The final version of the class diagram is presented below.

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Game: Represents the game’s main instance, by which all classes arise and inherit respectively. It controls the Flow of the game thanks to the ‘game\_status’ attribute, in addition to the level management.

Level: Represents the specific leve lof the game, depending on the race number the player is at. Moreover, it includes the map setting, with random obstacles generation and rivals, added to the finish line location.

Player: Represents the user who, through keyboard, his interactions with the ship and other game elements, participates in the race.

Boat: Esencial class for this diagram. It defines the properties and vehicles behaviour during the competition with different attributes such as ‘health’ or ‘resistence’, in addition to some other methods to modify your movement speed or react to the obstacles among others.

Rival: Class with behaviours similar to the main’s player ship, but controlled by Artificial Intelligence for decision making.

Map: Represents the scenario where the race takes place, varying as the level progresses.

PowerUp: Graphical interface that involves the collectibles to grab during the journey to gain an advantage over rivals.

Obstacle: Base class that defines the essential characteristics o fan obstacle in the game. It also implements the subclases Duck, Stone and Log to represent different types of obstacles with different sizes.

Duck: Randomly moving along the river obstacle that can be avoided by the player.

Stone: Static obstacle in the river that could cause extensive damage to the ship’s bow.

Log: Floating obstacle larger than the previous two, also static and with the capabilities to slow down and damage the vehicle.