

Video Rental System - Problem Description

The owner of the local video rental store wants to radically change how his video rental business works. Currently, he has the traditional video rental store where customers become members, come into the video rental store to rent a video, and return the video. With his new business plan, he hopes to increase his profit margin by increasing video sales and reducing staff.

In his new business plan, he wants to have the customers do everything online but the picking up and returning the videos. He wants a VRS website that allows the customers to become members or search the video inventory (by video name, actor name, director name, type of video (new release, western, mystery, drama, comedy, children, etc.), or video rating). The VRS website also allows members to log on as a member, search the video inventory (as before), select videos to rent (videos must be located at the store location where the member wants to pick up the videos), modify membership information, and check out the videos. The member can also pay late fees online since videos cannot be rented by a member with outstanding late fees. The paying of late fees and the rental of videos is to be charged to a credit card number provided by the customer in the membership application process. Provided with each rental is a video rental form which lists, for each video rented, the video ID, video name, and the due date and the rental charges charged to the member's credit card. Rented videos can be returned to any of the owner's video stores. Rented videos that are not picked up within 24 hours are returned to the available inventory; however, the rental charged is not removed from the member's credit card. On the day before a rented video is due to be returned, the VRS will email members with due notices which reminds them that the video is due. This due email will be sent to the member every 3 days after the video's due date. After 60 days of being past its due date, a \$30 charge for each overdue video is processed on the member's credit card, and an email is sent to the member to notify them of this charge. The length of rental is 5 days.

The pick-up and return of rented videos is only done through a drive-through facility at the video store. The ability for the customer to come into the video rental store to search for and rent videos is no longer available with this new business plan.

The owner of the video store also wants to automate his inventory processing. He can now get newly ordered videos with a video ID (via a bar code) on the video packaging. When new videos arrive at a store, the owner wants to simply scan the video ID which then retrieves the video information from the video distributor via the Internet (the video distributors provide this feature on their websites). All the video information (i.e., its name, rating (e.g., G, PG, R), director, length in minutes, actors) are automatically stored in the store's video inventory. The owner then indicates the store location where the video will be placed. When he wants to remove a video from the store because it is never rented or it is damaged (or for whatever reason), he simply chooses the remove option and scans the video ID to be removed.

Note on rental fees: the amount of the rental fee is determined by its type. New releases are at a rental fee of \$3.00. All the remaining types except children's are at a rental fee of \$2.00. Children's videos are at a rental fee of \$1.00. Once a video is no longer considered a new release, the owner changes its type from new release to the appropriate type (western, mystery, drama, comedy, etc.).

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The pick-up and return of rented videos is only done through a drive-through facility at the video store. [**Who enters the returned videos into the system? There seems to be an implied actor here, presumably the "staff" mentioned above.**] The ability for the customer to come into the video rental store to search for and rent videos is no longer available with this new business plan.

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