**QA ENGINEER TEST**

**Test title: Multi-currency support (As a customer, I want to be able to pay for products using either British or Euro coins.)**

**Acceptance criteria: All British and Euro coins are accepted.**

Priority: High

Test number: 1.1

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have British and Euro coins; the machine is full of products.

**Step 1**

Description: Inserting 1 British Pound into the coin slot.

Expected results: Machine accepts the coin.

**Step 2**

Description: Ejecting 1 British Pound from the machine.

Expected results: Machine returns the coin.

**Step 3**

Description: Inserting 1 Euro into the coin slot.

Expected results: Machine accepts the coin.

**Test title: Multi-currency support (As a customer, I want to be able to pay for products using either British or Euro coins.)**

**Acceptance criteria: As coins are entered, the total credit value is uploaded on a display screen.**

Priority: High

Test number: 1.2

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have British and Euro coins; the machine is full of products.

**Step 1**

Description: Inserting 1 British Pound into the coin slot.

Expected results: Machine accepts the coin, displaying the balance of 1 Pound.

**Step 2**

Description: Ejecting 1 British Pound from the machine.

Expected results: Machine returns the coin, displaying the balance of 0.

**Step 3**

Description: Inserting 1 Euro into the coin slot.

Expected results: Machine accepts the coin, displaying the balance of 1 Euro.

**Test title: Multi-currency support (As a customer, I want to be able to pay for products using either British or Euro coins.)**

**Acceptance criteria: Mixed currency is not accepted; the first coin of the second currency entered does not contribute to the credit value and is returned to the Customer (with explanation massage on the screen).**

Priority: High

Test number: 1.3

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have British and Euro coins; the machine is full of products.

**Step 1**

Description: Inserting 1 British Pound into the coin slot.

Expected results: Machine accepts the coin, displaying the balance of 1 Pound.

**Step 2**

Description: Inserting 1 Euro into the coin slot.

Expected results: Machine rejects and returns the coin, displaying the balance of 1 Pound and a message saying mixed currency is not accepted.

**Step 3**

Description: Ejecting 1 British Pound from the machine.

Expected results: Machine returns the coin.

**Step 4**

Description: Inserting 1 Euro into the coin slot.

Expected results: Machine accepts the coin, displaying the balance of 1 Euro.

**Step 5**

Description: Inserting 1 British Pound into the coin slot.

Expected results: Machine rejects and returns the coin, displaying the balance of 1 Euro and a message saying mixed currency is not accepted.

**Test title: Dispensing change (As a coin paying customer, after paying all my items, I want to be able to receive change.)**

**Acceptance criteria: After a purchase, the customer’s remaining credit is displayed on the screen.**

Priority: High

Test number: 2.1

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Inserting coins of a higher value than the desired product’s price.

Expected results: The machine accepts the coins and displays the balance.

**Step 2**

Description: Making a product selection.

Expected results: The machine dispenses the selected product.

**Step 3**

Description: Checking the balance.

Expected results: Machine shows remaining balance which should be more than 0 and equal the value difference between the previously inserted money and selected product’s price.

**Test title: Dispensing change (As a coin paying customer, after paying all my items, I want to be able to receive change.)**

**Acceptance criteria: Change is dispensed at the customer's request.**

Priority: High

Test number: 2.2

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Inserting coins of a higher value than the desired product’s price.

Expected results: The machine accepts the coins and displays the balance.

**Step 2**

Description: Making a product selection.

Expected results: The machine dispenses the selected product.

**Step 3**

Description: Requesting a return of the coins.

Expected results: The machine dispenses the coins of the value equal to the difference between inserted coins’ value and bought product’s price.

Question to the Product Owner: Does the machine have a button that allows to request change at customer’s wish?

**Test title: Dispensing change (As a coin paying customer, after paying all my items, I want to be able to receive change.)**

**Acceptance criteria: Change is returned in the smallest number of coins.**

Priority: Medium

Test number: 2.3

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Inserting big amount of coins of a small nominal value each, but a higher total value than the desired product’s price.

Expected results: The machine accepts the coins and displays the balance.

**Step 2**

Description: Making a product selection.

Expected results: The machine dispenses the selected product.

**Step 3**

Description: Requesting a return of the change.

Expected results: The machine dispenses correct change in as little amount of coins as possible, each the highest possible nominal value.

**Test title: Dispensing change (As a coin paying customer, after paying all my items, I want to be able to receive change.)**

**Acceptance criteria: The customer is notified about how much change has been dispensed on the display screen.**

Priority: Medium

Test number: 2.4

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Inserting coins of a higher value than the desired product’s price.

Expected results: The machine accepts the coins and displays the balance.

**Step 2**

Description: Making a product selection.

Expected results: The machine dispenses the selected product.

**Step 3**

Description: Requesting a return of the change.

Expected results: The machine dispenses the coins of the value equal to the difference between inserted coins’ value and bought product’s price.

**Step 4**

Description: Checking the display for the message.

Expected results: The machine displays the balance of 0, with the message stating the value of the change returned.

**Test title: Dispensing change (As a coin paying customer, after paying all my items, I want to be able to receive change.)**

**Acceptance criteria: If the machine is unable to offer change, the customer must be notified of this via the display screen prior to making a purchase.**

Priority: High

Test number: 2.5

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Emptying the machine of coins.

Expected results: Machine displays message on its screen, saying the change is unavailable.

Notes: I made an assumption that the machine should display the message all the time when there’s no change available, not only after the money is inserted.

Question to Product Owner: Do I have access to removing coins from the machine myself? Is it supposed to be showing the message at all times or only after the customer inserts some money (but prior to making a purchase)?

**Test title: Multiple vends (As a coin paying customer, I want to be able to pay for more than one product in a single transaction)**

**Acceptance criteria: To enable multi-product purchase, change is not dispensed immediately after the customer pays for the first product.**

Priority: High

Test number: 3.1

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Inserting coins of a higher total value than the desired product’s price.

Expected results: The machine accepts the coins and displays the balance.

**Step 2**

Description: Making a product selection.

Expected results: The machine dispenses the selected product.

**Step 3**

Description: Checking the balance.

Expected results: The machine displays remaining balance, not returning the change without the request, allowing to make another selection.

Notes: I made an assumption that the machine is not programmed to return change automatically.

Question to the Product Owner: Does the machine have the option to request a change (a button to press, for example)? Or is there an option to choose multiple vends prior to making purchase?

**Test title: Multiple vends (As a coin paying customer, I want to be able to pay for more than one product in a single transaction)**

**Acceptance criteria: Credit must be displayed on the display screen.**

Priority: High

Test number: 3.2

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have coins; the machine is full of products.

**Step 1**

Description: Inserting coins of a higher total value than the desired product’s price, but lower total value than the price of more than one product.

Expected results: The machine accepts the coins and displays the balance.

**Step 2**

Description: Making a product selection.

Expected results: The machine dispenses the selected product.

**Step 3**

Description: Checking the balance.

Expected results: The machine displays remaining balance without returning the change immediately, allowing to make another selection.

**Step 4**

Description: Making another selection.

Expected results: The machine displays credit, showing how much more money is needed for the selected second product.

Notes: I assumed that “credit” in this case means the amount of money left to insert into the machine to allow to pay for the product.

**Test title: Contactless payment (As a customer, I want to be able to pay for products using contactless debit/credit card or Apple Pay.)**

**Acceptance criteria: The machine will debit the customer’s credit card/bank account with value of selected product.**

Priority: High

Test number: 4.1

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have contactless card or Apple Pay; the machine is full of products.

**Step 1**

Description: Making a selection of a desired product.

Expected results: The machine accepts the selection and displays credit.

**Step 2**

Description: Making a payment using contactless card or Apple Pay on the contactless terminal.

Expected results: The terminal on the machine debits customers card or Apple Pay with the amount equal to the price of the selected product and credit previously displayed on the screen.

Notes: I assumed the customer has enough funds on the card or Apple Pay to cover the cost of the product. If that’s not the case, the machine should display an error message.

**Test title: Monitoring & alerting (As a Service Operator, I want the machine to notify me of significant/error events)**

**Acceptance criteria: The machine emails designated operative when a product reaches low stock.**

Priority: High

Test number: 5.1

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have a vending machine full of products.

**Step 1**

Description: Buying the same product over and over until there are only a few of them left.

Expected results: The machine sends an email, notifying designated operative of the low stock.

Question to a Product Owner: How low the stock should be for the machine to make a note of it? Is there a certain number of products left that triggers the “low stock” message?

**Test title: Monitoring & alerting (As a Service Operator, I want the machine to notify me of significant/error events)**

**Acceptance criteria: The machine emails designated operative when a product goes out of stock.**Priority: High

Test number: 5.2

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have a vending machine full of products.

**Step 1**

Description: Buying the same product over and over until there are none left.

Expected results: The machine sends an email, notifying designated operative of the product being out of stock.

**Test title: Monitoring & alerting (As a Service Operator, I want the machine to notify me of significant/error events)**

**Acceptance criteria: The machine emails designated operative when a product goes out of stock.**Priority: High

Test number: 5.3

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have a vending machine full of products.

**Step 1**

Description: I change the machine’s temperature for a short time.

Expected results: The machine sends an email, notifying designated operative of the temperature being outside the range.

Notes: I assumed there is a temperature switch on the machine.

Questions to the Product Owner: Is there a way to change the temperature manually? Is there a switch I can use to do that?

**Test title: Monitoring & alerting (As a Service Operator, I want the machine to notify me of significant/error events)**

**Acceptance criteria: The machine emails designated operative when the machine develops a fault.**

Priority: High

Test number: 5.4

Test date: 1/7/2020

Test designed by: Oleksandra Tretyakova

Test conditions: I have a vending machine full of products.

**Step 1**

Description: I break the internet connection (for example, turn of Wi-Fi the machine is connected to)

Expected results: The machine is supposed to send an email to the designated operative, however, that can’t be done due to lack of internet connection. Therefore, test would be failed.

Question to the Product Owner: Am I allowed to temporarily “damage” the machine by, for example, putting something inside that makes the movement impossible? If yes, then I would do that to check if the email gets sent.