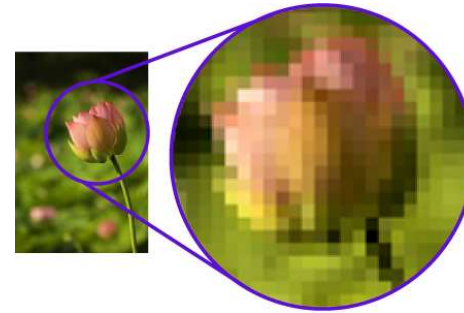


Computergrafik

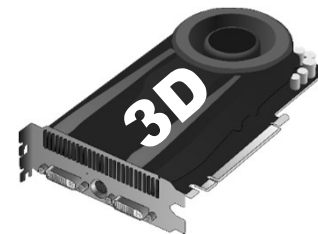
Spiele 2D

First goal – understand concepts

- 2D computer graphics (hardware internals, OpenGL)
 - Rasterization
 - Textures (Sprites)
 - Transformations
 - Culling/clipping
 - Anti-aliasing
 - Shader intro
- Games
 - Collision detection
 - Physics

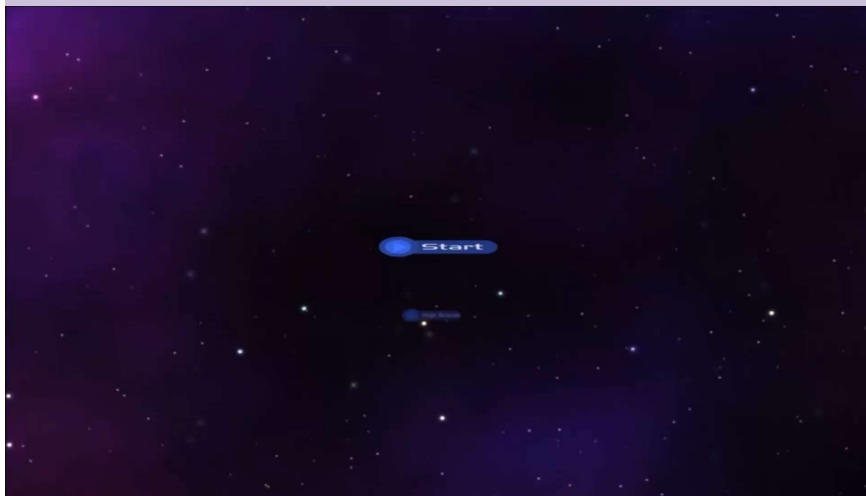


Rasterisation



Second goal – practicle work

- If done with SE lecture
- If advanced students
- Big software project
- 2D sprite-based **game**
- Teams



- Number of exercises
 - Show theory
- Mini games
- Finish with small game



LVA structure

	Month 1				Month 2				Month 3				Month 4			
1st Part	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
2nd Part	C	G	C	C	C	C	C	P	C	C	C	P	C	C	C	P
Project	prototype								game play				final game			

L ... theory lecture

C ... coaching/working (tutors/myself)

P ... play testing

G ... game concept

Todo

- Form teams of 3-5 person(s)
- Create game concept
- Implement a 2D game
 - Team organization
 - Meetings
- Play-testing events
- 1 minute let's play video



- Form teams of 1-2 person(s)
- Work on given exercises
- Create small game



Grading

- Time spent on project
- Active participation in coaching/working blocks
- Outcome at play-testing/final game
- Team gets one grade
 - Team members distribute grade within team

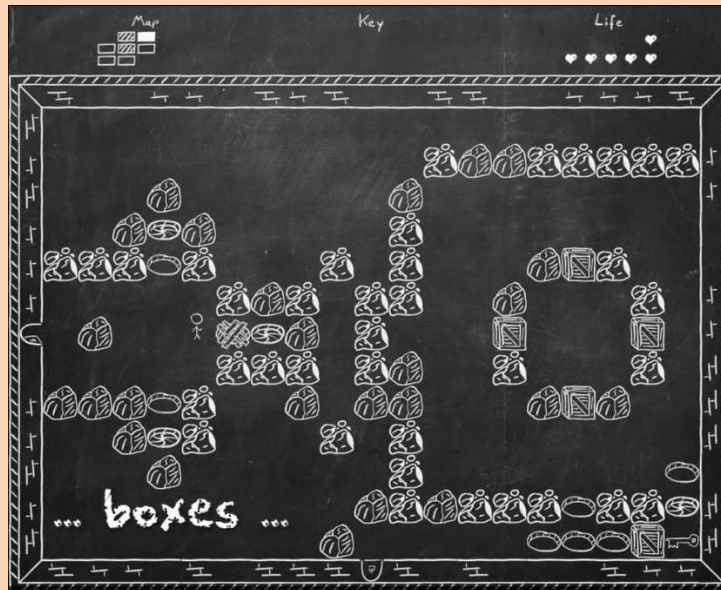


Programing framework

- C#
 - Mix of Java and C++
- MS Visual Studio
 - Linux/MacOS guys can use mono, but have to convert final version (a.k.a. upload version)
- Graphics: OpenGL graphics API (many details later)
 - OpenTK
 - C# wrapper for OpenGL
- Sound: NAudio
- Additional libs check with me first

Project – 2D game

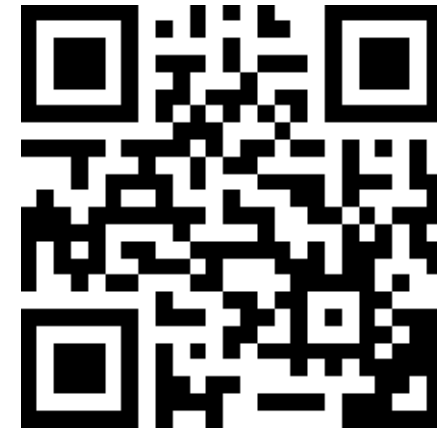
- If existing game → introduce a twist
 - No exact copies allowed!
- C# and OpenGL, no libs for rendering
- **Free** textures/sprites/sounds from web ok



If you want to do a(nother) game

- Excellent!
- Possible with/without team
 - Informatikprojekt (5ects), MD projekte (5, 10, 15 ects)
 - Fachbereichsprojekt Spiele (3 or 5 ects)
 - Bachelor thesis (15 ects)
 - Master (xxx ects)

Resources at Github (goo.gl/924Jlv)



- Slides
- Tutorials
- Framework
- Links
 - Commented links on games and computer graphics
- Google Calendar (goo.gl/SySLwF)
 - All Game Relevant Events (and more)
- Moodle
 - Project/Example upload
 - Forums for questions