

# ATHENS - TUD15

## Assignment 2

### Group **Z4QQQ**

#### **1. Write a natural language description of why and how the pattern is implemented in your code.**

##### **WHY:**

We used the State Pattern for three different states of our game (WelcomeState, PlayingState, and GameOverState). It made sense since the Slick2D framework has built in support for this pattern. Furthermore, it makes the application extendable with new states and allows to separate the logic for each state. This makes the code more readable and thus, easier to maintain.

##### **HOW:**

We already had this pattern in the first version of our game and hence, we did not need to refactor it.

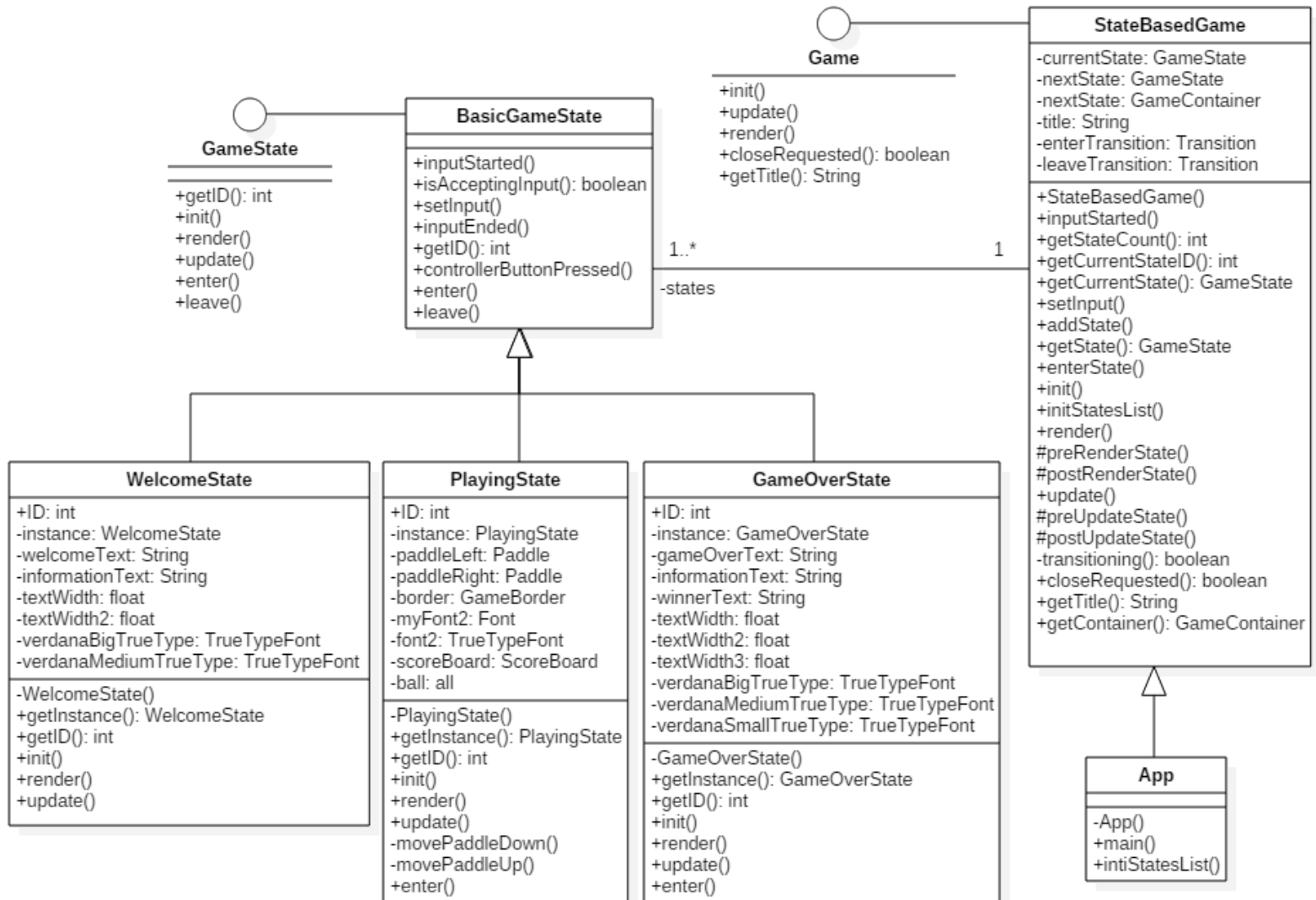
Because of the built in support by Slick2D we only had to extend predefined classes to get the States and Context classes.

Our context class is the App.class which extends the abstract class StateBasedGame. All states are registered there and it stores the current state of the application.

States extend a predefined abstract class BasicGameState (equals to the state class in the slides). These states need to implement a getId, update, render, and init method, which are used for the game logic and to draw the elements.

The transitions between the states are done in the update functions with a call of the enterStateMethod of the StateBasedGame object (App.class). Each state has a unique ID that is used for the transition to another state.

## 2. Make a class diagram of how the pattern is structured statically in your code.



### 3. Make a sequence diagram of how the pattern works dynamically in your code.

