**Purchase PowerUp - Fully Dressed Use Case Model #2**

**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** |
| 2 | Player | Purchase Powerup | Alessandro |

# Use Case Model

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# Use Case 2 - Purchase PowerUp - Fully Dressed

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| **Scope** | Asteroids |
| **Level** | User Goal |
| **Primary Actor** | Player |
| **Stakeholders and Interests** | Player wants to purchase Powerups in order to have a more enjoyable gameplay experience.  Owner wants to encourage as many Players to purchase as many PowerUps as possible, to generate revenue.  External Bank also wants as many PowerUp Purchases to be done as possible, to increase their own business revenue. |
| **Preconditions** | Player has a valid account in good standing  Player has valid details for a valid form of payment (Paypal, Credit Card, etc) |
| **Success Guarantee** | Player’s payment details have been saved into the system. Player’s payment has been received by the System. Player has either directly received their purchased Powerups to their account, or has received credits into their account that can later be used to redeem PowerUps. |
| **Main Success Scenario** | Player wants to purchase PowerUps for their gameplay. Player authenticates with the system and is granted access. Player then browses available Powerups for purchase, and selects one desired Powerup. Player pays for the PowerUp with a Credit Card, in order to receive their desires Powerup(s). System processes payment and/or deducts pre-existing balance, and adds the Powerup(s) to the Player’s account. Player is then free to use the Powerup(s) now or at a later time. |
| **Extensions** | 1. \* When Player attempts to purchase \*   1. If Player has not yet entered payment details, Player will be redirected to the area where they can enter payment details.    1. If payment details are verified as valid, payment details are saved into the system, and user can continue with purchase    2. If payment details aren’t valid, Player is notified and will be unable to make a payment.       1. Player may attempt to re-enter the same or different payment details one or more additional times       2. If Player enters too many failed payment details, Player is is throttled from doing so again for some time 2. If Player’s payment was declined, Player may try to process payment again    1. If Player attempts too many failed payments, Player will be throttled from doing so for some amount of time 3. If external payment system is offline, Player is asked to try again later and we will apologize by granting them some small free PowerUp or credit, to limit the damage to our reputation. 4. If Player’s payment was successful, the Powerup(s) or credit is applied to their account   2. \* When Player is redeeming previously purchased credits \*   1. If Player’s credit balance is sufficient for their desired Powerup(s), transaction can proceed 2. If Player doesn’t have sufficient balance, Player is prompted to add more balance    1. If Player does not have a valid form of payment saved, Player is sent to the page where they may add details (see the first Extension Thread)    2. If Player does have a valid form of payment saved, Player is prompted to initiate a payment for more credit       1. If payment succeeds, return to the beginning of this thread (2)       2. If payment fails, Player may make one or more additional attempts, per Extension Thread 1.2       3. Player may make purchases per Extension Thread 1.4 |
| **Special Requirements** | External Banking System is online for payment processing, and is functional. |
| **Technology and Data Variations List** | External Banking System with Payment Processing API.  Protocol to store payment details that complies with all applicable laws. |
| **Frequency Occurrence** | Could range *never* to several times a day, depending on the Player’s personality, income, |
| **Miscellaneous** | We should think about a 2nd payment processing system (bank) for redundancy, in case our primary system goes down. We could even use both systems at the same time, randomly choosing one for each transaction, to ensure both work.  Tax law issues? Currency exchange rate issues? National and International issues related to payment processing, acceptance, virtual currency (ie credits), and virtual goods. |
| **System Sequence Diagram**    After logging in, the player selects the store. The items available are displayed and the player selects which item to purchase. The player then selects the payment type and enters their payment information. After the transaction, the powerup is added to the account. | |

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