Activity 4

Due Date: 5 PM 23-10-2020

Develop a context level DFD for the following scenario. Refine the DFD to an appropriate level. Mention the reason(s) for stopping at a particular level of refinement. Clearly show the stores, processes, data, and knowledge source/sink. Also use the heritage identifiers appropriately.

Video-Rental Ltd. (VRL) is a small video rental store. The store lends videos to customers for a fee, and purchases videos from a local supplier. They need a computerized system that helps them run their daily business. Description of their daily business is as follows:

Only a registered customer can borrow videos from the store. New customers register by filling out a form with their personal details and credit card details. The credit card details are used to pay subscription fee, video borrowing fees, and overdue fines. On successful payment of subscription fee, the customer is issued a membership card by VRL. The membership card has a unique membership id which is later used when borrowing videos. Each new customer's form is also added to the customer file. A customer can request a video by providing video title, his/her membership id, and payment – payment is always with the credit card used to open the customer account. If the payment is successful the customer is handed over the video by VRL. The customer then returns the video to the store after watching it. If a loaned video is overdue by a day the customer's credit card is charged, and a reminder letter is sent to the customer. Each day after that a further transaction on card is made, and each week a reminder letter is sent. This continues until either the customer returns the video, or the charges are equal to the cost of replacing the video. The local video supplier sends a list of available titles to VRL, who decides whether to send the supplier an order and payment. If an order is sent then the supplier sends the requested videos to the store. For each new video a new stock form is completed and placed in the stock file.