

Assignment 1: Development of a web application for film management

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1 Objective

The objective of this assignment is to design a web application that allows users:

- To manage an on-line film database
- To rate films
- To make recommendations based of film rates
- To buy tickets on-line

All these objectives are certainly ambitious. For this reason, we will spread their achievement throughout two assignments.

The parts that are marked with **[]** are optional and graded as 20%.**

2 Domain information

This is an enumeration of the most relevant domain information which the application should deal with:

- A film is defined in terms of:
 - A title,
 - a director,
 - up to 3 main characters (actors),
 - A genre (drama, comedy, action, adventure, horror)
 - A year of production.
- **[**]** In addition, a film has an *average rate*. This *average rate* is calculated using the rates that have been given to it by the users of the system.
- A director and an actor are defined in terms of his/her name and date of birth.
- The system has a collection of users. Each user is defined in terms of:
 - Its **username** (identifier)
 - Its **name**

- Its `email`.
- There will be two types of users: *employees* and *clients*. For the employees, the `bank account number` will also be kept.

At the moment, this is the only domain information you need to consider. For the second assignment, we will add some more issues such that ticket reservation, theatres, etc.

3 Functionalities:

In its first stage, the application should offer the following basic functionalities:

- *Backstage functionality:*
 - Authenticate an employee.
 - Insert a new film into the system.
- *Client functionality:*
 - Authenticate a client.
 - View a list of all the films kept in the system.
For a specific film, the user can click on its title and see its specific information (i.e., title, year of production, **[**]** average rate, main characters...).
 - **[**]** Perform a *rate tour*.
During a rate tour, the user is given a list of films and he/she rates them.
 - **[**]** Show the Top-10 movies for the user.
Each user can be given a list of the top-10 best rated movies as recommendation. This list consist of the 10 films with better average rate excluding those already rated by the user (we assume that users rate movies that they have watched).

In this first assignment, the technologies that should be used in its development are the following:

- Java
- Servlets
- JSP pages
- Sessions
- JDBC
- Tags
- Java beans
- Error management with JSP pages

4 Assignment delivery

- **Deadline: 19-April-2009 (23:55 h.)**
- The assignment should be developed in groups of 1 or 2 students
- The application should be packaged in a `.tgz` file with the following structure:
 - A folder containing a UML diagram with the application domain model.
 - A `README` file with the application detailed deployment and usage instructions.
 - A `DB` folder with a `.sql` to create the database.
 - The `src` folder with the java classes/servlets that have been developed
 - Some folder with the `deployment descriptor` files (e.g., a `dd` folder)
 - The `application.war` file with the deployable application.
- At least one servlet class should be used.