*Florida International University*

*School of Computing and Information Sciences*

Software Engineering Focus

Feature Document

User Story ID #750 Collect Metrics

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**Project:** VR-Gaming to Broad Participation in CS

**Product Owner(s)**: Francisco Ortega

**Mentor(s)**: Francisco Ortega

**Instructor**: Masoud Sadjadi

**User Story Name: Collect Metrics**

* Description: As a developer, I want to collect metrics for research purposes, so that relevant information can be extracted from the players data.

Acceptance Criteria

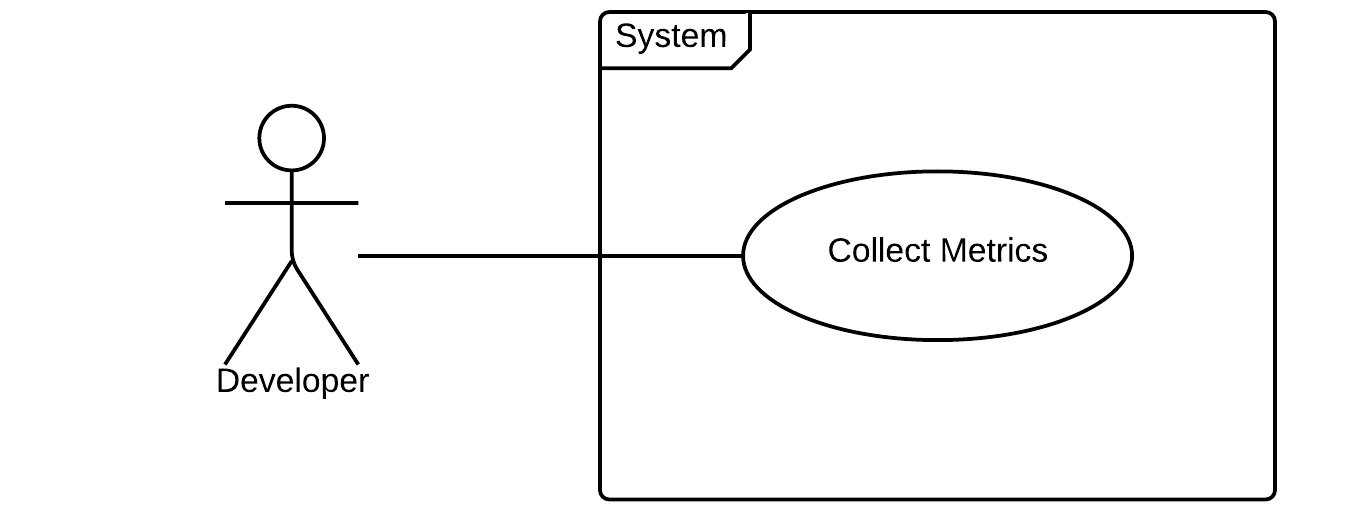
* Verify that the metrics start collecting data when the player clicks on start game.
* Verify that a unique player id is generated for each player.
* Verify that the date, game started time and game ended time is collected.
* Verify that for each room the following is collected: time room was entered, time puzzle was started, time puzzle was solved, time room was exited, and the number of attempts made to solve the puzzle.
* Verify that the players location and rotation is being collected every second.

**Use Case**

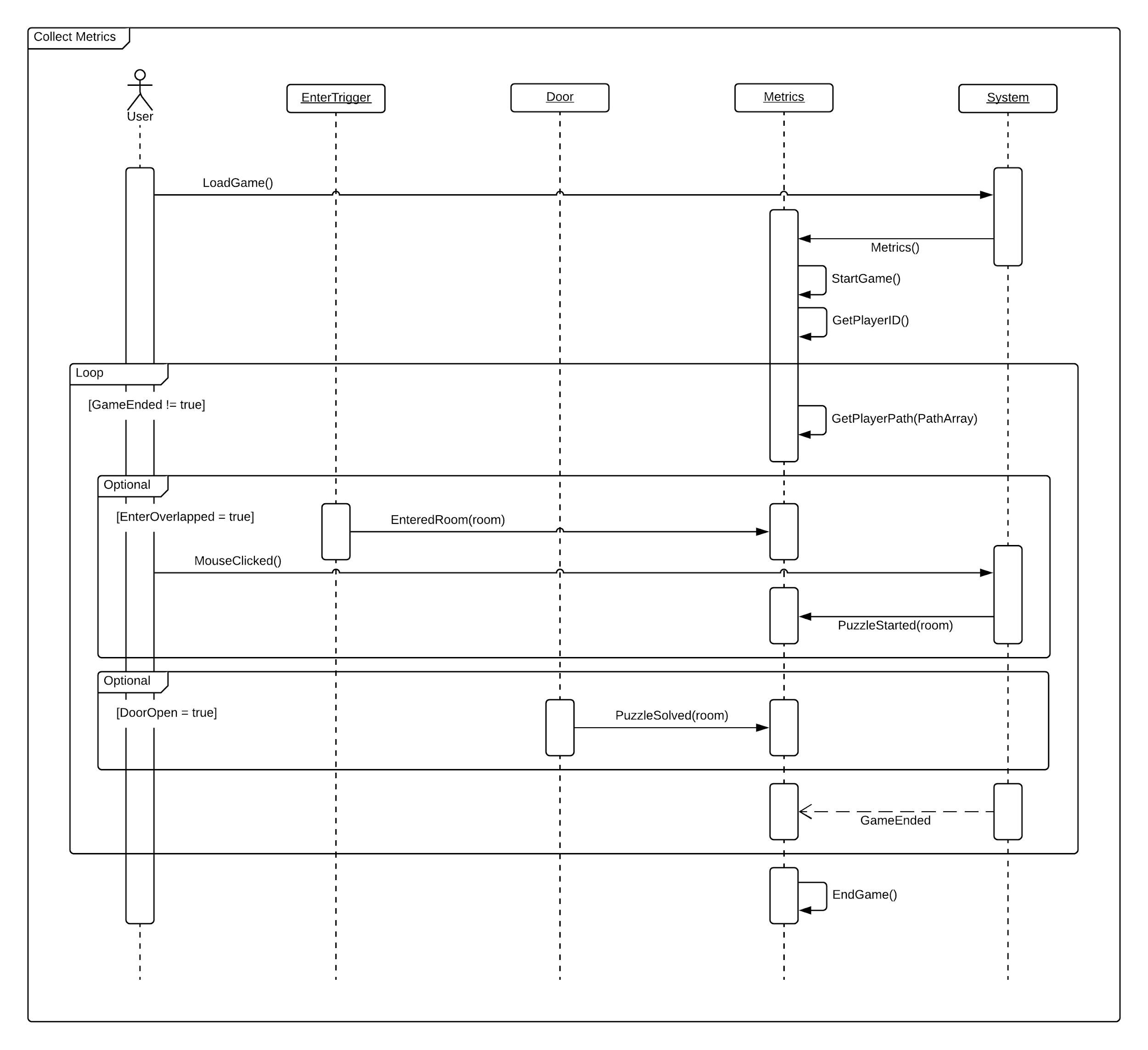
* Name: Collect Metrics
* Actor: Developer
* Preconditions: Player started the game.
* Description <Flow of events>:

1. The date and game started time is collected.
2. A unique player id is generated.
3. The players location and rotation is collected every second.
4. For each room the following is collected:
   1. The time the room was entered.
   2. The time the puzzle was started.
   3. The time the puzzle was solved.
   4. The number of attempts made to solve the puzzle.
   5. The time the room was excited.
5. The game ended time is collected.
6. The players location and rotation stops being collected.

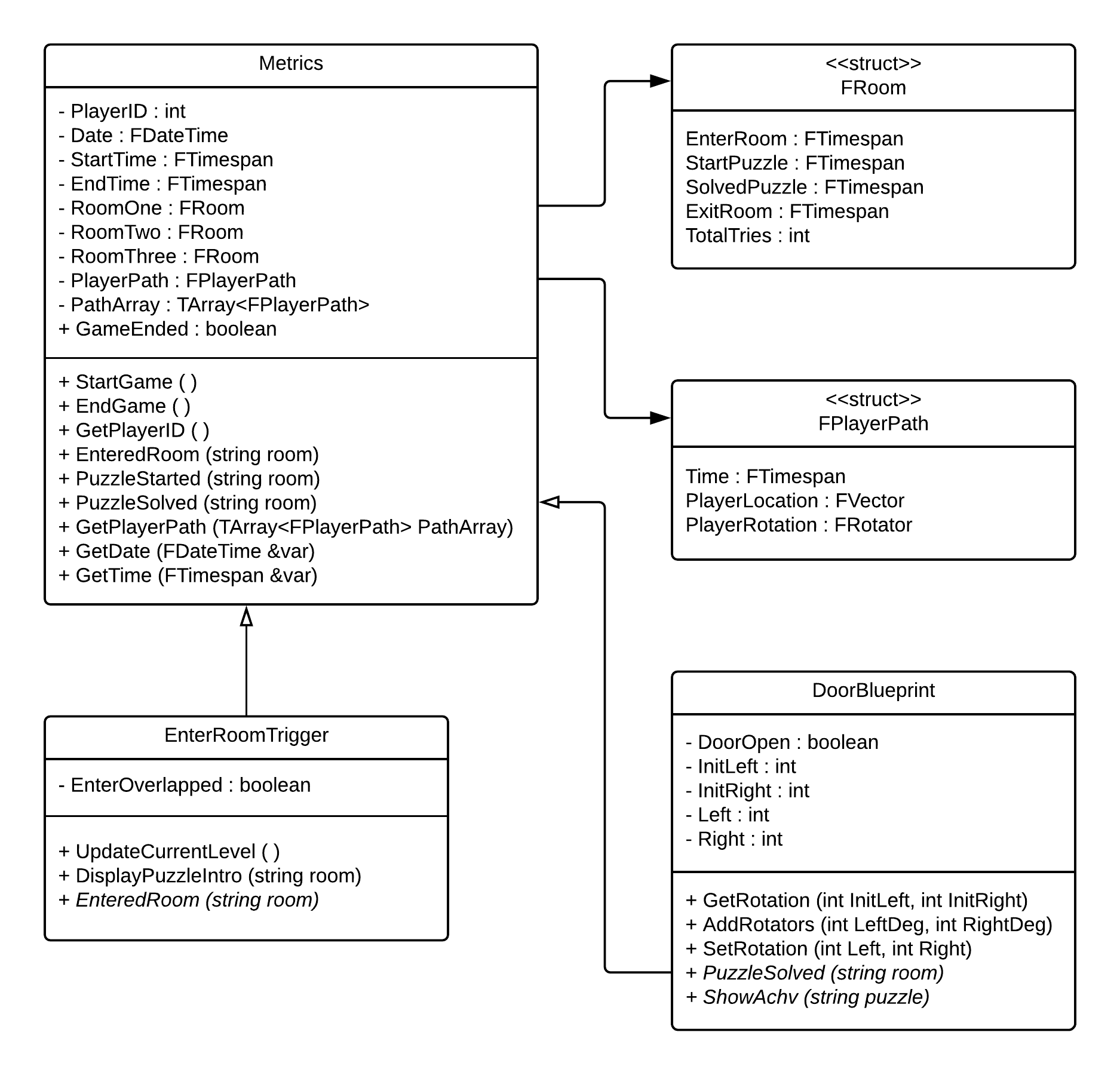
**Use Case Diagram**



**Sequence Diagram**



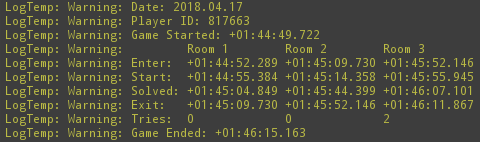
**Class Diagram**



**Unit Test**

* Test case ID: metrics\_start
* Description/Summary of Test: Metrics start collecting data when the player clicks on start game.
* Pre-condition: Player clicks on the “start game” button.
* Expected Results: The metrics begin recording data.
* Actual Result: The metrics began recording data.
* Status (Fail/Pass): Pass
* Test case ID: generate\_id
* Description/Summary of Test: Generate a unique player ID at the start of the game.
* Pre-condition: The game is started.
* Expected Results: Generates a unique player id.
* Actual Result: A unique player id was generated.
* Status (Fail/Pass): Pass
* Test case ID: collect\_date\_and\_time
* Description/Summary of Test: The date and time that the game is started is recorded.
* Pre-condition: The game is started.
* Expected Results: The date and time is recorded.
* Actual Result: The date and time was recorded.
* Status (Fail/Pass): Pass
* Test case ID: collect\_time\_room\_entered
* Description/Summary of Test: The time for when a room is entered is collected.
* Pre-condition: The player enters a room.
* Expected Results: The entered room time is collected.
* Actual Result: The entered room time was collected.
* Status (Fail/Pass): Pass
* Test case ID: collect\_time\_puzzle\_started
* Description/Summary of Test: The time for when a puzzle is started is collected.
* Pre-condition: The player starts the puzzle.
* Expected Results: The puzzle started time is collected.
* Actual Result: The puzzle started time was collected.
* Status (Fail/Pass): Pass
* Test case ID: collect\_time\_puzzle\_solved
* Description/Summary of Test: The time for when a puzzle is solved is collected.
* Pre-condition: The player solves the puzzle.
* Expected Results: The puzzle solved time is collected.
* Actual Result: The puzzle solved time was collected.
* Status (Fail/Pass): Pass
* Test case ID: collect\_time\_room\_exited
* Description/Summary of Test: The time for when a room is exited is collected.
* Pre-condition: The player exits a room.
* Expected Results: The exited room time is collected.
* Actual Result: The exited room time was collected.
* Status (Fail/Pass): Pass
* Test case ID: collect\_total\_number\_of\_tries
* Description/Summary of Test: The number of attempts made to solve the puzzle is collected.
* Pre-condition: The player solved the puzzle.
* Expected Results: The total number of tries is collected.
* Actual Result: The total number of tries was collected.
* Status (Fail/Pass): Pass
* Test case ID: record\_player\_location\_rotation
* Description/Summary of Test: Players location and rotation is being collected every second.
* Pre-condition: The game is started.
* Expected Results: Payers location and rotation gets collected every second.
* Actual Result: Players location and rotation is collected every second.
* Status (Fail/Pass): Pass

**Visual User Guide**

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