

## **Java Coding Exercise**

Welcome to the MessageMedia coding exercise. Let's have a couple of fun hours together!

Please work on the exercise below and deliver a solution that meets the stated requirements. This is a good opportunity to show you approach to a specific problem. We are looking for pragmatic, maintainable code, as well as tests to prove your code works.

Feel free to create additional classes or use any 3<sup>rd</sup> party libraries you need to support the design of your solution. Having said that, Spring, Hibernate, or in-memory database are definitely overkill here!

Please do not share the test on social media.

The MessageMedia Engineering team

# **Soccer Match Stats Analyser**

Consider the following simplified live stats analyser system for World Cup 2018. The system will be able to display the stats information with a given time stamp based on the events received during a soccer match.

• An event record is comprised of the following elements:

Time: Game starts from 00:00, break at 45:00, ending at 90:00.

o Event Type:

START: Game starts with Team A (or B) taking kick-off

POSSESS: Team A (or B) takes possession

SHOT: Team A (or B) shoots
 SCORE: Team A (or B) scores
 BREAK: Half-time break
 END: Game ends

o Team: The team applied to the event

- The kick-off to start the second half is taken by the other team.
- To calculate the total possession time for Team X, add up all the individual time periods that team X has possession. Each possession time is calculated either from when the game starts with Team X or Team X takes possession, and then ends when game ends or the other team takes possession.
- Event records are received in correct time order.
- The input file is well formed and is not missing data.

## The Problem

Initialized with an input file in CSV format containing a list of events, please implement a function on a class, which, when given a timestamp, outputs the stats of possession, shots, scores of each team.

Below is an example of an input CSV file:

```
Time, EventType, Team 00:00, START, A 00:10, POSSESS, B 01:00, POSSESS, A 01:20, SHOT, A 02:20, SHOT, A 02:20, SCORE, A
```

...

```
45:00, BREAK,
45:00, START, B
...
90:00, END
```

Given the time stamp 00:11, Team A possessed 10 seconds, Team B possessed 1 second. The output will be:

```
TimeStamp, Team, Possession, Shot, Score 00:11, A, 91%, 0, 0 00:11, B, 9%, 0, 0
```

Given the time stamp 02:21, Team A possessed 91 seconds, Team B possessed 50 second. The output will be:

```
TimeStamp, Team, Possession, Shot, Score 02:21, A, 65%, 2, 1 02:21, B, 35%, 0, 0
```

### **Documentation**

Please describe the assumptions and approach to solve this problem.

### **Deliver Solution**

Please send us the source code and make sure there is no compilation error.

Thank you and have fun!