

2030

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Use Case	Show inventory
Actor	Vending machine
Purpose	To show availability of all beverages
Overview	The vending machine displays all available beverages
Type	Supporting
Cross Reference	Inventory Management Module
Pre-requisites	User interacts with the vending machine
Typical Course of Events	1. Vending machine shows all available beverages
Alternative Course of Events	
Exceptional Course of Events	

Use case	Select beverage
Actor	User
Purpose	To allow users to select a beverage from the vending machine
Overview	Users select a beverage
Type	Primary
Cross Reference	System Operations
Pre-requisites	
Typical Course of Events	1. User selects a beverage
Alternative Course of Events	
Exceptional Course of Events	

Use Case	Check inventory
Actor	Vending machine
Purpose	To check the availability of a selected beverage
Overview	Vending machine checks whether the vending machine has stock
Type	Supporting
Cross Reference	Inventory Management Module
Pre-requisites	User selects a beverage
Typical Course of Events	1. System checks inventory → 3. Availability is displayed
Alternative Course of Events	<ol style="list-style-type: none"> 1. If beverage is out of stock, system checks other vending machines 2. If another vending machine has the selected beverage, request pre-pay
Exceptional Course of Events	1. If totally out of stock, displays out of stock

Use case	Purchase beverage
Actor	User
Purpose	To conduct purchase
Overview	Users inserts credit card to the vending machine and makes a payment
Type	Primary
Cross Reference	System Operations
Pre-requisites	User has a valid payment method
Typical Course of Events	<ol style="list-style-type: none"> 1. User inserts credit card 2. Online banking transfers money 3. Beverage dispensed
Alternative Course of Events	<ol style="list-style-type: none"> 1. User inserts credit card 2. Online banking transfers money 3. Vending machine provides user with verification code and location
Exceptional Course of Events	<ol style="list-style-type: none"> 1. Payment fails due to insufficient funds → 2. Transaction is canceled

Use case	Prepay
Actor	User
Purpose	User receives beverage that the user purchased
Overview	Users goes to the directed vending machine and inserts verification code
Type	Primary
Cross Reference	System Operations
Pre-requisites	User has a valid verification code
Typical Course of Events	<ol style="list-style-type: none"> 1. User inserts verification code 2. Beverage dispensed
Alternative Course of Events	
Exceptional Course of Events	<ol style="list-style-type: none"> 1. Incorrect verification code 2. No beverage dispensed

Use case	Update stock
Actor	Vending machine
Purpose	Vending machine updates stock of beverages
Overview	Vending machine receives payment information and updates the number of beverages inside the vending machine
Type	Primary
Cross Reference	Inventory Management Module
Pre-requisites	User have transferred money through the vending machine
Typical Course of Events	1. User either conducts a purchase or a pre-purchase 2. The number of the selected beverage decreases
Alternative Course of Events	
Exceptional Course of Events	

Use case	Dispense beverage
Actor	Vending machine
Purpose	Vending machine provides user with the beverage
Overview	Vending machine dispenses the beverage that the user had selected
Type	Primary
Cross Reference	System operation
Pre-requisites	Either a proper purchase or a prepay with proper verification code had been received
Typical Course of Events	1. Vending machine dispenses the beverage
Alternative Course of Events	
Exceptional Course of Events	

Glossary

Glossary	Description
Name:string	Name of the beverage
Stock:int	Number of beverage
Price:int	Price of beverage
Location:int	Location of another vending machine
Verification_code:string	Verification code for the pre pay

Test number	Test category	Description	Use case
1	Test printed menu	See if the vending machine shows proper types vending machines	1. show_inventory
2-1	Select beverage	Check the beverage inside the vending machine. See if that beverage could be purchased	2. select_beverage, check_inventory
2-2	Select beverage	Select beverage that only exists in other vending machines. Test if the vending machine attempts prepay	2. select_beverage, check_inventory
2-3	Select beverage	Select a beverage that no vending machine contain. Test if the vending machine alerts the user.	2. select_beverage, check_inventory
3-1	Purchase beverage	Insert a credit card to make a payment. Test whether credit card works.	3. purchase_beverage, prepay
3-2	Purchase beverage	Insert a non valid credit card. Test if the vending machine denies the purchase	3. purchase_beverage, prepay
3-3	Purchase beverage	Insert a credit card with insufficient cash	3. purchase_beverage, prepay

Test number	Test category	Description	Use case
4-1	Update stock	Test whether the number of beverage had been decreased	4. update_stock, check_inventory
4-2	Update stock	If the purchased beverage has no more stock left inside the vending machine, test whether it will notify it.	4. update_stock, check_inventory
4-3	Update stock	Test whether the beverage that only has one stock remaining with a preserved order could be purchased	4. update_stock, check_inventory, select_beverage
5-1	Prepay	Insert proper verification code on a proper vending machine. Test whether user can receive drink	5. prepay
5-2	Prepay	Insert improper verification code on a proper vending machine. Test whether the vending machines refuses purchase	5. prepay
5-3	Prepay	Insert proper verification code on an improper vending machine. Test whether purchase is denied	5. prepay
6	Receive beverage	Test whether user can receive drink when followed all proper steps	6. dispense_beverage