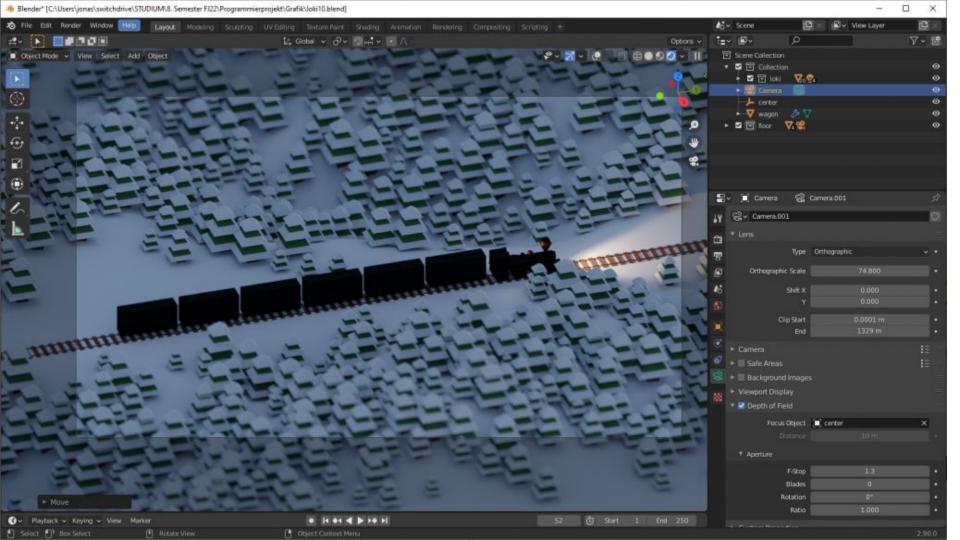
## Gruppe 8

Vorlesung Programmierprojekt FS 22 Basel

> Alexandr Sazonov, Jonas Biedermann, Sebastian Lenzlinger, Seraina Schöb





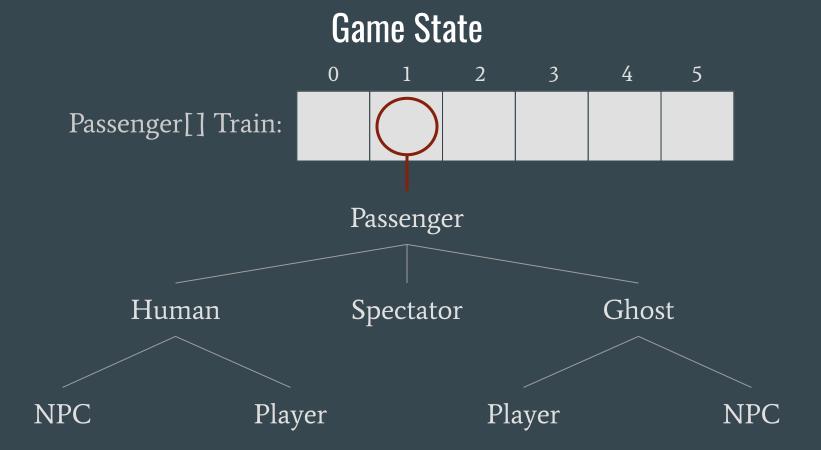
Live Train Sounds08\* [Train Sounds] - Ableton Live 11 Suite X File Edit Create View Options Help + 8 + 0 0 49. 1. 1 \ 🕡 🗸 68. 0. 0 Link Ext Tap 120.00 ||| || 4 / 4 O • 1 Bar • 49 . 1 . 1 H W Search (Ctrl + F) Collections Name 73 77 r 85 r 89 r 93 ▶ fL Backup Set Favorites 00 2 4 Orange ▶ Samples (ii) unused 1 S New Rec... 218.way 0 С New Rec... 219.way Categories (=) music 13 S ₽ Sounds New Rec... 220.way -3.5 С 22 Drums Int. New Rec... 221.way -inf | -inf O Instruments Int. New Rec... 222.way III Audio Effects New Rec... 223.way MIDI Effects New Rec... 233.way acoustic 14 S • acous acou acoustic 5 acoustic 5 acoustic 5 ☐ Max for Live Train Sounds.als Aud Aud Aud Aud Aud Aud Aud Au ( banjo 15 S • I -C: Plug-Ins Train Sounds01.als ( snare 16 S • s sr snare s s snare snare s s snare snare s s snare snare ► Clips ► Train Sounds02.als Theremin 2 Theremin 2 Theremin 17 S 0 Int. Samples ► Train Sounds03.als Audio 2 Audio 2 ( melodica 18 S • II ≈ Grooves Train Sounds04.als Theremin 2 ( ) Theremin 19 S 0 Templates ► Train Sounds05.als Kontakt 5 2 20 Kontakt 5 20 S 0 Train Sounds06.als Result annour 21 S Places ► Train Sounds07.als 25 S 0 Theremin 1 Theremin ( ghost noises Packs ► Train Sounds08.als 26 S • Alarm Bell O User Library 27 S track noise - Current Project Day noises 31 S Producing night noises 33 S Ableton Projects New Drop Files and Devices Here Samples Organized S Post ( A Reverb Desktop ( B Delay S Post + Add Folder... 0 4/1 ( Master 0 80 1:30 2:30 2:45 3:00 13:30 3:45 1:45 2:00 Reaktor 6 Configure 3 O Utility @ (B) Max LFO @ @ @ O Delay Sidechain (a) (D) Transistor Input Output Curve Comp Jitter Smooth Scale Target Fine LFO Time Left Right 0 No Input \* Sync ØL ØR Sync (init) Δ Gain On Freq On -0.21 1 2 1 2 Stereo ▼ Num Base 0.01 -0.95 100 % (list) Track Osc2Freq 3 4 3 4 Gain Width 1/64 ▼ X 1 This Track 0.00 0.00 dB 5 6 5 6 (1) Invert 40.9 % 60.6 % Rate 237.28 ms Device (list) 8 16 8 16 0.00 dB Osc2Vol Balance 0.514 0.40945 0.60630 Waveform Freq Reaktor 6 100 % 0.0 % 0.0 % Filter 1.00 kHz Mix Parameter 0.0 Mono Modulation (0) Feedback Osc3Freq Fine 4.21 Hz Rate Filter 0  $|\infty|$ 100 % Bass Mono 1/2 Output rate: 1.00 ms Мар Once 0.50 Hz 0.0 % ▼ none Mute DC Mute none 1.77 120 Hz (Q) 60 %

0

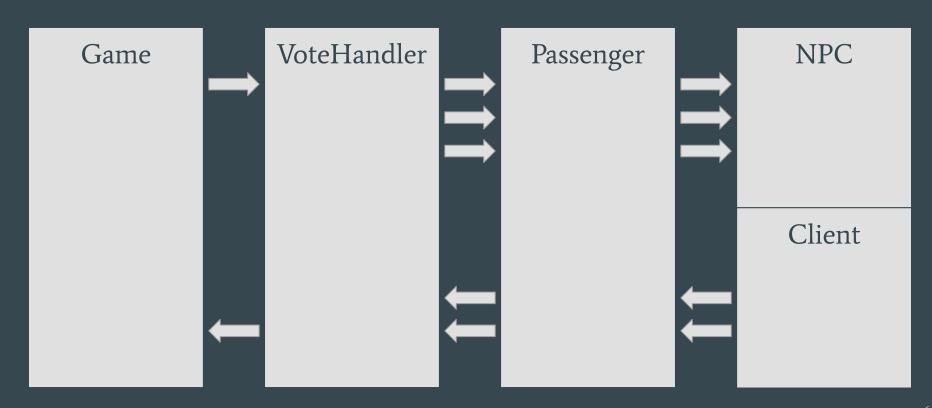


ghost noises Max LFC

## **Demonstration**



### Game Logic



## Qualitätssicherung

Qualitätsmerkmale

### 1) Bedienbarkeit

- Erreichbarkeit
- Mitteilungsgüte
- Barrierefreiheit

#### 2) Testbarkeit

- Strukturiertheit
- Abgeschlossenheit

#### 3) Verständlichkeit

- Prägnanz
- Lesbarkeit

### 4) Korrektheit

## Qualitätssicherung

Massnahmen

### 1) Coden

- Documentation-oriented
- Regelmässige Sitzungen
- Konstanter Austausch via Slack

#### 2) Testen

- Black & White Box

#### 3) Messen

- Lines of Code
- Cyclomatic Complexity
- Dependency
- → Analyse und Plots mit OriginPro

### Progress Report

Codeverständnis — Documentation-oriented-coding

### Time Management

Alexandr Seraina Sebastian Jonas Design & Sound **Unit-Tests** GUI **GUI** Milestone IV Rule enforcement Win state JAR-Review **Unit-Tests** determination Rule enforcement GUI **GUI Unit-Tests Unit-Tests** Milestone V Game logic QA report Game logic Software architecture Manual update Gameplay video Network protocol

# Fragen?



### Quellen

Boehm B. W., Brown J. R., and Lipow. M.: «Quantitative evaluation of software quality» in *Proceedings of the 2nd international conference on Software engineering,* IEEE Computer Society Press, pp. 592–605, Washington DC, USA: 1976

Schneider K.: *Abenteuer Softwarequalität - Grundlagen und Verfahren für Qualitätssicherung und Qualitätsmanagement,* dpunkt.verlag, Heidelberg, DE: 2012