

**Planning and Implementing an Object-Oriented Software System**

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Pairs Practical Project

Object Oriented Constructs / Systems Analysis & Design

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# 1 – Introduction & Objective.

This Assessment has as objective the creation and reasoning of a movie rental software for kiosks that allows the user to rent movies and return them to different kiosks. During the assessment, the reader will go through all the phases of the creation of such a project from planning to execution.  
By the end of this paper, the reader should be able to see clearly all phases of creation and implementation of an IT Project that utilises techniques of SAAD (System Analysis and Design) and OOC (Object Orientation Constructs), using Java Language.

# 2 – Problem definition.

Consider the scenario where the movie industry is releasing a huge amount of movies every year, it turned nor possible for the main public to buy every launched movie to watch on their DVD players at a low cost, therefore with a large share of the population presented growing demand for watching movies once solution presented is to have at their disposition the power of renting any movie with a simple and elegant system that provides the user choices and benefits.

## A – System

Being fully flexible is vital as the growing demand for this solution brings concurrency to this market, the user would be fully satisfied if there’s very little limitation on their demands, therefore commodity is the key work for this matter.  
The objective of getting over limitations as ***logistic, usability and flexibility*** define the problem we will address.

*Logistic:* Users have to be able to rent a movie from different kiosks and return them into different kiosks, this demands an interconnected system and stock control.

*Usability:* Users have to be able to use the kiosks by intuition, therefore the platform has to be user friendly and reduce the amount of information necessary for them to accomplish their objective.

Flexibility: The public in general have different motivations when acquiring a movie, the objective can vary from an actual purchase, multiple movies, the number of days they need to watch and the costs that imply for these different scenarios should follow the necessity of the client.

# 3 – System Requirements

The system requires a range of movies stored in an accessible database where all kiosks can communicate with for retrieving and share information regarding their status and recurrent users that have enrolled in the system for more benefits.

* A Kiosk should be able to check and update its own movies amount.
* A Kiosk should be able to inform the system’s network of the status of the amount of DVD’s for every different movie it has and issue an alert in case one is running low or running high.
* A Kiosk should be able to charge users for movies and hold credit for misuse of the platform before handing the movie to the user.
* A Kiosk should be able to create new users and collect users information for login to the platform for benefits, this information should be updated to the network when finished.
* A Kiosk should be able to inform users about the number of movies it has, and every option of purchase informing also the costs for every option.

## A – Optional

* A Kiosk could be able to send confirmation e-mails.
* A Kiosk could provide a wide search for movies in other kiosks.
* A Kiosk could be able to check the DVD returned wasn’t damaged nor changed.
* A Kiosk could have a GUI for easy user manipulation.

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