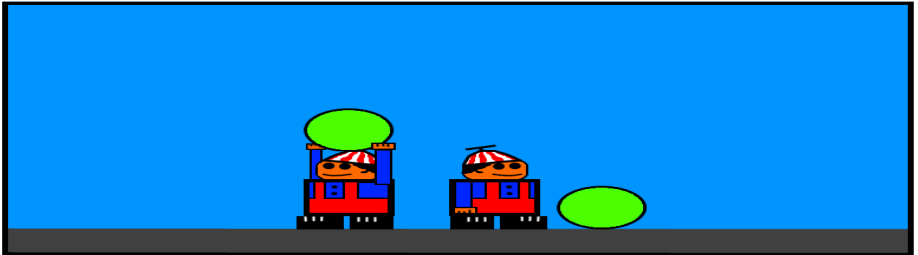


Kolloquium Implementierungsphase RetroMachines

Team B (RetroFactory)

Institut für Programmierparadigmen

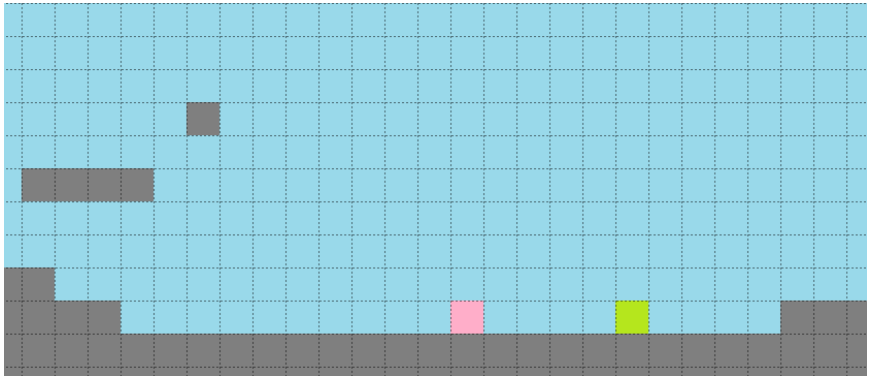


- Lambda-Datenstruktur
 - Subklassen statt enums
- SQLite verworfen
 - Verwaltung von LibGDX

- Screens erben von einer Klasse
- Design ist modular unterteilt
 - Skin
 - Font
- Appstart führt ins Hauptmenü

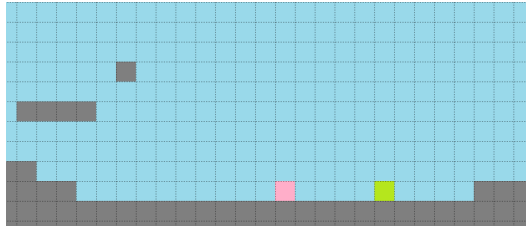
- Screens erben von einer Klasse
- Level bestehen aus:
 - Tiled-Map
 - JSON-File

Aufbau Tiled-Map



Aufbau der Tiled-Map

- Gerastert
- verschiedene Ebenen
 - Hintergrund
 - Lauf-Ebene
 - Ablagen
 - Spielelemente
- Charakter bewegt sich vor den Ebenen



```
{  
  "level": {  
    "description": "Level das (lambda x . x x)(y) darstellt",  
    "hasTutorialScreen": true,  
    "levelid": -1,  
    "data": {  
      "Gameelements": ...,  
      "Tree": ...,  
      "Target": ...,  
      "Hint": ...  
    }  
  }  
}
```

- Allgemeine Infos
- Daten
 - Spielelemente
 - Auswertungsstruktur
 - Zielkonstellation
 - Hinweiskonstellation

```
"level": {  
  "description": "Level das  $(\lambda x . x x)(y)$  darstellt",  
  "hasTutorialScreen": true,  
  "levelid": -1,  
  "data": {  
    "Gameelements": [...],  
    "Tree": [...],  
    "Target": [...],  
    "Hint": [...]  
  }  
}
```



```
"Gameelements": [  
  {  
    "color": 2,  
    "type": "Var",  
    "posx": 5,  
    "posy": 5  
  },  
  {  
    "color": 1,  
    "type": "Var",  
    "posx": 60,  
    "posy": 300  
  },  
  {  
    "color": 2,  
    "type": "Var",  
    "posx": 3,  
    "posy": 5  
  },  
  {  
    "color": 2,  
    "type": "Abs",  
    "posx": 10,  
    "posy": 5  
  }  
],
```

- Liste aller Spielelemente
- Attribute
 - color: Elementgruppe
 - type: Element Typ
 - posX: Position X-Achse
 - posy: Position Y-Achse

```
"Gameelements": [  
  {  
    "color": 2,  
    "type": "Var",  
    "posx": 5,  
    "posy": 5  
  },  
  {  
    "color": 1,  
    "type": "Var",  
    "posx": 60,  
    "posy": 300  
  },  
  {  
    "color": 2,  
    "type": "Var",  
    "posx": 3,  
    "posy": 5  
  },  
  {  
    "color": 2,  
    "type": "Abs",  
    "posx": 10,  
    "posy": 5  
  }  
],
```

```
"Tree": [  
  {  
    "color": -1,  
    "family": [  
      {  
        "color": -1,  
        "family": [ ]  
      },  
      {  
        "color": -1,  
        "family": [ ]  
      }  
    ]  
  },  
  {  
    "color": -1,  
    "family": [  
    ]  
  }  
],
```

- Auswertungsstruktur
- Attribute
 - color: Dummy-Objekt
 - family: Verschachtelung

```
"Tree": [  
  {  
    "color": -1,  
    "family": [  
      {  
        "color": -1,  
        "family": [ ]  
      },  
      {  
        "color": -1,  
        "family": [ ]  
      }  
    ]  
  },  
  {  
    "color": -1,  
    "family": [ ]  
  }  
],
```

```
"Target": [  
  {  
    "color": 1,  
    "type": "Var",  
    "family": [ ]  
  },  
  {  
    "color": 1,  
    "type": "Var",  
    "family": [ ]  
  }  
],
```

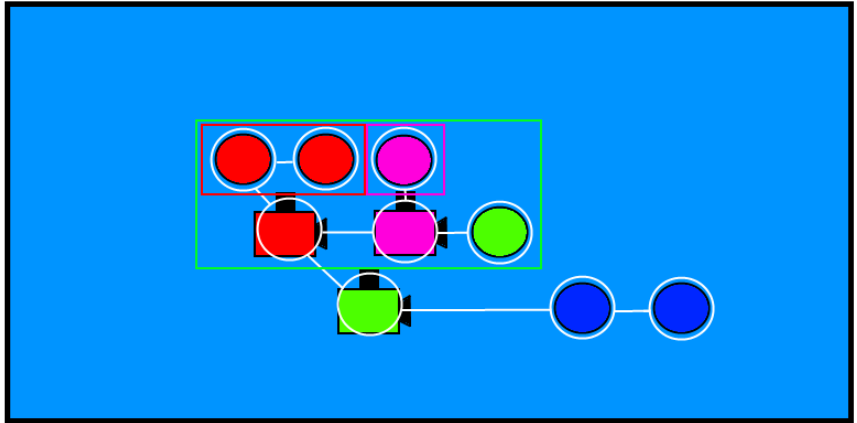
- Zielkonstellation
- Baumstruktur
- Attribute
 - color: Farbgruppe
 - type: Typ des Objekts
 - family: Verschachtelung

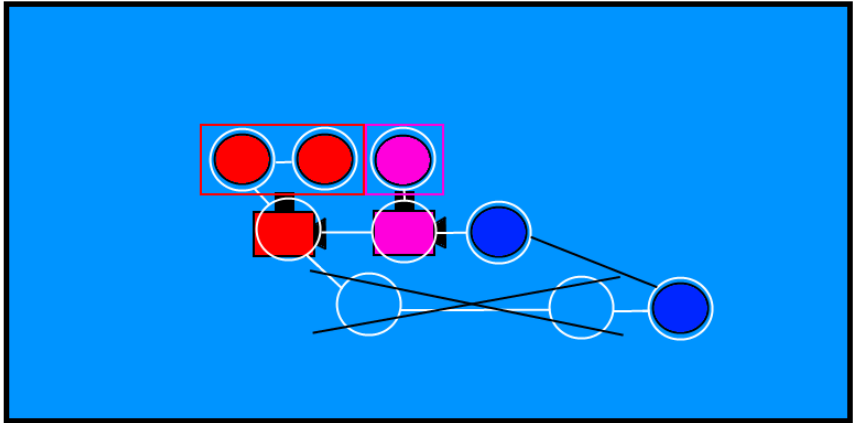
```
"Target": [  
  {  
    "color": 1,  
    "type": "Var",  
    "family": [ ]  
  },  
  {  
    "color": 1,  
    "type": "Var",  
    "family": [ ]  
  }  
],
```

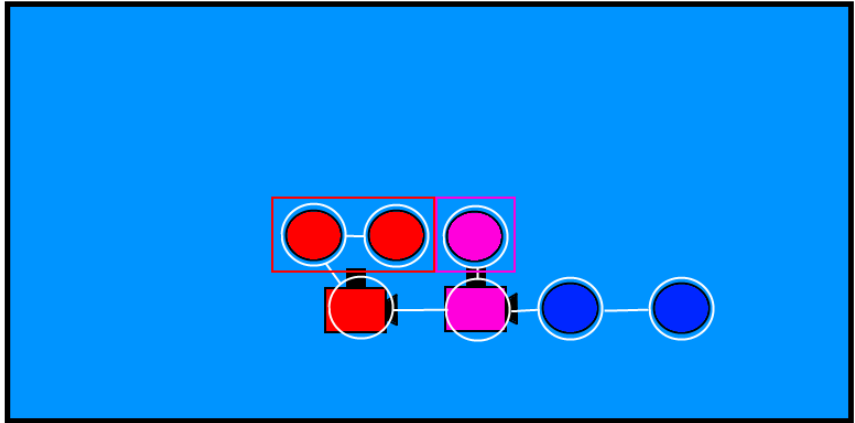
```
"Hint": [
  {
    "color": 1,
    "type": "Abs",
    "family": [
      {
        "color": 1,
        "type": "Var",
        "family": [ ]
      },
      {
        "color": 1,
        "type": "Var",
        "family": [ ]
      }
    ]
  },
  {
    "color": 2,
    "type": "Var",
    "family": [
    ]
  }
]
```

- Hinweis zum Ziel
- Baumstruktur
- Attribute
 - color: Farbgruppe
 - type: Typ des Objekts
 - family: Verschachtelung

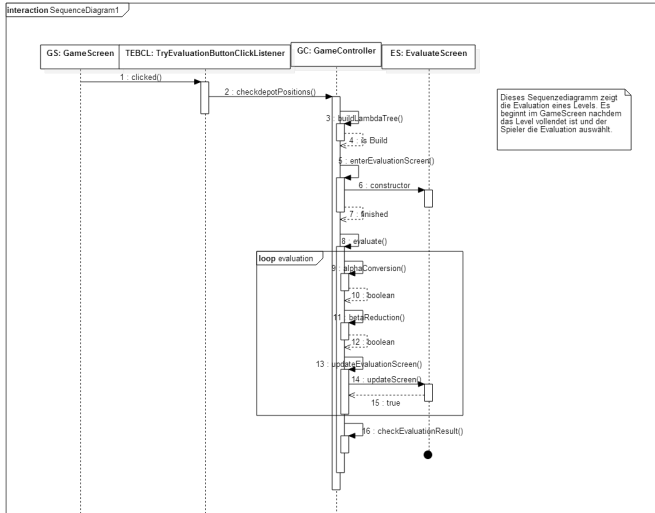
```
"Hint": [  
  {  
    "color": 1,  
    "type": "Abs",  
    "family": [  
      {  
        "color": 1,  
        "type": "Var",  
        "family": [ ]  
      },  
      {  
        "color": 1,  
        "type": "Var",  
        "family": [ ]  
      }  
    ]  
  },  
  {  
    "color": 2,  
    "type": "Var",  
    "family": [ ]  
  }  
]
```





Sequenzdiagramm Auswertung



- SQLite Datenbank
- Speichert:
 - Einstellungen
 - Profilinformationen
 - Spielfortschritt
 - Spiel-Statistiken

Vielen Dank für Ihre Aufmerksamkeit!