images/803204448675856388/6eqoPNuy.jpg)

<https://www.eclipse.org/eclipse.org-common/themes/solstice/public/images/logo/eclipse-800x188.png>

[http://uia.pameldingssystem.no/auto/1/Windows\\_logo\\_Cyan\\_rgb\\_D.png](http://uia.pameldingssystem.no/auto/1/Windows_logo_Cyan_rgb_D.png)

[https://www.apple.com/ac/structured-data/images/knowledge\\_graph\\_logo.png?201703182200](https://www.apple.com/ac/structured-data/images/knowledge_graph_logo.png?201703182200)

<http://gradle.wpengine.netdna-cdn.com/wp-content/uploads/2015/10/gradle-logo-horizontal2.svg>

<https://www.extremetech.com/wp-content/uploads/2012/05/Linux-logo-without-version-number-banner-sized.jpg>

# Kilder

Side 6:

<https://enigma-dev.org/docs/wiki/images/a/ab/Box2d.png>

<http://www.theorangeday.com/wp-content/uploads/2014/04/libGDX-RedGlossyNoReflection.png>

<https://www.sl4j.org/images/logos/sl4j-logo.jpg>

<http://howtodoinjava.com/wp-content/uploads/2014/06/google-gson.jpg>

<http://junit.org/junit4/>

<https://github.com/mockito/mockito>

<https://twitter.com/sonarlint>

<http://findbugs.sourceforge.net/>

Side 7:

<https://media.giphy.com/media/WM3HX2cZ3zTry/giphy.gif>