**EBazaar Inc.**

**eBazaar**

**Use Case : Checkout**

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| eBazaar | Version: 1.1 |
| Use Case Specification: Checkout | Date: May 2017 |

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**Use Case : Checkout**

**1. Brief Description**

Perform the process of checking out with purchase—validating credit card, selecting shipping method, setting address, acknowledging agreement.

**2. Actors**

Customer

Credit Verification System

Rules Engine Accounts Db ProductsDb

**3. Preconditions**

The Customer clicked the Proceed Checkout button on the Cart Items browse window.

**4. Flow of Events**

**4.1 Basic Flow –** Checkout takes place successfully using default address and payment info

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| **User Activity** | **System Response** |
| 1. Customer selects the Proceed to Checkout option | 1. If user is not logged in, go to Login Use Case. After successful login, the system brings up a billing and shipping address screen with the user’s default billing and shipping information, obtained as customer information, including addresses and default shipping method. |
| 2. Customer accepts default shipping address and clicks the  "Billing address same as shipping" option. | 2. System copies shipping into the billing address fields. |
| 3. Customer then opts to continue checkout. | 3. The system displays default payment method. For this phase of development, the only payment method is credit card. Credit card type, credit card number, expiration date, and name on card. |
| 4. Accepting the default payment info, Customer opts to continue | 4. The system calls the Rules Engine to make basic data validation checks on the fields in the Payment data. After the rules pass, the system passes the data to the Credit Verification System. After processing, the system displays Terms of Agreement. |
| 5. Customer accepts Terms of Agreement. | 5. The system displays the shopping cart  details once again in the Final Order screen. |
| 6. User reviews final order screen and submits order. | 6. The system submits the order for eBazaar order processing and displays a thank you message. The system assembles from the submitted shopping cart and customer data a final order that is stored in the Accounts database. |

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**4.2 Alternate Flows**

*4.2.1.* Checkout takes place successfully using all defaults except that a updated (valid) shipping or billing

address .

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| **User Activity** | **System Response** |
| 1.Customer selects the Proceed Checkout button | 1. If customer is not logged in, go to Login Use Case. After successful login, the system brings up a billing and shipping address screen with the user’s default billing and shipping information, including addresses and default shipping method. |
| 2. Customer types in new shipping (billing) address and clicks the "New Shipping Address" (“New Billing Address”) check box. The user opts to continue to Payment window. | 2. The system calls the Rules Engine to validate the new address. After validity is verified, the address is sanitized and stored in memory in its sanitized format. The system displays the payment info screen, as in  Step 2 of the Basic Flow. |
| 3. Steps 3 –5 are the same as the Basic Flow |  |

*4.2.2* Checkout takes place successfully using all defaults except that both a new shipping address and new billing address (both valid) are entered.

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| **User Activity** | **System Response** |
| 1. Customer selects the Proceed to Checkout option | 1. If user is not logged in, go to Login Use Case. After successful login, the system brings up a billing and shipping address screen with the user’s default billing and shipping information, including addresses and default shipping method. |
| 2. Customer types in new shipping and billing addresses and clicks the “Save Shipping Address” and “Save Billing Address” options, and does NOT select the "Billing address same as shipping" option. User then clicks on the Continue option. | 2. The system calls the Rules Engine to validate both addresses. After validity is verified, both addresses are sanitized and stored in memory in sanitized format. The system displays the payment info screen, as in Step 2 of the Basic Flow. |
| 3. Steps 3 – 6 are the same as in the Basic Flow |  |

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*4.2.3* Customer enters a new, invalid shipping (billing) address.

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| **User Activity** | **System Response** |
| 1. Customer selects the Proceed to Checkout option | 1. If customer is not logged in, go to Login Use Case. After successful login, the system brings up a billing and shipping address screen with the user’s default billing and shipping information, including addresses and default shipping method. |
| 2. Customer types in new, invalid shipping (billing) address and clicks the “Save Shipping Address” (“Save Billing Address”) check box. User then opts to continue. | 2. The system calls the Rules Engine to validate address. An error message is presented to the Customer to indicate the nature of the error. Examples:  “Zipcode must be numeric.”  “Zipcode must have exactly 5 digits.” “All address fields are required.” |

*4.2.4* When payment information is checked against rules, a rule violation is discovered.

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| **User Activity** | **System Response** |
| 1. Customer selects the Proceed Checkout option | 1. If Customer is not logged in, go to Login Use Case. After successful login, the system brings up a billing and shipping address screen with the user’s default billing and shipping information, including addresses and default shipping method. |
| 2. Customer accepts default shipping and billing addresses and then opts to continue. | 2. The system displays the Payment Window |
| 3. Either the user accept default payment info or  updates the value shown and selects “Proceed” | 3. The system runs rules on the submitted payment info and discovers an error (current date may be past the expiration date if default was accepted, or any of the credit card fields may have failed rules if user has updated the payment fields), or rules pass but Credit Verification System returns an error (insufficient funds, cancelled or denied card). An error message is presented to the user indicating the problem (empty  fields, credit card number not numeric or not 16 digits, expiration date invalid, MasterCard in Illinois).  System continues to display the Payment Window. |

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*4.2.5* User selects Shipping Address (Billing Address) from a list of saved addresses.

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| **User Activity** | **System Response** |
| 1. User selects the Proceed to Checkout option | 1. If user is not logged in, go to Login Use Case. After successful login, the system brings up a billing and shipping address screen with the user’s default billing and shipping information, including addresses and default shipping method. |
| 2. User opts to “Select Ship Address” (or “Select Bill  Address”). | 2. The system reads from the database the shipping (billing) addresses stored for this customer and presents them for selection by the user (in, say, a popup window). |
| 3. User selects one of the addresses displayed. | 3. The system populates the Shipping Address (Billing  Address) table in the window with the selected address information. |
| Remaining steps are same as Steps 3-6 in Basic Flow |  |

*4.2.6 Order Cancellation*

The user cancels an order in the Final Order Window. The UI displays “Order Cancelled” and remains on

the same screen.

*4.2.7 Reject terms and conditions*

On the Terms and Condition Window, instead of selecting “Accept”, the user may choose to return to

Shopping Cart or Exit Application.

**4.3 Exceptional Flows**

*4.3.1 Credit card authorization unavailable –* a message is presented in the message bar indicated unavailability of this service and advises user to try again later.

*4.3.2 Rules engine unavailable* - a message is presented in the message bar indicated unavailability of this service and advises user to try again later.

**5. Post-Conditions**

If the use case was successful, the order information will have been entered into the orders database. If the user enters a new valid shipping address, that is saved on the memory.

**6. Business Rules**

a. If, in filling out shipping and billing info, the user creates a new shipping address, all fields must be filled in.

b. If, in filling out shipping and billing info, the user creates a new shipping address, zip code must be numeric and consist of 5 characters.

c. All fields in the payment info screen must be non blank.

d. The credit card number on the payment info screen must be numeric, having 16 digits.

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e. The expiration date given for the credit card on the payment info screen must either be today's date or some date after today's date.

f. MasterCard may not be used for payment in the state of Illinois (i.e. for *billing* address in Illinois). g. User may not proceed with Checkout steps if his/her Shopping Cart is empty.

h. When a User submits a final order, the quantity requested must not exceed the quantity available.