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COMP 3111: Software Engineering

Lecture 8 Exercise: Movie Shop—Use-Case Model

- The system must be able to handle both physical and digital videos.

actors & functionality:

- It must be able to record which videos are sold and rented and by whom.

actors & functionality:

- For sold videos, the quantity sold should be recorded; for physical video rental, which copy is rented and when it is due back should be recorded.

actors & functionality:

- The system should keep track of overdue rentals of physical videos and send email notices to customers who have videos overdue.

actors & functionality:

- There will be a customer membership option for an annual fee, which will entitle a member to discounts (10%) on the sale and rental of videos.

actors & functionality:

- Members should be able to make reservations for physical video rentals either in person at the shop, by telephone or via the Web.

actors & functionality:

- A member can reserve at most five physical videos at any one time, but there is no limit on how many physical videos a member or nonmember can rent at any one time.

actors & functionality:

- As an added feature, the shop would like to allow customers (either members or nonmembers) to input, via the Web, mini-reviews (up to 100 words) and a rating (from 1, lowest, to 10, highest) of videos they have purchased or rented.

actors & functionality:

- These reviews should be anonymous if the customer so wishes (i.e., customers can specify whether they want their name to be made known when other customers browse the reviews).

actors & functionality:

- A sales clerk should be able to enter and update the following information about all customers (members or nonmembers): name, address, phone number, age, sex, and email address.

actors & functionality:

- Members are assigned a membership number by the shop when they become members and a password, which allows them to change their personal information and to buy and rent digital videos via the Web.

actors & functionality:

- The shop manager should be able to generate various reports on the sale and rental of videos.

actors & functionality:

- A sales clerk should be able to sell and rent physical videos and process the return of rented physical videos.

actors & functionality:

- When selling or renting physical videos, a sales clerk must be able to look up customer information and determine whether the customer is a member.

actors & functionality:

- A sales clerk must be able to enter basic information about a video (i.e., video id, title, leading actor(s), director, producer, genre, synopsis, release year, running time, selling price, and rental price).

actors & functionality:

- The system must be able to handle both physical and digital videos.

Actors:

Functionality:

- It must be able to record which videos are sold and rented and by whom.

Actors: Customer

Functionality: Customer: buys video, rents video

- For sold videos, the quantity sold should be recorded; for physical video rental, which copy is rented and when it is due back should be recorded.

Actor:

Functionality:

- The system should keep track of overdue rentals of physical videos and send email notices to customers who have videos overdue.

Actor:

Functionality: Customer receives an overdue notice

- There will be a customer membership option for an annual fee, which will entitle a member to discounts (10%) on the sale and rental of videos.

Actor: Member

Functionality: Member get discount

- Members should be able to make reservations for physical video rentals either in person at the shop, by telephone or via the Web.

Actor:

Functionality: Member reserves videos, Sales clerk reserve video

- A member can reserve at most five physical videos at any one time, but there is no limit on how many physical videos a member or nonmember can rent at any one time.

Actor:

Functionality:

- As an added feature, the shop would like to allow customers (either members or nonmembers) to input, via the Web, mini-reviews (up to 100 words) and a rating (from 1, lowest, to 10, highest) of videos they have purchased or rented.

Actor:

Functionality: Customer writes a review, Member writes a review

- These reviews should be anonymous if the customer so wishes (i.e., customers can specify whether they want their name to be made known when other customers browse the reviews).

Actor:

Functionality: Customer browse reviews, Member browse reviews

- A sales clerk should be able to enter and update the following information about all customers (members or nonmembers): name, address, phone number, age, sex, and email address.

Actor: Sales Clerk

Functionality: Sales clerk: enters information about customers, Update customer information

- Members are assigned a membership number by the shop when they become members and a password, which allows them to change their personal information and to buy and rent digital videos via the Web. actors & functionality:

Actor:

Functionality: Member update personal information, Member: Buy video, Member: Rent video

- The shop manager should be able to generate various reports on the sale and rental of videos. actors & functionality:

Actor: Shop manager

Functionality: Shop manager: generates reports on sales and rentals

- A sales clerk should be able to sell and rent physical videos and process the return of rented physical videos. actors & functionality:

Actor:

Functionality: Sales clerk: sells, and rents physical videos, Sales clerk: processes return of rented physical videos

- When selling or renting physical videos, a sales clerk must be able to look up customer information and determine whether the customer is a member. actors & functionality:

Actor:

Functionality: Sales clerk: looks up customer information

- A sales clerk must be able to enter basic information about a video (i.e., video id, title, leading actor(s), director, producer, genre, synopsis, release year, running time, selling price, and rental price).

Actor:

Functionality: Sales clerk: enters information about video

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Lecture 8 Exercise: Movie Shop—Use-Case Model

1. On the accompanying sheet containing the problem statement, identify all actors and their required functionality. *(Only actors and functionality that are explicitly given in or implied by the requirements statement should be included.)*
2. In the space below group the functionality into use cases and show the uses cases and their related actors in a use-case context diagram on the accompanying sheet.

Actor	Required Functionality

Actors	Required Functionality	Use cases
Customer	Buys video, Rents video, Writes reviews, Browse reviews	Buys video, Rents video, Write reviews
Member	Buys video, Rents video, Reserves video, Get discount, Manages their personal information	Buys video, Rents video, Write reviews, Reserve video
Sales clerk	Enters customer information, Updates customer information, Sells and rents physical videos, Process returns, Look up customer information, Enters information about video	Handle sales and rentals, Handle customer information, Handle video information
Shop manager	Generates reports about sales and rentals	Generate reports

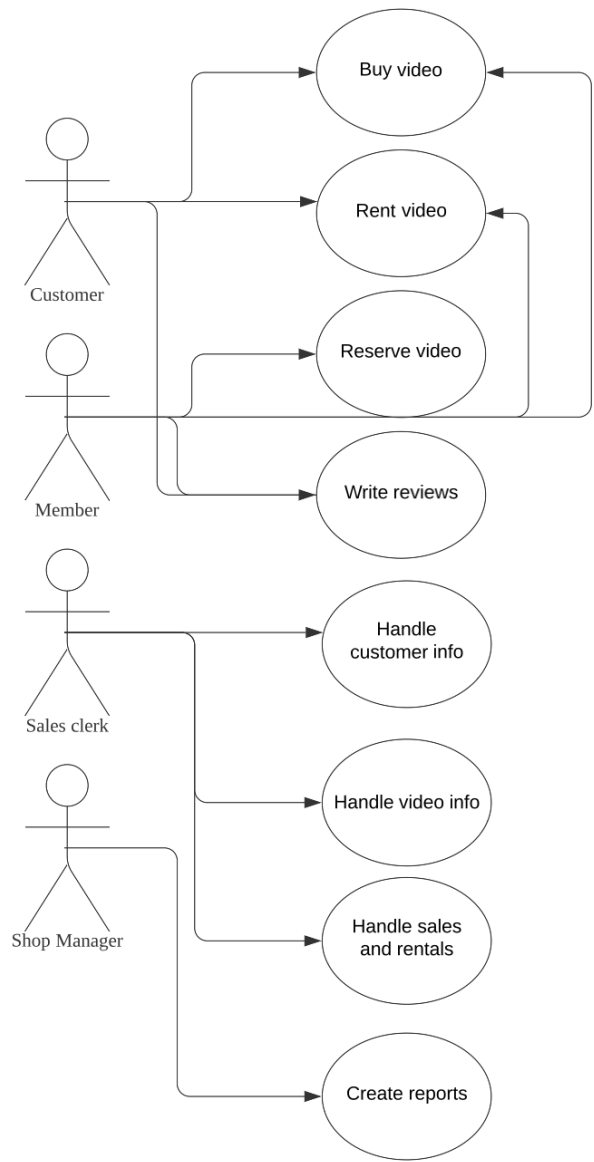
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Lecture 8 Exercise: Movie Shop—Use-Case Model Context Diagram

In the space below, show the uses cases and their related actors in a use-case context diagram.



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Lecture 8 Exercise: Movie Shop—Use-Case Model Context Diagram

In the space below construct the use-case context diagram resulting from your discussion with another group.

