Software Engineering Assignment 1

Produce a UML use-case model use-case description that are within the scope of the system.

|  |  |
| --- | --- |
| **ID** | UC1 |
| Actors | Accept and Validate coins and calculate value of the coins inserted |
| Name | Coin Calculator |
| Description | User inserts coins into machine. The Machine will determine if the coins are acceptable for the machine (Pounds would be accept but Euros may not). If coins are accepted the machine will calculate the amount entered to determine if its enough to purchase item. |
| Pre-Condition | Coins must be acceptable to the machine |
| Event Flow | * Coins inserted * Coins determine if acceptable * Coins calculated (total sum) |
| Post- condition | If coins are not excepted then result in output coins and try again |
| Includes | UC2, UC3, UC4 |
| Extensions |  |
| Triggers | Incorrect coins inserted will result in error |
| **ID** | UC2 |
| Actors | Choosing Drink |
| Name | Drink chooser |
| Description | Users enters choosing number selection for drink. Machine reads selection. |
| Pre-Condition | User must enter correct number for a selection |
| Event Flow | * Users enters drink choice * Machine reads chosen selection |
| Post- condition | If user enters incorrect data then machine will output “try again” |
| Includes | UC2, UC3, UC4 |
| Extensions |  |
| Triggers | Incorrect selection will result in error |
| **ID** | UC3 |
| Actors | Heat up the water to the correct temperature then mix the drinks. Dispenses in disposable cups |
| Name | Drink temperature |
| Description | User enters temperature level for drink. Machine outputs disposable cups. Machine then dispenses and mixers drink. |
| Pre-Condition | Users must select a presented temperature level |
| Event Flow | * User selects chosen temperature * Machine reads data * Machine dispenses disposable cup * Machine Mixes drink |
| Post- condition | If user selects temperature level not presented than error and will ask to retry again |
| Includes | UC2, UC3, UC4 |
| Extensions |  |
| Triggers | Incorrect temperature entered will result in error |
| **ID** | UC4 |
| Actors | Return change if the customer has entered an amount greater than price of drink. |
| Name | Return |
| Description | If user has entered an amount that cost more than drink than machine will output the sum of the additional amount entered. |
| Pre-Condition | Users must have entered a greater sum of the chosen drink |
| Event Flow | * Coins inserted * Machine determines if sum entered is greater * Machine outputs the sum of the amount entered after drink sum has been taken. |
| Post- condition | If sum is equal to drink than no output |
| Includes | UC2, UC3, UC4 |
| Extensions |  |
| Triggers | Sum = to drink results In no response |

**Task 2**

new passwords must be limited to at least 8 chars is a good example

Machine must be able to connect to the internet

Hot water shouldn’t heat up more than 45°C

Response Time from user to machine

Alarm ends when Operator closes door

Machine needs to be able to output right drink option

Machine needs to output right amount of milk or sugar

Machine needs refill of drinks

Machine needs to be able to read button selection

Machine needs to be plugged

**Task 3**

COFFAA = Black coffee no sugar

COFFAB = Black coffee with sugar

COFFBB = Coffee with milk and sugar

COFFCA = Coffee plain

HOTCAA = Hot Chocolate plain

FLWAA = Flat White plain

TEAAA = Tea no sugar

TEAAB = Tea with sugar

TEABB = Tea with milk and sugar

TEACA = Tea Plain

SOUAA = Soup plain