

# USE CASE EXAMPLES

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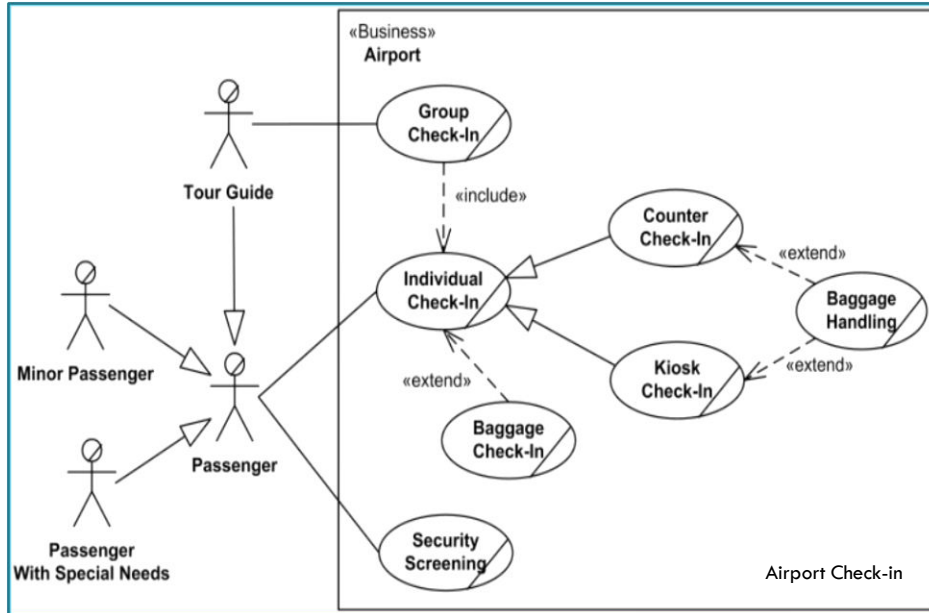
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# Two types of Use Case

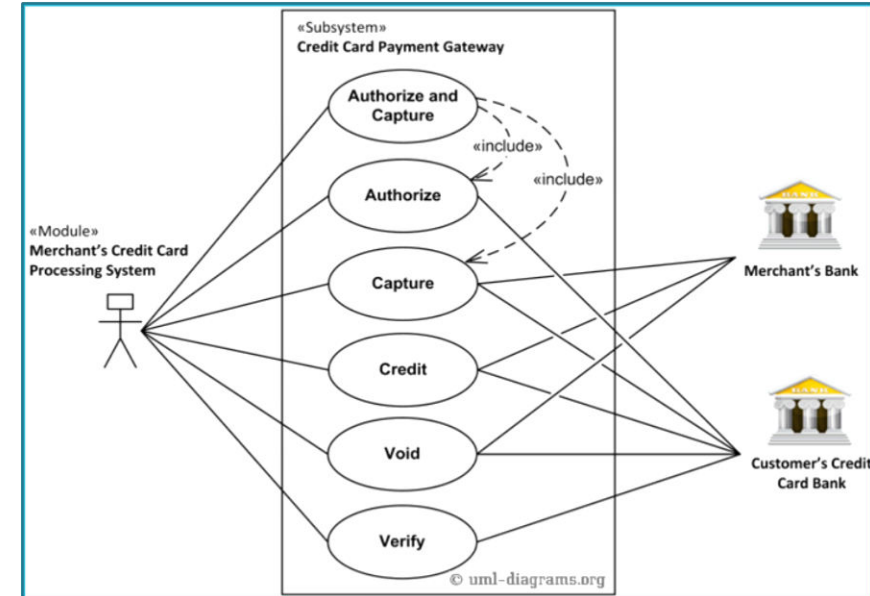
## Business Use Case Diagrams

Airport check-in and security screening business model



## System Use Case Diagrams

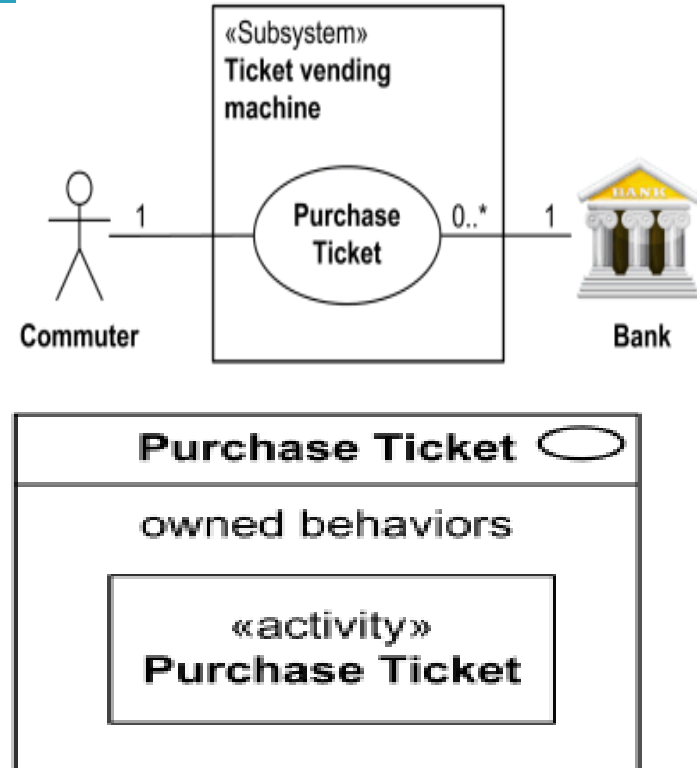
Credit Card Processing System

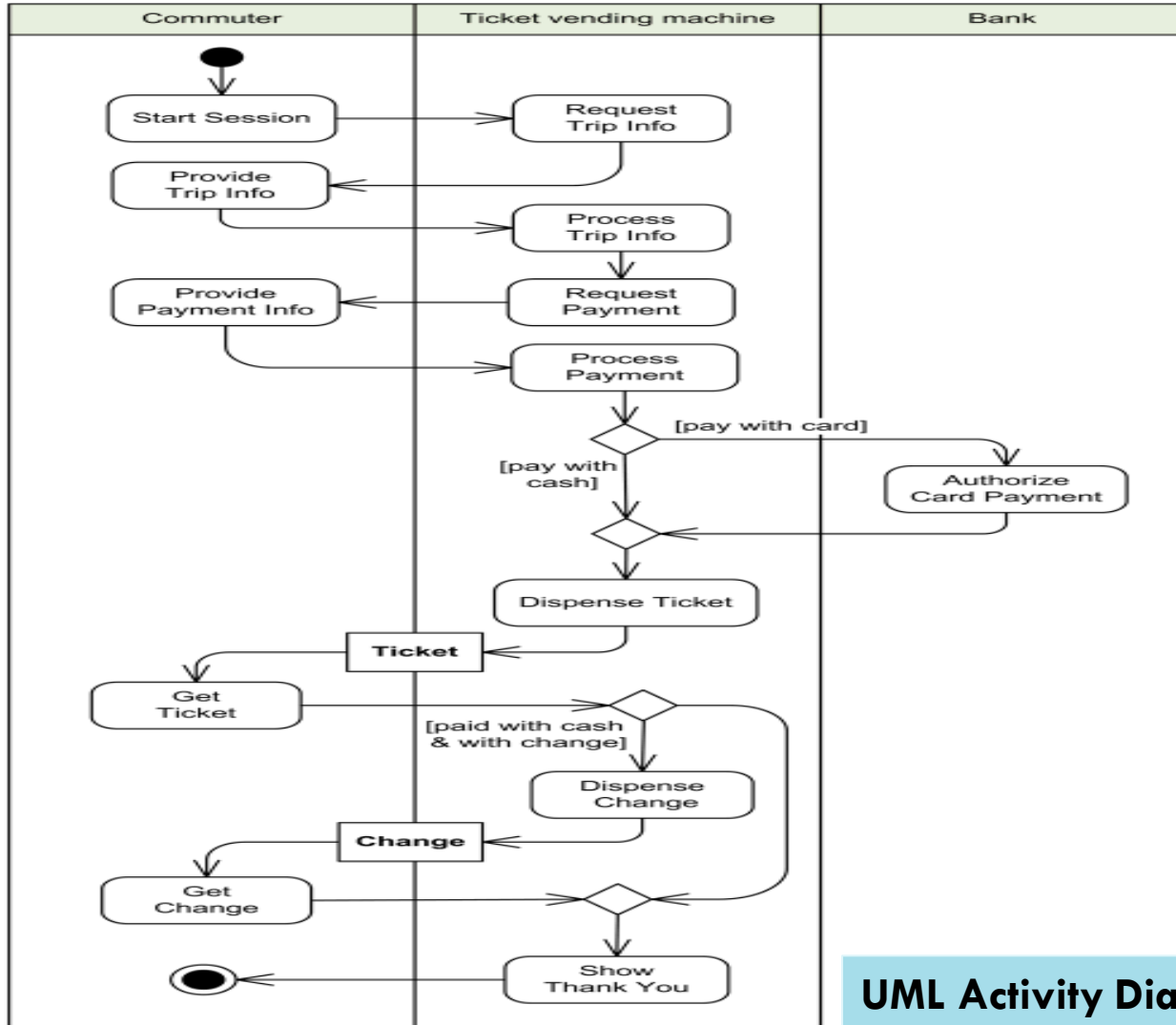


# System Use Case Diagrams

## Ticket vending machine

- ❑ vending machine that sells and produces tickets to commuters.
- ❑ This kind of a machine is a combination of both hardware and software, and it is only a part of the whole system selling tickets to the customers. So we will use **«Subsystem»** stereotype.
- ❑ **Purchase Ticket** use case
- ❑ Purchase Ticket use case owns behavior represented by Purchase Ticket activity.

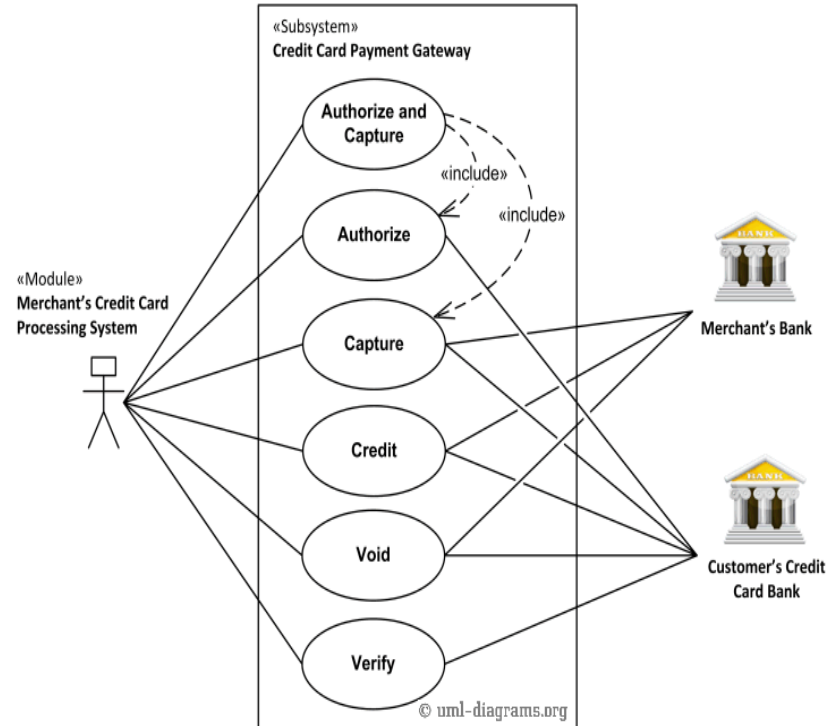




UML Activity Diagram

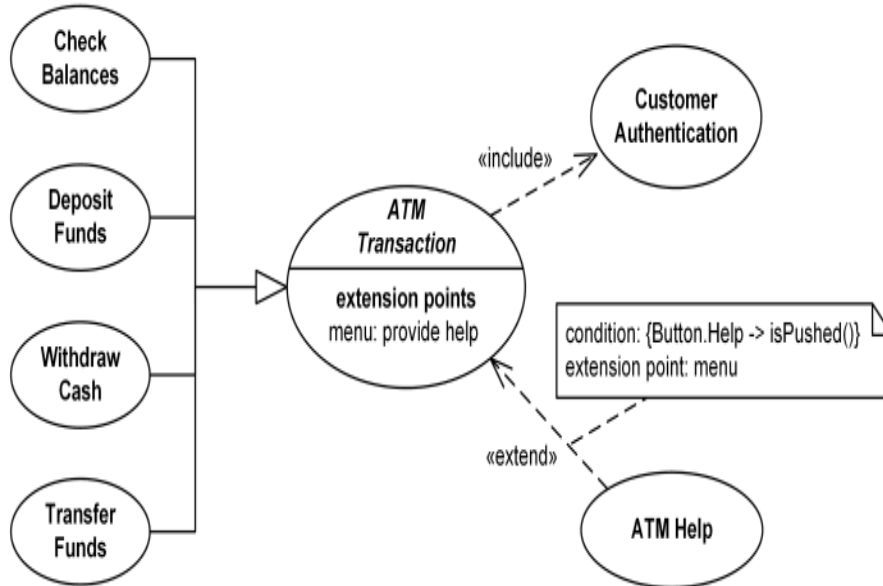
# ATM

- An automated teller machine (**ATM**) or the automatic banking machine (**ABM**) is a banking subsystem (subject) that provides bank customers with access to financial transactions in a public space without the need for a cashier, clerk, or bank teller.

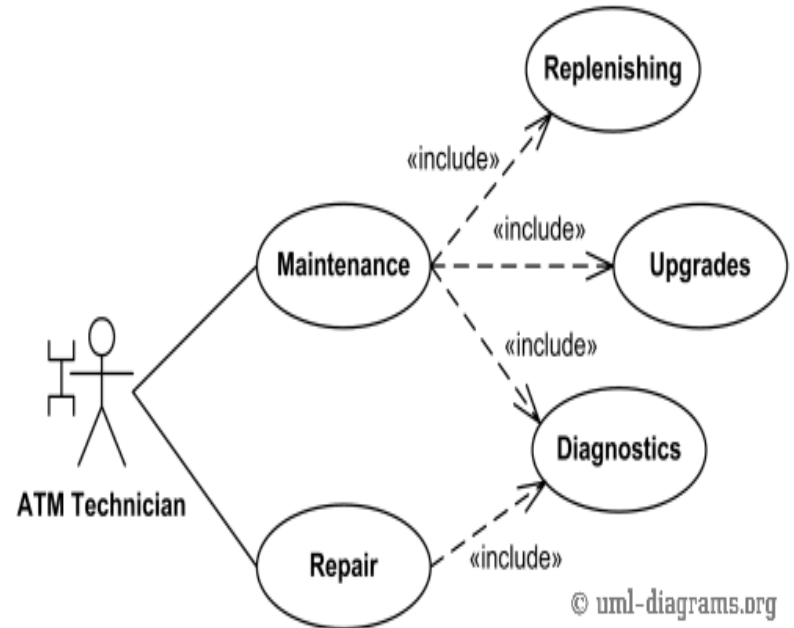


# ATM

## Customer Authentication

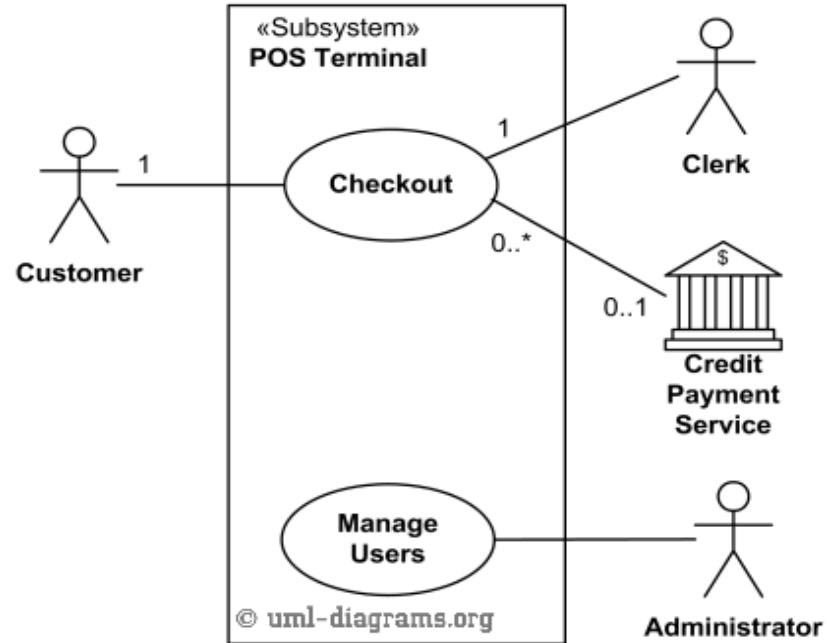


## ATM Transaction use case is extended via extension point

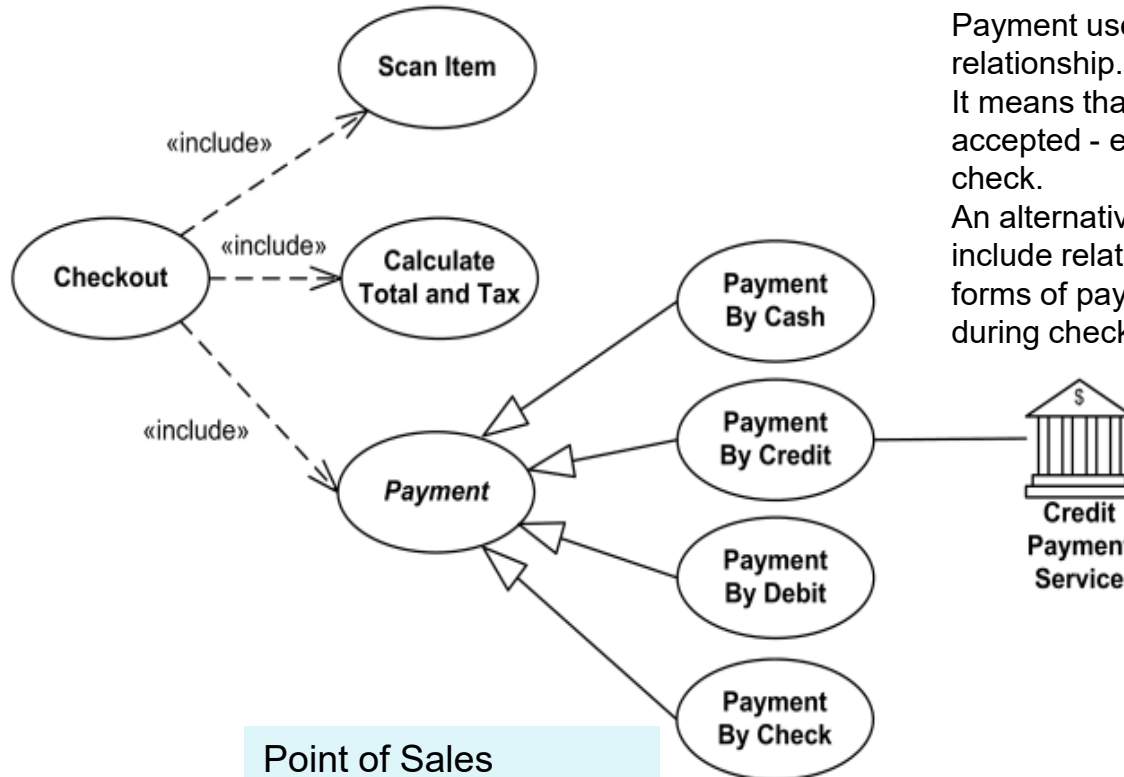


# Point of sales (POS) terminal

- ❑ Checkout use case involves Customer, Clerk and Credit Payment Service actors and includes scanning items, calculating total and taxes, and payment use cases.
- ❑ This is an example of a large and complex use case split into several smaller use cases.



# Point of sales (POS) terminal



Payment use case is represented using generalization relationship.

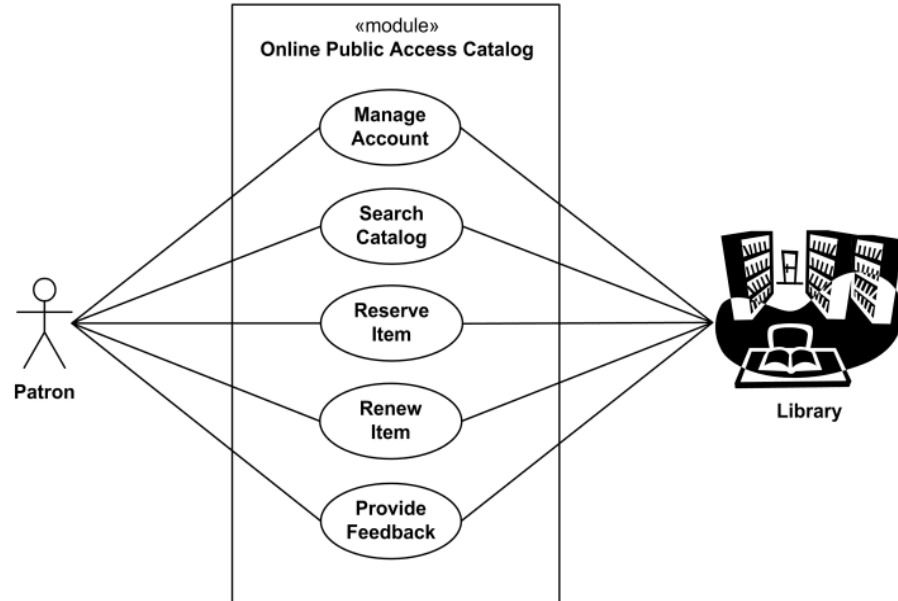
It means that only one specific type of payment is accepted - either by cash, or by credit, debit, or with check.

An alternative to such representation could be to use include relationship so that not just single but several forms of payment could be accepted from the same client during checkout.



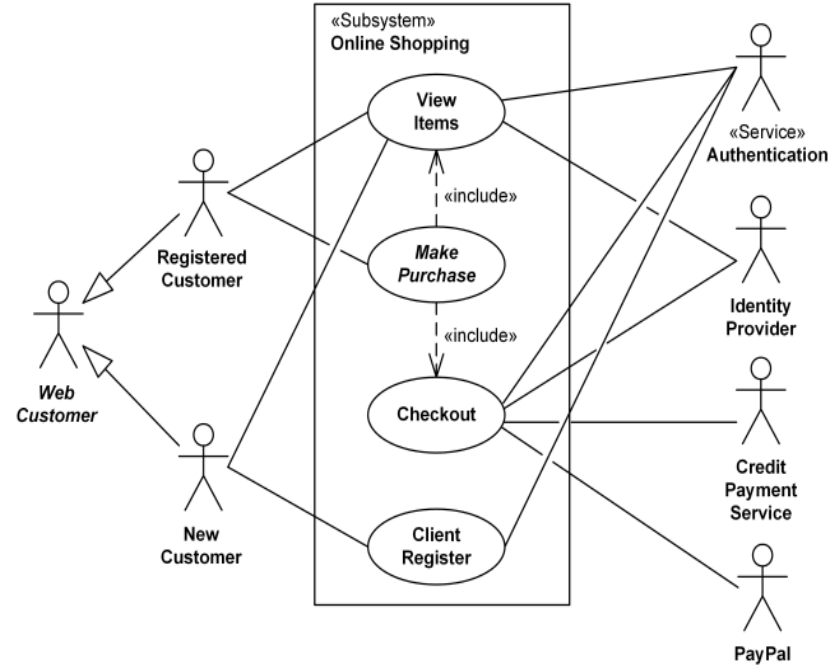
# e-Library online public access catalog (OPAC)

- Patrons of a library can search library catalog online to locate various resources - books, periodicals, audio and visual materials, or other items under control of the library. Patrons may reserve or renew item, provide feedback, and manage their account



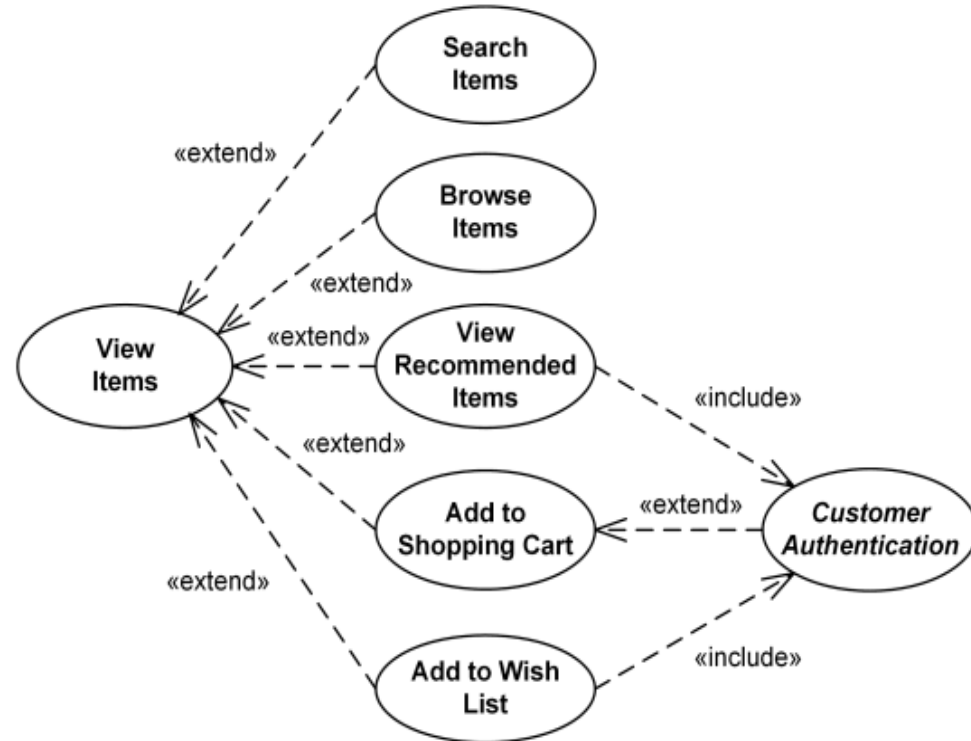
# Online shopping use case diagrams

- Web customer actor uses some web site to make purchases online. Top level use cases are **View Items**, **Make Purchase** and **Client Register**.



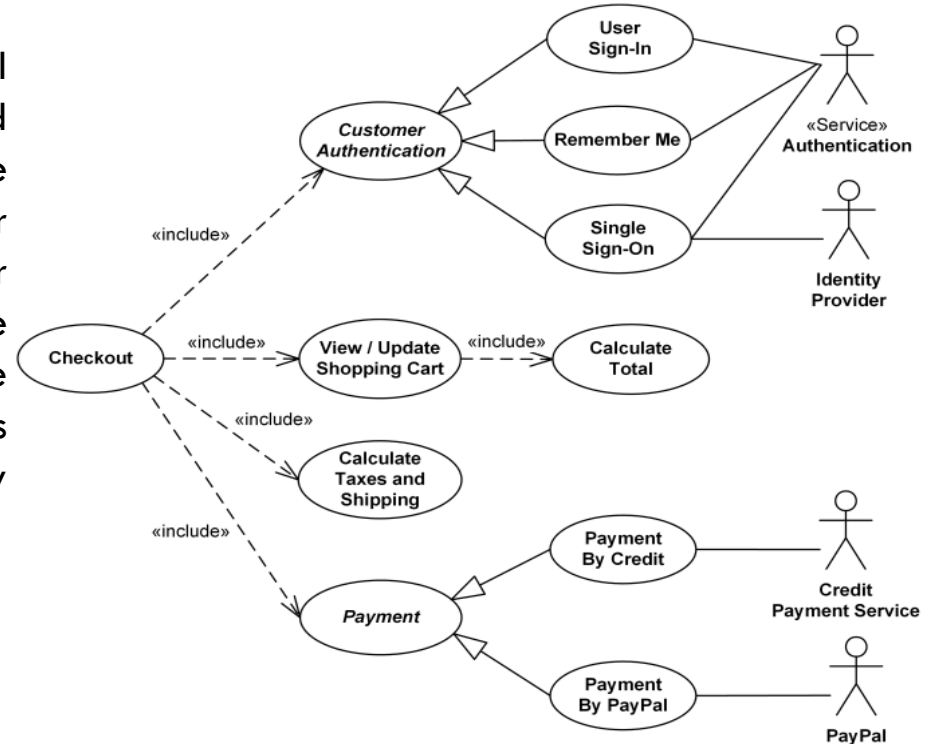
# Online shopping use case diagrams

- **View Items** use case is extended by several optional use cases - customer may search for items, browse catalog, view items recommended for him/her, add items to shopping cart or wish list. All these use cases are extending use cases because they provide some optional functions allowing customer to find item



# Online shopping use case diagrams

- ❑ **Checkout** use case includes several required uses cases. Web customer should be authenticated. It could be done through user login page, user authentication cookie ("Remember me") or Single Sign-On (SSO). Web site authentication service is used in all these use cases, while SSO also requires participation of external identity provider



# Credit card processing system

- The merchant submits a credit card transaction request to the credit card payment gateway on behalf of a customer. Bank which issued customer's credit card is actor which could approve or reject the transaction. If transaction is approved, funds will be transferred to merchant's bank account.

