**Play Game - Fully Dressed Use Case Model #1**

**Revision History**

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| **Version** | **Date** | **Description** | **Author** |
| Inception Draft | Sep 20, 2018 | First Draft. To be refined during elaboration. | Eric Guzman,  Mike Peralta, Alessandro Quezada |
| Elaboration review | Oct 24, 2018 | Changed use case number 12 added system shutdown and system booting for running maintenance like reviewing flagged accounts. Added a use case diagram as well. | Mike, Eric, Alessandro |
| Elaboration 2 | Dec 11, 2018 | Fixed layout fully dressed uses cases are in separate docs. Added description for SSD. | Eric Guzman, Alessandro Quezada |

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| Use Cases | | | |
| **Use Case #** | **Actor** | **Goal** | **Team Member** |
| 1 | Player | Play Game | Eric |

# Use Case Model

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# Use Case 1 - Play Game - Fully Dressed

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| **Scope** | Asteroids |
| **Level** | User Goal |
| **Primary Actor** | Player |
| **Stakeholders and Interests** | Player wants to play an enjoyable game  Owners and Admins want as many Players to play as many games and enjoy them as much as possible, because this directly impacts the business's ability to generate revenue; If Players don’t enjoy the game, they will stop using the service, and Owners / Admins will have no customers. |
| **Preconditions** | Player has a valid account in good standing |
| **Success Guarantee** | Player has successfully played a game, and has enjoyed themselves greatly.  The system has recorded the Player’s game, and the Player’s account now reflects the additional statistics derived from the game that was played.  All changes made during the game, such as Player’s manual adjustments, purchases or applications of Power-ups, etc, are now also permanently stored in the system. |
| **Main Success Scenario** | 1. User authenticates with the system. 2. User requests to start a new game and chooses a difficulty. 3. User plays a game of Asteroids until no lives are left. 4. System updates the player’s recent game history and high scores. The game replay is recorded. Any Power Ups used are deducted from the player’s account. Any other modifications are recorded. 5. *HAACS* records statistics from the game for analysis. 6. User is now free to play another game, or choose to do something else |
| **Extensions** | 1. \* If no account was found during authentication \*   1. System shows error and denies access 2. User tries their credentials again (if typo), or a different account, or creates another account   2. \* If invalid account credentials were found during authentication \*   1. System shows error and denies access 2. User may try credentials again (if typo), or request a password reset    1. System sends email to user with password reset instructions   3. \* If a Player has attempted to authenticate too many times \*   1. For the system’s protection, too many failed authentication attempts by any Player should result in a throttling of that Player’s ability to attempt further authentications, pending a cooldown period.   4. \* If Player’s client cannot communicate with server to authenticate user \*   1. System shows a description of error and denies access 2. System instructs user to wait and try again 3. Admins are notified when this happens too many times (beyond some defined threshold of occurrences over time)   5. \* If the user quit the game before completion \*   1. The game details are logged to the system, and all quits are aggregated for review by Admins, just in case the Player quit out of frustration while dealing with a System bug 2. The Player’s in-game statistics will not be recorded, other than that they quit the game   6. \* If the Player is disconnected during a game \*   1. If the Player’s client reconnects before the end of gameplay, stats will still be recorded normally 2. If the Player’s client does not reconnect before the end of gameplay, no stats will be recorded, other than a record of the disconnection |
| **Special Requirements** | * Reliable server to receive incoming game stats |
| **Technology and Data Variations List** | Not applicable, because the System handles all threads on its own without need for special technology or data variation |
| **Frequency of Occurrence** | Could range from once per several months, to hundreds of times per day, depending on the Player’s personality type and other obligations. |
| **Miscellaneous** | We should determine how exactly a disconnection should be accounted for in a Player’s statistics, to be fair to Players with legitimately bad connections, yet dissuade malicious Players from strategically disconnecting in order to manipulate their statistics. |
| **System Sequence Diagram**    The Use Case for Play Game starts with the Player logging into their account on the client. After login, the player starts the game and the input loop is started. As the game plays, input from the player is recorded until the player dies. After the game, the score is displayed. | |

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