
ASSIGNMENT 2

CLASS DIAGRAM AND SEQUENCE DIAGRAMS

SEM Group 45

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Class diagram

The classes we choose to represent in our class diagram are:

- Authentication
- Player
- DatabaseController
- Game
- GameObject
- Paddle
- Puck
- Movement
- PhysicsHandler

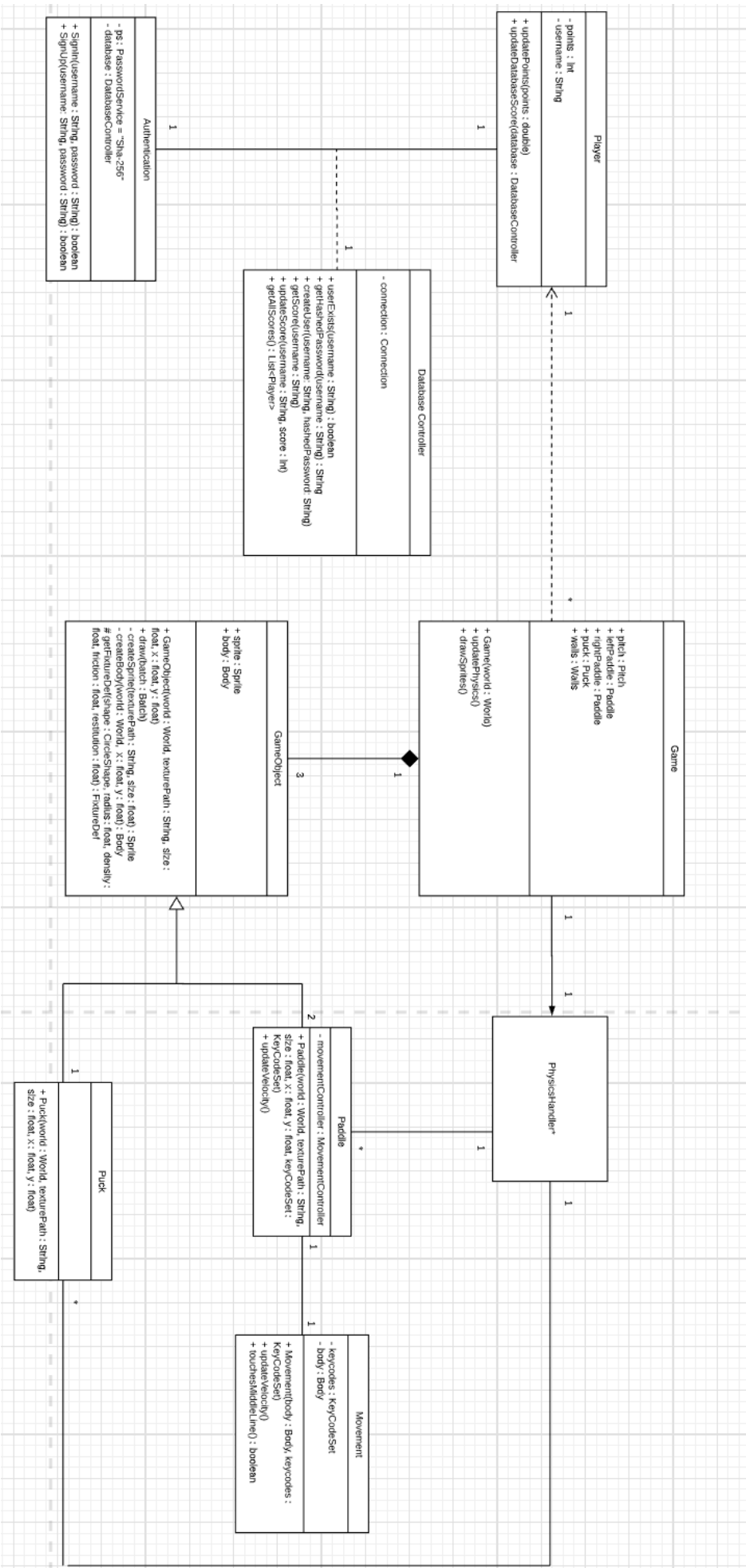
The authentication will enable the user to login or signup (Authentication), for which we need a connection to the database (DatabaseController). Once this has happened the username should be saved for when the points of the player are to be updated (Player). The user should be able to start a game (Game) which has multiple game objects (GameObjects), which include the two paddles (Paddle) and a puck (Puck).

The paddle need to be able to be moved by the user and should not move out of their half of the field. This is done by a class for movement (Movement). For both the puck and the paddles, collisions need to be checked such that the puck is actually able to move and change direction when hitting walls or paddles. This is done by an external library (PhysicsHandler). This makes up the core of the game since the user can now login and play a primitive version of air hockey.

Note: In the class diagram, one game class can have three game elements, two of which are paddles and one of which is puck. This is attempted to be modelled in the diagram, but we are unsure if we used the right notation for that, which could cause ambiguity.

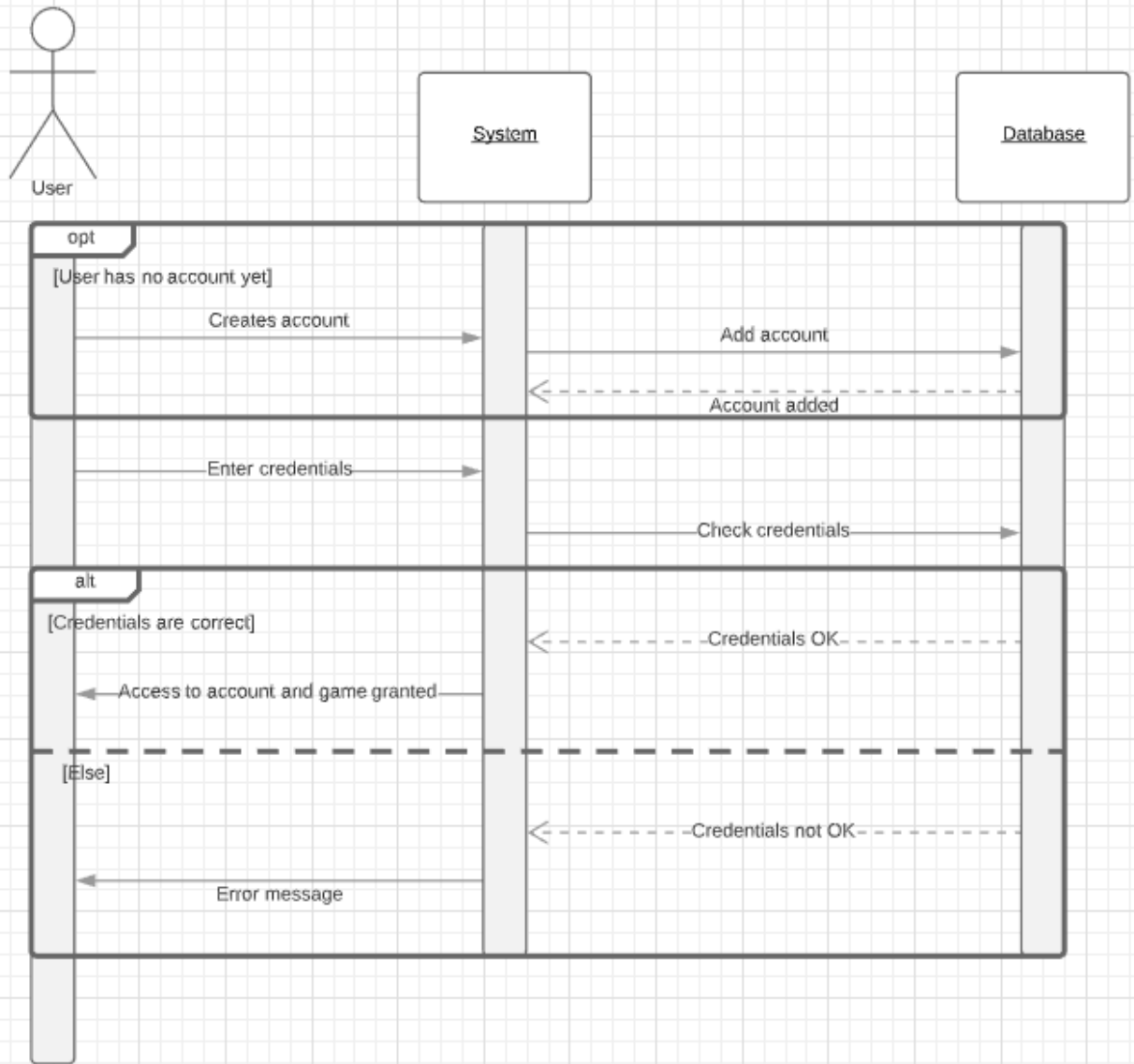
Note: In the diagram, the star (*) next to the 'PhysicsHandler' class means the class is from an external library.

Note: A pdf of the class diagram has been added to the repository since the image in this document is not the big which can make it hard to inspect. The document is located under 'doc/assignments/additional'.

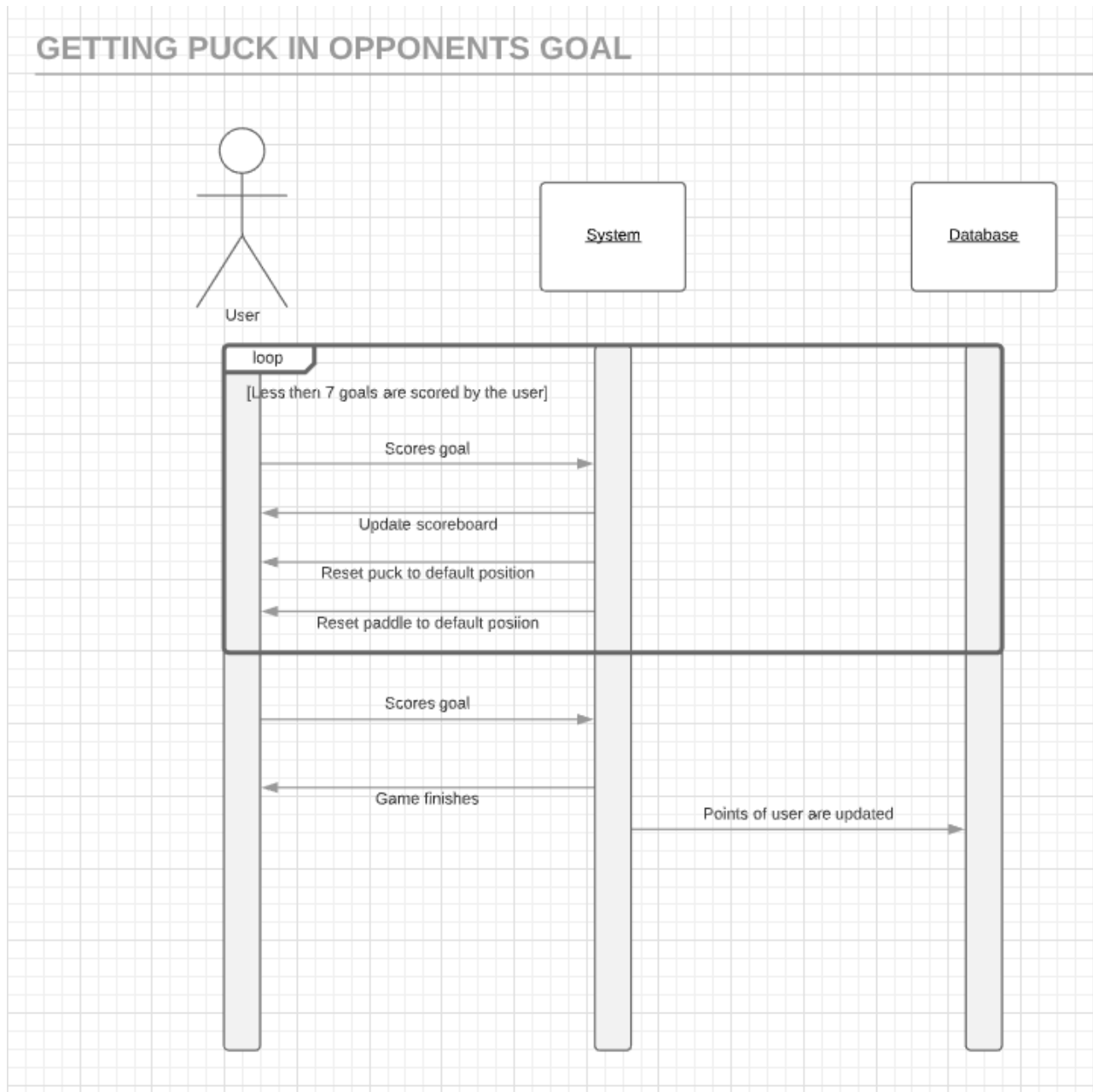


Sequence diagram 1

LOGGING IN



Sequence diagram 2



Sequence diagram 3

