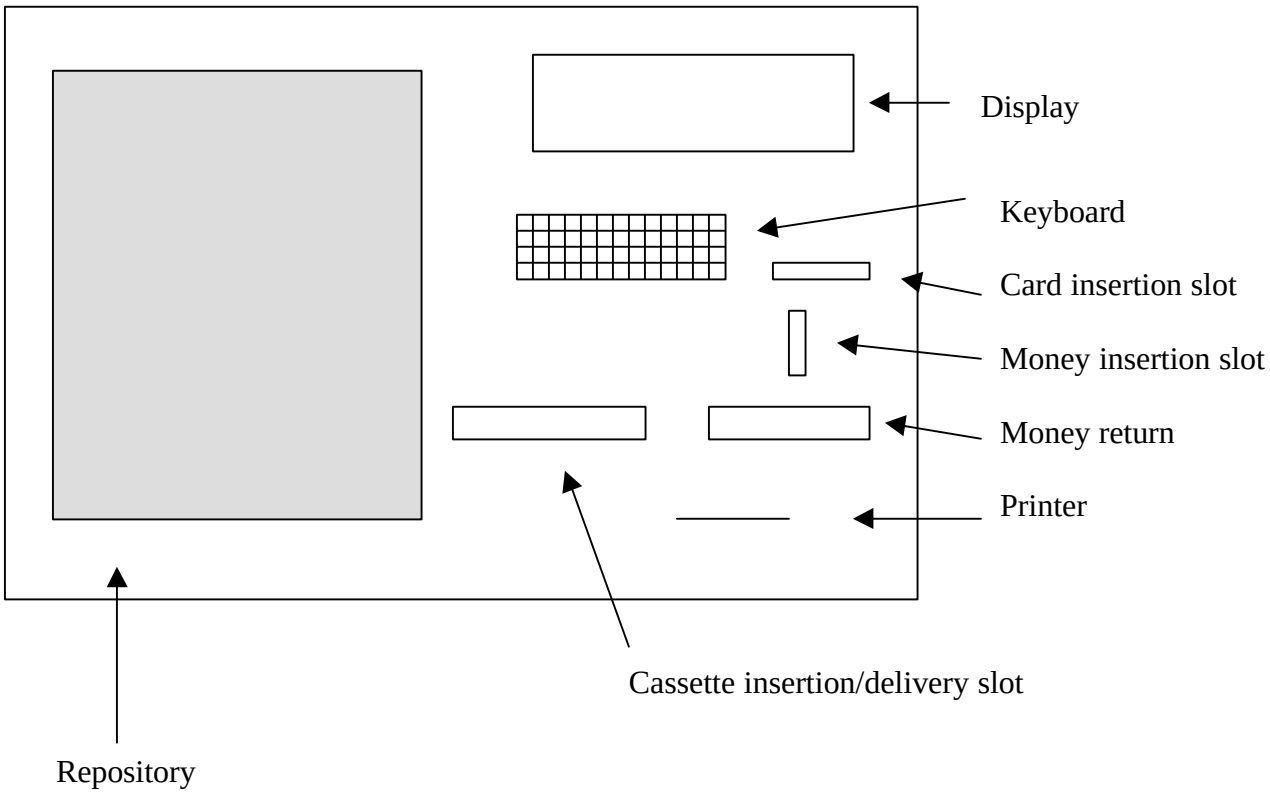
SEG 3300 Team Project
E-Video

1. Background

The purpose of this project is to apply the theory of analysis of Object-Oriented Analysis Design seen in the course to work towards the implementation of a prototype of a realistic and complete though sufficiently simple example in order to experience the main concepts of the course within a limited time. This project is intended to be carried out by groups of approximately six (6) students. The project consists of a collection of deliverables which must be submitted according to prescribed milestones.

2. Overview of the Requirements



A great retail chain of video cassette rentals businesses wants to implement a group of automated distributor systems which will

allow rental of video cassettes at other places than only in video clubs. This business has hired you to do the analysis, the Object-oriented design of the distributor systems. They would like, as well, to have a prototype of parts of this system which you can demonstrate by means of assimilation.

2.1 The figure below is a schematic diagram of an e-video distributor. This e-video consists of a display device and a compartment within which the videos are stored as well as a suitable interface.

2.2 E-video distributor operation. The e-video distributor must allow rental of film cassettes as well as rental of video games. Each cassette is identified by a unique number which corresponds to a listing in a catalogue. Different cassettes may have different rental prices and this will be reflected in the catalogue.

The customers of the rental chain can rent the films, return the films, and browse the catalogue on line using the e-video distributor. Each of the customers are sent a magnetic access card when they register. All customer interactions begin with the client identification which consists of the insertion of the card and ends with the retrieval of the card. Each customer also has a credit account with the rental chain.

The on-line browsing of the catalogue permits a customer to find the code of a cassette by searching by the title of the film or game, the name of the principal actor of the film, or the name of the producer of the film. The client may also attach a list of the latest entries within a certain number of days

To rent a film, the customer must first insert the card, then specify the cassettes to be rented by entering their codes. The

client can find the codes by browsing the catalogue on line before beginning the rental. Once the customer has finished entering the cassette codes, the e-video distributor will determine the amount of the transaction and present it to the customer. If the customer has sufficient credit in his account, he can decide to pay electronically. In this case, the amount of the rental is debited directly from the account. The client may also pay by inserting money into the e-video distributor machine. The e-video distributor returns the desired cassettes by the slot entitled "Cassette Return". If the client has paid in cash and there is change to be returned, he can ask for the change or credit to his account. At the end of the rental, the e-video distributor prints a receipt with a list of cassettes rented, the required dates of return as well as the amount credited to the account of the customer.

To return cassettes, the client, after identifying himself, must insert the cassettes one after one in the recovery return insertion delivery slot. After the return of all the cassettes, the e-video distributor prints a receipt confirming the return and indicates any charges which will be made for late return. The fines of the client will be taken out of his account and added to the amount to be paid for a subsequent rental. The e-video distributor is maintained by an operator who has the responsibility of loading the cassettes in the compartment as well as recovering the money in the containers. The operator may, as well, ask to have a report printed on the statistics of cassette rentals. The operator is supplied with a magnetic card and a password. Each of his interactions must begin by the insertion of the card and validation of his password.

3. Constraints

This project must be conducted by groups of four to five students. You are responsible for the make-up of these groups. The calendar of milestones and deliverables is as follows:

February 2/01 Initial requirements for project and product

March 2/01 Analysis document

March 23/01 Design document and prototype

April 2-6/01 Test plan document and simulation/demo

The requirements for e-video (project and product) must include:

- a description of the overall project requirements
- the project objectives
- the description and allocation of activities of the project team
- a list of the main capabilities of the system
- the high level description of use cases
- the system level (use case diagram)

The specification of the problem is still not complete. You are free to complete the specification by making realistic assumptions. Make a list of these assumptions in your initial requirements document.

Groups should be formed as soon as possible and the user liaison should transmit the team title and the members of the team to bob@site.uottawa.ca

Please note that the last deliverable will require the inclusion of an estimate of participation of each of the members of the team. This is meant to discourage any "free riders" in the team.