

# Team Project Design Document

## DVD Rental System - Uber-Vision Ireland

**Version Number: 1**

Date	Author	Comments
06/02/15	Group K	First draft
9/02/15		Added project description, Agile development or DbC?
10/02/15		Agile chosen. Brief system architecture given. Use Case Diagrams added.
11-12/02/15		GUI, ERD and Class diagrams added. Completed.

### Summary

The aim of this project is to design and build a system for Uber-Vision Ireland. The system is to be used managing a DVD rental service. The system will allow use by staff members and public users. Staff members include administrative roles and basic staff roles, whereas public users will be divided into public users and registered members. Access to functionality in the system will be allotted to the various roles as deemed necessary. Administrators will have access to all functionality, whilst public users will have extremely limited access.

The design proposed will contain a database of DVD's available in the store as well as databases of reservations and users. This will allow real time information to be viewed on the availability of DVD's as well as information on reservations and users. Information will only be available to users with relevant privileges, for example, only an administrative user will be able to add or remove DVD's from the system.

### Assumptions & Dependencies

The planned system will be operational on a thin client platform, based on the assumption that a reliable Internet connection will be present at all times. This is the case as the intention of the team is to implement this system as a website with access to real time information from an SQL database, provisionally this will be run using xampp. This allows use through multiple operating systems and devices. User credentials will allow access to functionality relevant to that user. For example, a member will not be able to view the reservation information other than that which is relevant to that users account. An admin will be able to add, edit or remove dvd's from the system, whereas a basic staff user will not.

The operations each user has access to can be seen in the use-case diagrams presented further on in this document.

The proposed system will be relying on the amount of customers that may have signed up, so it gives the admin's more functionality, in that they intend to track the amount of customers that have the same rental movie and seek to obtain the rentals that a customer may want.

# Team Project Design Document

The customer as an end user, will also be dependent on their emails, as they will receive one prior to their favorite DVD release date.

## Development Methods

The agile methodology is the design process this team will be predominantly using. Frequent consultation with the customer will lead to constantly evolving requirements, and as stated in the values of the agile methodology, customer collaboration over contract negotiation. Although the original requirements for the proposed system were laid out in a project description, these have already evolved considerably, this evolution is visible through the addition of a member user to the stated admin and staff users.

The agile methodology emphasizes people and interactions over processes and tools. The frequent meetings and consultations between members of the team, and the team and the customer implement this. The agile process emphasises production of on time and on budget software, a paramount concern for the team throughout the process of designing and building this system. With a strict deadline looming, working software is of the utmost importance and although planning is an integral part of the process, it is important not to become bogged down in documentation at the expense of functioning software. The team must also be able to adapt to evolving requirements and respond accordingly an opposed to following a rigid plan.

### Values:

Individuals and interactions over tools and processes.

Working software over comprehensive documentation.

Customer collaboration over contract negotiation.

Adaptive over prescriptive. Responding to change rather than follow a plan.

Also when developing the design, it was necessary to implement an easy to browse interface for the user. Prototypes were designed using HTML5, CSS and Microsoft paint to project the key features and certain functionality used within the system. Designing these prototypes the designers and developers a template to work off visually instead of developing from scratch.

The database was designed using ERwin software, to indicate all the tables that will be needed when building the SQL Databases.

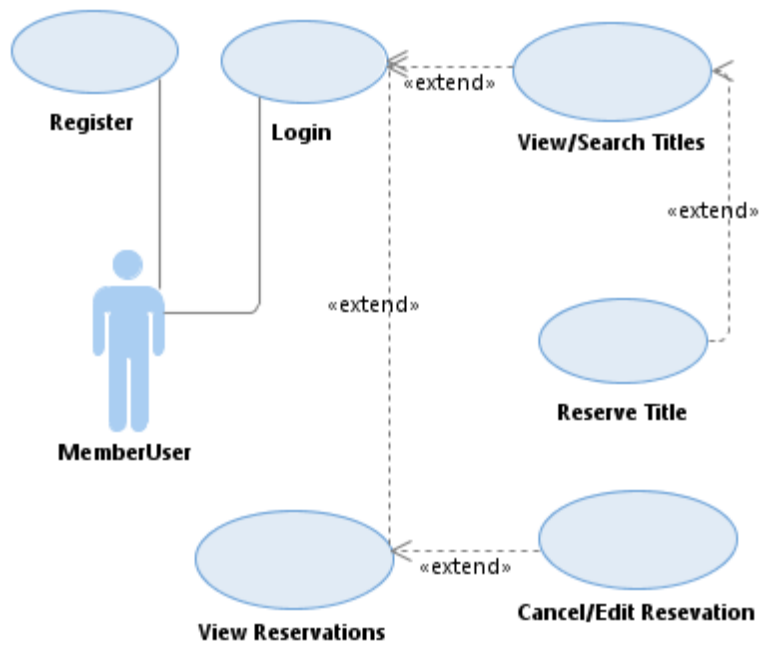
## High Level System Architecture

This system will be implemented as a webpage, using the standard technologies such as html, javascript, css and so forth. Jsp will allow the system to link to an SQL database. XAMPP will be used to run the information from the website and its database.

# Team Project Design Document

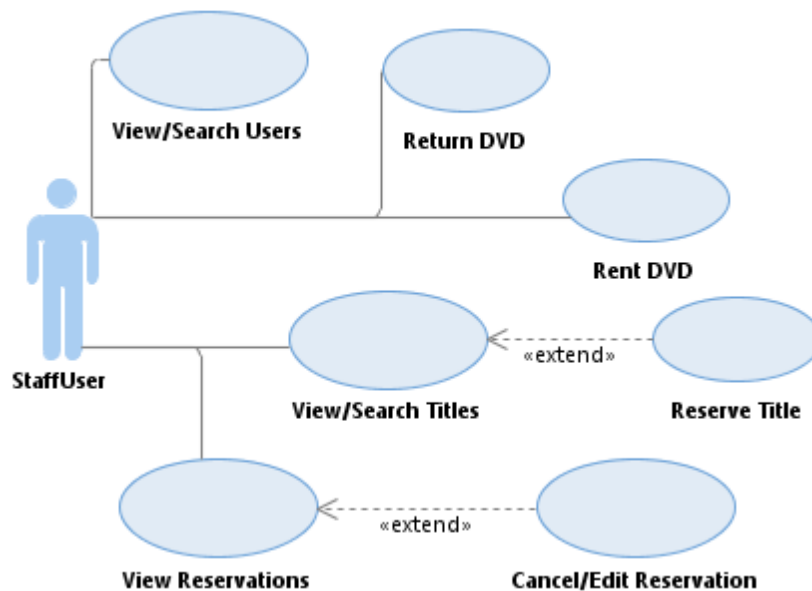
## Detailed System Design

Member User:



Staff User:

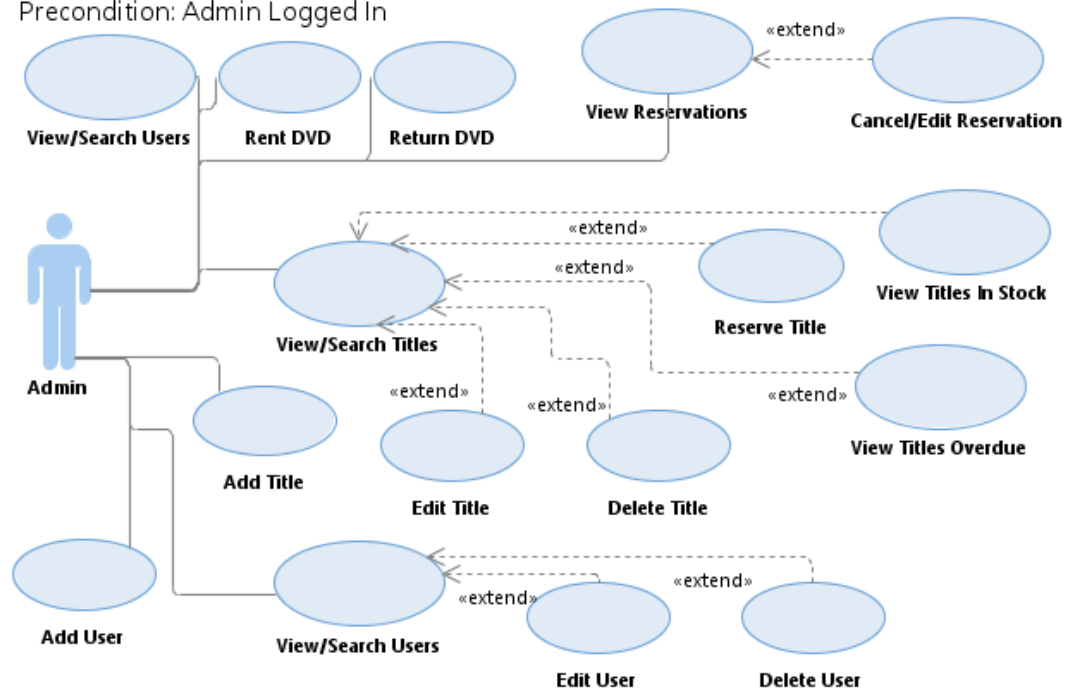
PreCondition: Staff User Logged In



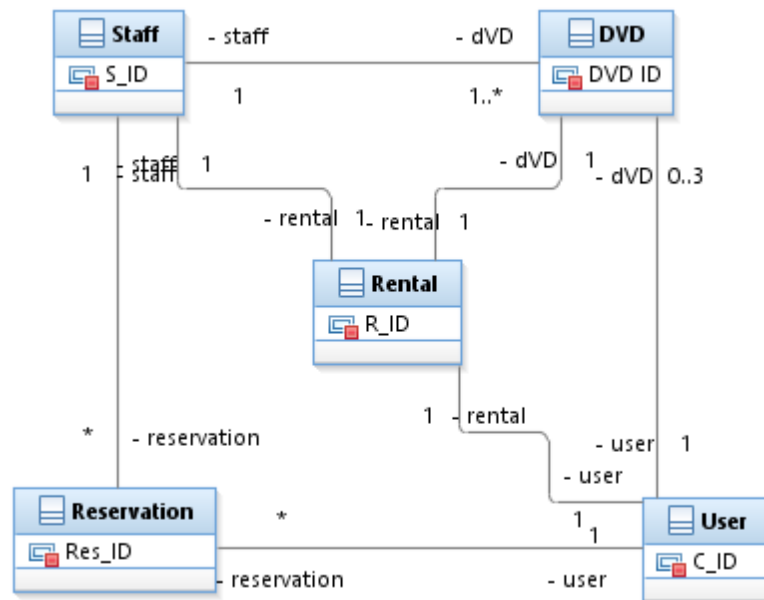
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Administrative User:

Precondition: Admin Logged In

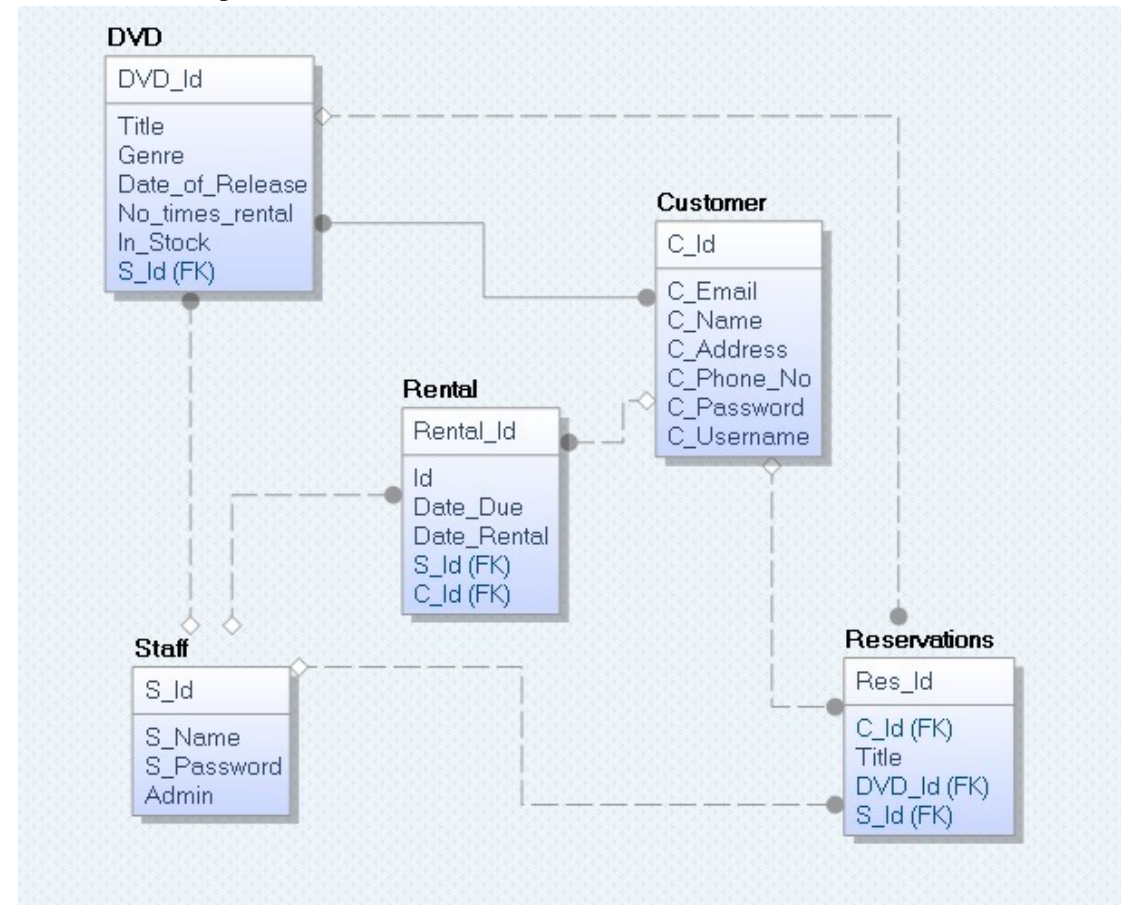


Class diagram



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## Database design



## GUI prototype

Staff view:

# Uber-Vision



[List of DVD's](#) [Edit DVD's](#) [Customers](#) [log out](#)

Currently in Stock



Harry Potter & the  
deathly hallows

No of times Rented: 105  
(Need's testing)  
Currently Overdue



Shoot 'Em Up  
No of times rented: 12



Game of Thrones Season 1  
No of times Rented: 87  
(Needs Testing)



Game Of Thrones Season 1:  
Customer: Danielle123  
Click [here](#) for more info



Lord of the Rings  
Customer: Bobby Smith  
Click [here](#) for more info

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e.g. test plan, design document, user manual, test results