



USE CASE DESCRIPTION:

ID	NAME	PRIMARY ACTOR	PRE-CONDITION	EVENT FLOW	EXTENSION POINTS	TRIGGER	POST-CONDITION
UC1	SELECT DRINK	CUSTOMER	1. Machine In Service 2. Adequate Stock		1. Reject If Out_Of_Stock = True 2. User Cancel Order		1. ORDER HAS BEEN PLACED
UC2	PAYMENT	CUSTOMER	1. Cash_Box_Full		1. Refund If Cash_Box_Full = True & User Cancel & Change Failed 2. Change If Coins > Price 3. Print Receipt	UC1	1. PAYMENT COMPLETED
UC3	GET DRINKS	CUSTOMER	1. Payment Success 2. Drink Is Available		1. Drink_Not_Available	UC2	IDLE
UC4	CANCEL ORDER	CUSTOMER	1. Order Has Not Been Confirmed		1. If Coins Were Inserted, Redund	UC1 & UC2	IDLE
UC5	CONFIRM ORDER	CUSTOMER	1. Payment Has Been Completed			UC2	1. PREPARING DRINKS
UC6	CHANGE	CUSTOMER	1. Coins Inserted > Price		1. Failed If Cash in Box Not Enough To Change	UC2	
UC7	PRINT RECEIPT	CUSTOMER	1. Payment Has Been Completed		1. Throw Exception If Out_Of_Paper	UC2	IDLE

UC8	COLLECT CASH	ENGINEER	1. Cash_Box_Full 2. Door Is Opening 3. Identity Authenticated		1. Failed To Authenticate		CASH_BOX_isEmpty
UC9	ADD STOCK	ENGINEER	1. Door Is Opening 2. Out_Of_Stock = True 3. Identity Authenticated		1. Failed To Authenticate		STOCK = ADEQUATE
UC10	TESTING	ENGINEER	1. Door Is Opening 2. Identity Authenticated		1. Failed To Authenticate		
UC11	CLOSE THE DOOR	ENGINEER					IDLE
UC12	AUTHENTICATE	ENGINEER & SERVICE OPERATOR	1. System Working		1. Alarm, If Timeout For Waiting Passcode 2. Inform Operator, If Timeout For Waiting Passcode 3. Create New Account Via Master Password By Operator	UC8, UC9, UC10	IDENTITY AUTHENTICATED
UC13	CHECK BALANCE	SERVICE OPERATOR	1. Identity Authenticated 2. Machine Is Online		1. Uc15 — Download Information		
UC14	INFORMED	SERVICE OPERATOR	1. Identity Authenticated 2. Machine Is Online				

UC15	DOWN LOAD INFOR MATIO N	SERVICE OPERATO R	1. Identity Authenticated 2. Machine Is Online				
UC16	RE- ENTE R PIN	SERVICE OPERATO R	1. Identity Has Not Been Authenticated			UC12	
UC17	CREAT E NEW ACCO UNT	SERVICE OPERATO R	1. Identity Authenticated 2. Master Password 3. Machine Is Online			MACHINE SYSTEM FAILED	
UC18	CHEC K STOC K LEVEL	SERVICE OPERATO R OR CUSTOM ER	1. Operator Request 2. Or Processing Purchase		UC14 — INFORMED	UC1, UC13	
UC19	CHEC K CASH BOX	SERVICE OPERATO R OR CUSTOM ER	1. Operator Request 2. Or Processing Purchase		UC14 — INFORMED	UC1, UC13	
UC20	REFU ND	CUSTOM ER	1. Coins Were Inserted, Order Has Not Been Confirmed			UC4	REFUND COINS
UC21	DOWN LOAD RECIP ES	SERVICE OPERATO R	1.Identity Authenticate 2. Machine Is Online				

TASK2: REQUIREMENTS

QUALITY	Requirement	Criteria
SPEED	Drinks should be prepared as soon as possible	Drinks should be delivered within 2 minutes after customer completed the payment and confirmed.
EASE OF USE	The vending machine shall be intuitive and self-explanatory	95% customers shall be able to buy drinks within two minutes of encountering the product for the first time
RELIABILITY	Machine should have small Mean-Time-To-Failed	Can be defined in terms of a percentage (say, 0.01%)
SIZE	Memory size of machine should be enough to maintain daily use	Can be defined in terms of a precise number (say, 1TB)
ROBUSTNESS	Machine can restart after failed in a short time	Can be defined in terms of a precise time (say, 5 minutes)

TASK3: STATECHART

