Sample

Computer Science III

Homework 1 – Use Cases

**User Purchases a Product**

1. The machine displays a list of products.
2. The user selects a product from the list.
3. The machine displays price.
4. The user adds coins.
5. The machine dispenses purchased product.

**Variation #1**

* 1. In Step 2, the user selects an invalid product.
  2. Continue with Step 1.

**Variation #2**

2.1 In Step 4, the user adds an insufficient amount of coins within the required time interval.

2.2 The machine returns coins to the user.

2.3 Continue with Step 1.

**Variation #3**

3.1 After Step 4, the machine cannot dispense the product because it is sold out.

3.2 The machine displays an error message: *Sold Out*.

3.3 The machine returns coins to the user.

3.4 Continue with Step 1.

**Variation #4**

4.1 At any time, the user cancels the request.

4.2 The machine returns any added coins.

4.3 Continue with Step 1.

**Operator Logs In**

1. The machine displays a list of products.
2. The operator enters authorized passcode.

**Variation #1**

* 1. During Step 2, the operator enters invalid passcode.
  2. The machine displays an error message: *Invalid passcode*
  3. Continue with Step 1.

**Operator Restocks Product**

1. The operator carries out **Operator Logs In**.
2. The machine displays two options to the operator:
   1. *Restock*
   2. *Remove Money*
3. The operator chooses the *Restock* option.
4. The machine displays a list of items that can be restocked.
5. The operator selects an item z to restock.
6. The machine displays: *How many would you like to add?*
7. The operator indicates how many to add by typing in a number n.
8. The machine adds n to the total z in stock.

**Variation #1**

* 1. During Step 3, the operator chooses an invalid option.
  2. The machine displays an error message: Invalid option.
  3. Continue with Step 2.

**Variation #2**

2.1 During Step 5, the operator chooses an invalid product.

2.2 The machine displays an error message: Invalid product.

2.3 Continue with Step 4.

**Variation #3**

3.1 During Step 7, the operator indicates an invalid number.

3.2 The machine displays an error message: Invalid number of items to add.

3.3 Continue with Step 6.

**Variation #4**

4.1 At any time, the operator cancels the request.

4.2 Continue with Step 1.

**Operator Removes Money**

1. The operator carries out **Operator Logs In**.
2. The machine displays two options to the operator:
   1. *Restock*
   2. *Remove Money*
3. The operator selects *Remove Money*.
4. The machine dispenses the money to the operator.

**Variation #1**

* 1. During Step 3, the operator chooses an invalid option.
  2. The machine displays an error message: Invalid option.
  3. Continue with Step 2.

**Variation #2**

2.1 At any time, the operator cancels the request.

2.2 Continue with Step 1.