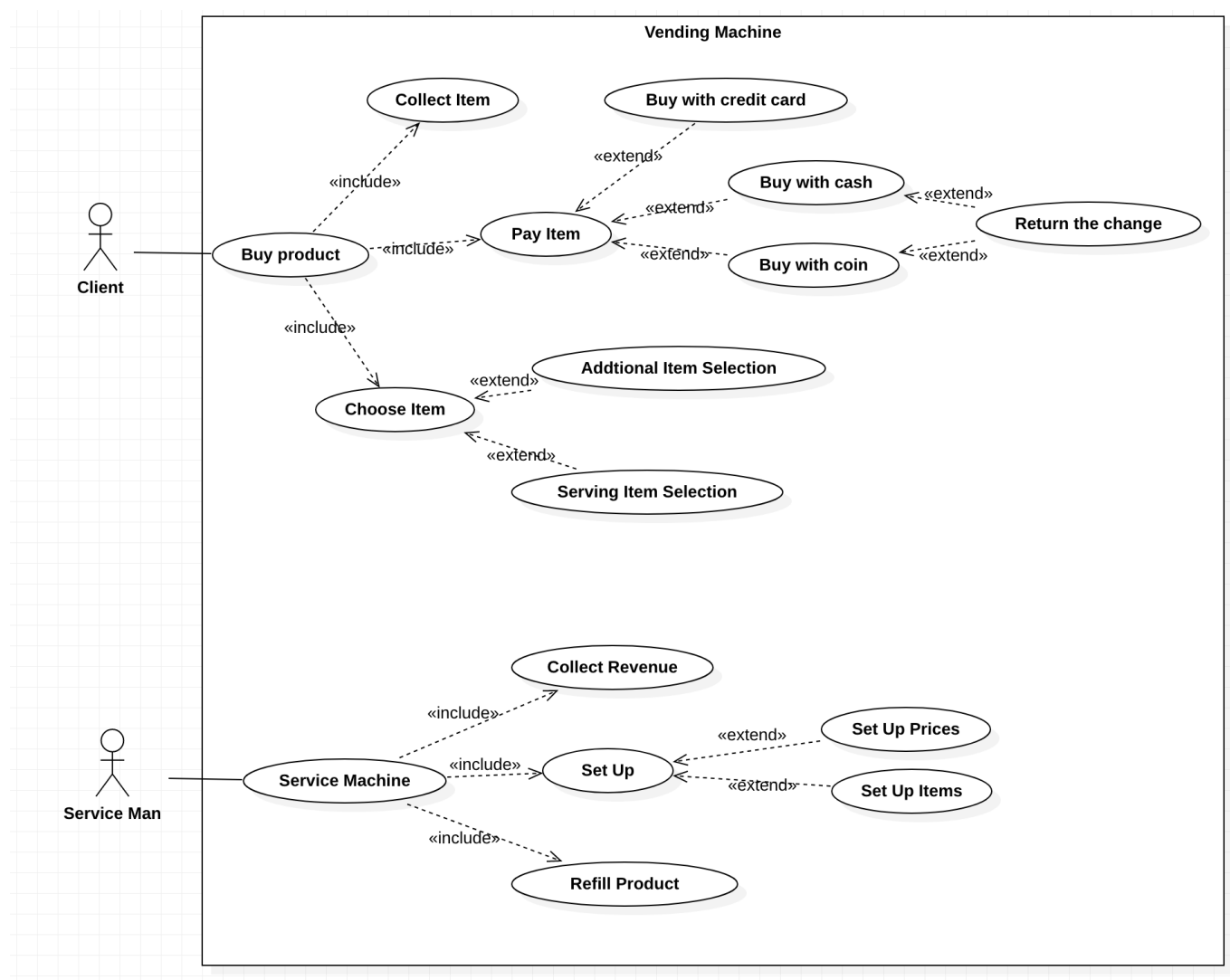# VENDING MACHINE

CENG 451 : Information Systems

Analysis and Design
Fall 2021-2022

Group 10

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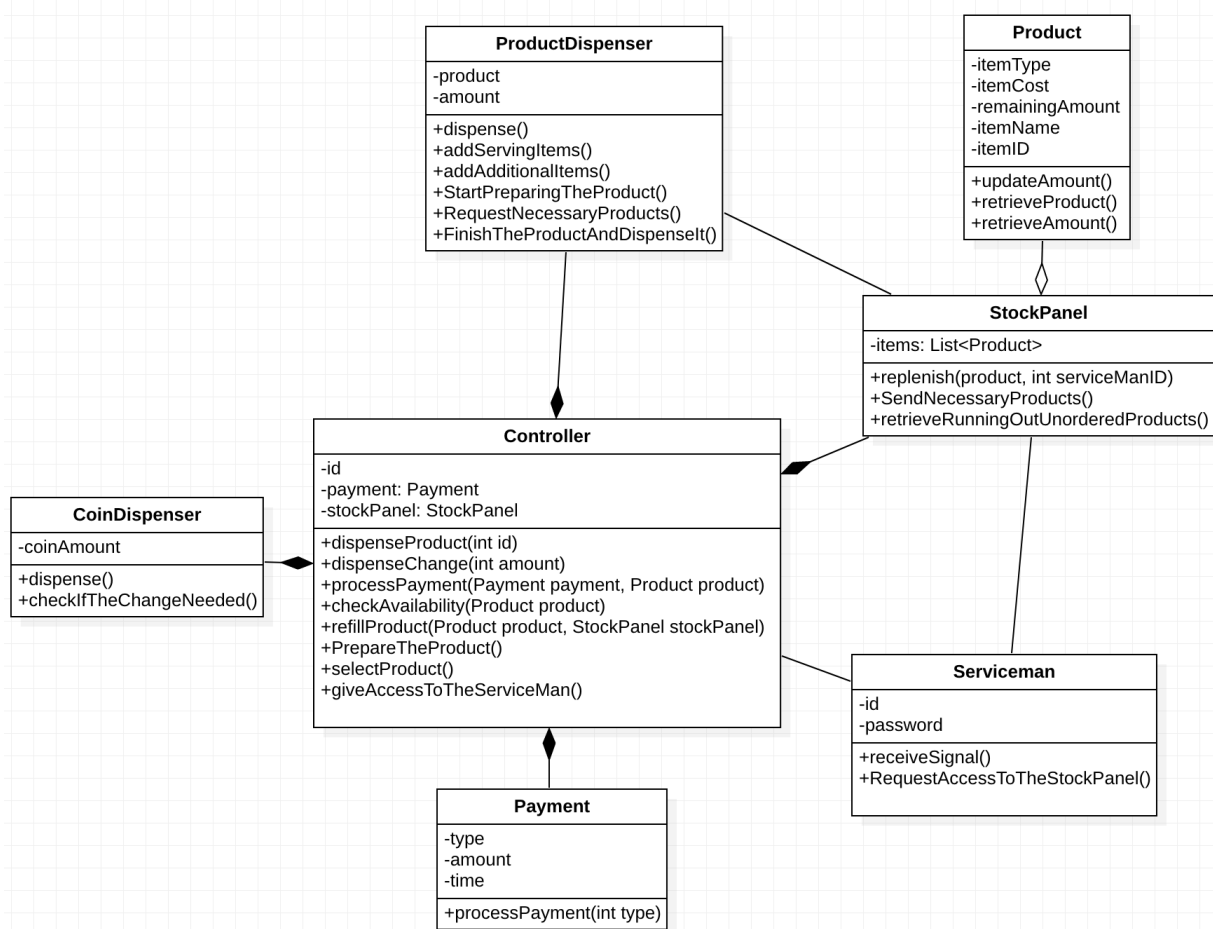Alparslan Yesilkaya - 2237923

Use Case Diagram

Scenario Description

1. Person chooses the product that he wants to buy. If there is no product, stay in step 1.
2. Serving items are selected depending on the product.
3. Additional items are selected by the user if they have not been finished.
4. User selects the payment method.
5. If the payment will be done using a credit card POS device is used.
6. Otherwise payment is done using cash or coin the money collection and identification system is used.
7. If the balance check goes through, go to step 9 otherwise go to step 5 or step 6.

8. If the payment method is not a credit card, return the change if the amount of the money is more than the cost of the product.
9. Give the item to the user.
10. If the vending machine detects a production that is running out, it orders and pays the product.
11. Serviceman receives the order.
12. Serviceman gets the product from the storehouse.
13. Serviceman arrives at the machine.
14. Serviceman puts the product into the machine.
15. Serviceman collects the payment for the products.

Class Diagram

Sequence Diagram

interaction BuyProduct

Controller | **StockPanel** | **Payment** | **ProductDispenser** | **CoinDispenser**

Lifeline: User

1 : Choose Product

2 : ControlAvaliability

3 : [NO OK]NotEnough

4 : [NO OK]NotEnough

5 : [OK]Enough

6 : [OK]RequestPayment

7 : MakePayment

8 : ProcessPayment

9 : [NO OK]PaymentFailure

10 : [NO OK]PaymentFailure

11 : [OK]PaymentSuccessful

12 : [PaymentType! = CreditCard] ReturnTheChange

13 : [ChangeIsNeeded] ReturnTheChange

14 : PrepareTheProduct

15 : StartPreparingTheProduct

16 : RequestNecessaryProducts

17 : SendNecessaryProducts

18 : FinishTheProductAndDispenseIt

20 : [OK]ProductIsReadyToTake

19 : [OK]ProductIsReadyToServe

interaction RefillProduct

Controller   **StockPanel**

Lifeline1: **Servicemen**

1 : CheckIfAnyUnorderedProductIsRunningOut

2 : [NO OK]NoSuchProduct

3 : [OK]ListOfTheProducts

4 : SendOrderWithPayment

5 : [Payment is Ok]PrepareTheProducts

6 : ArriveAtTheMachine

7 : RequestAccessToTheStockPanel

8 : [NO OK]NoAccess

9 : [OK] Access

10 : Refill

11 : [NO OK]Failure

12 : [OK]Successful

13 : CloseAccessToTheStockPanel

14 : [NO OK]Still open

15 : [OK]Closed