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| **Actor’s Action** | **System Response** |
| 1) The factory setup the machine  3) Enters (Default Password, Default Username, Location, ID)  5) Enables remotes access and monitoring for beneficiary | 2) Validates and accepts credentials  4) Sends new credentials to remote servers  6) System operates and is accessible locally and/or remotely by beneficiary |
| **Alternative route** | |
|  | 3a) Credential submission not accepted.  [SR] Network error prevents sending credentials to remote servers |

**Machine Installation**

**Vending Machine**

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| **Actor’s Action** | **System Response** |
| 1) Chooses product Mapping from management interface  2) Enters product name into corresponding input box and clicks Ok button  5) Select a product name from a dropdown list  6 ) Selects a desired slot location from a dropdown menu  8) Enters a desired price into corresponding input box and clicks OK button  9) Select A desired price from dropdown menu  10) Select a desired temperature range or status from the current product dropdown menu.  12) Select a quantity for product from a drop down menu.  13) Presses save on management interface. | 3) Validates and accepts price input  7) Validates and accept slots allocation  11) Accepts temperature ranges  14) Accepts and stores created configurations. |
| **Alternative route** | |
|  | 8a) Beneficiary enters wrong format for price  [SR] Beneficiary is alerted to his error and machine does not accept input  12) Beneficiary provides wrong quantity for product  [SR] System fails to calculate the individual weight of product |

**Refill of machine**

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| **Actor’s Action** | **System Response** |
| 1) Open machine’s door  2) Places goods into machine  3) Locks the door | 4) System response to suppliers locking the door  5) System calculate individual weight for products in allocated slots -System initialises AlertControl according to configuration -System calculates an estimate of overall product value -System calculates offset against current available money in the Machine |
| **Alternative route** | |
|  | 2a) Supplier places products in the wrong slots.  [SR] System fails to estimate overall estimate of current money in the system |

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| **Actor’s Action** | **System Response** |
| 1) Request vending machine type to a specific location from Machine provider  3) Pay for the vending machine | 2) Location of installation is define and mapped out  4) Machine installation is carried out and machine details (Type, location, ID, Customer) is logged on the Machine provider database server |
| **Alternative route** | |
|  | 4a) Customer machine installation is faulty  [SR] System refuses to log and confirm details. |

**Purchase Vending Machine**

**Purchase items**

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| **Actor’s Action** | **System Response** |
| 1) Select a preferred item by pressing a button  3) Insert cash or card for payment  6) Get or pick up item from the base of the base of the machine | 2) Vending machine reads and calculate the prefer item details (Type, slot-line, numbers, amount)  4)Vending machine display amount due and receive the proportionate cash value  5) Vending machine dispense or drop the item selected for user to pick it up |
| **Alternative route** | |
|  | 4a) User select item and did not insert cash or payment  [SR] Vending machine refuse to dispense item  4b) User select wrong item and insert cash (lower than the item value)  [SR] Vending machine refuse to dispense item and refund cash. |

**Cash evaluation**

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| **Actor’s Action** | **System Response** |
| 1) Sense the ambient environ for change in temperatures proportionate to the value set, for the environs. | 2) Adjust the degree of coldness relatively |
| **Alternative route** | |
|  | 2a) Temperature sensor not reading correctly the set-up temperature environ  [SR] Temperature function refuse to work |

**Reads temperature**

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| **Actor’s Action** | **System Response** |
| 1) Read and confirm the cash/card properties that was inserted  3) Compare the cash/card amount to the calculated value of the selected items. | 2) Detect the genuineness of the currency or card properties.  4) Accept the cash/card and send data to confirm (in the case of credit/debit/visa card) |
| **Alternative route** | |
|  | 2a) Cash/card cannot be verify  [SR] System cannot dispensed items. |

**Vandalise**

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| **Actor’s Action** | **System Response** |
| 1) Handles machine with aggressive force and malicious intent | 2) Internal Acelerometers report data higher than the specify threshold  -System sends alert and report corresponding logs to remote servers -System sends an alert email to the Beneficiary. |
| **Alternative route** | |
|  | 2a) Internal Accelerometers may be faulty  [SR] System not able to detect possible vandalism [SR] System interprets a normal purchase as vandalism |

**Report Weight Data**

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| **Actor’s Action** | **System Response** |
| 1) Reports data from sensors that does not correspond to overall estimation of current weight | 2) The system check if a purchase was made  -System check what was purchased -The system calculates weight imbalance against the individual weight of product that was purchase -The System determines if the weight balance corresponds to a possible product that was not dispensed due to error -The system validates should a refund be issued -The system reports weight imbalance and actions taken to remote server and logs |
| **Alternative route** | |
|  | 2a) System cannot read sensor  [SR] System fails to determine if current weight imbalance was related to a foregoing purchase and cannot decide whether it should issue a refund. |

**Login setup**

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| **Actor’s Action** | **System Response** |
| 1)Select change login from management interface  2) Enters new username in provided input Box  3)Enters new password in provided input box  4) Presses save | 5) Validate new credentials  6) Stores new credentials |
| **Alternative route** | |
|  | 5a) Beneficiary (customer) supplies password not adhering  [SR] Vending Machine does not accept input and alert beneficiary (customer) the error |

**Login**

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| --- | --- |
| **Actor’s Action** | **System Response** |
| 1) Enters username  2) Enters password | 3) Validate Credentials  4) Allow access to management interface |
| **Alternative route** | |
|  | 3a) Machine Provider supplies wrong username or password  [SR] Vending Machine denies access to management interface. |