# TS Advanced: Regular Exam - 18.01.20

# Problem 3. Race

**class** Race {  
 *//* ***TODO: implement this class...***  
}

### Your Task

### Write a Race class, which supports the described functionality below. Firstly, import the RaceInterface, Quali and Racers classes. The race class must implement the RaceInterface.

### Functionality

#### constructor()

Should have **1 private** property:

* **raceName** - string

#### overtake({overtakerID}, {overtakenID})

Both the overtakerID and the overtakenID are numbers.

* Firstly, check if both the ids have taken part in the qualification. Afterwards you show follow the following rules in order to make a successful overtake:
  + The overtaker must be in lower position than the overtaken driver
  + They must be in subsequent positions
  + Racer who is in first position cannot overtake
  + Racer who is in last position cannot be overtaken
* If all the conditions are fulfilled swap the positions of both drivers, sort the drivers in ascending order by their position and return the following message:

"**{overtakerID} successfully overtook ${overtakenID}"**

* If one of the ids passed as a parameter has taken part in qualification you should throw a new error:

**"There are no such racers in the race"**

* If one or all rules for a successful overtake is not valid you should throw a new error:

**"This overtake is not possible"**

#### winRace()

* Check if the racer who is in first position has a valid contract and how many won races he has. If the number is higher or equal to 1 you should just increment it, otherwise set them to 1 and return the following message:

**"The winner of the {raceName} race is {firstName} {lastName}"**

#### showStandings()

This function should return a message in the following format:

#### "Here is your top three:

**{position}. {firstName} {lastName}**

#### {position}. {firstName} {lastName}

#### {position}. {firstName} {lastName}

#### And the rest of the grid is as follows:

#### {position}. {firstName} {lastName}

#### . . . "

### Examples

This is an example how the code is **intended to be used**:

|  |
| --- |
| Sample code usage |
| **let race = new Race(‘Sepang');**  **race.overtake(22, 33);**  **race.overtake(5, 33);**  **race.overtake(5, 22);**  **race.overtake(22, 5);**  **race.overtake(5, 22);**  **race.winRace();**  **console.log(race.showStandings());** |
| Corresponding output |
| Here is your top three:  1. Lewis Hamilton  2. Sebastian Vettel  3. Valtteri Bottas  And the rest of the grid is as follows:  4. Max Verstappen |