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 3rd 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.
    - 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
    - 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!