

# Designing web applications

## 1 Problem specification: a music web site.

The following are the specifications for a music web site.

The site publishes data about music artists and their albums. Each artist is characterized by his/her name, a surname, and a biography. Each album is characterized by its title and duration and contains a set of tracks (songs). Each track is characterized by the track's title and duration.

On the public home page a welcome message is showed to users. From the public home page all users, both not authenticated and authenticated users, can browse the available information by means of a browsing page. The browsing page shows the list of all the available artists. The list is paged, and shows 3 artists per page. By clicking on an artist, the user must be able to see, in a new page, the biography or, alternatively, the set of published albums. From the list of albums, the album details (duration and list of tracks) must be reachable.

The public home page includes also a self-registration form. It allows new users to register themselves into the system. Each user is characterized by a username, a password, and an email.

By means of a login form, located in the public home page, users can access to the protected personalized user area by means of an authentication based on a username and password mechanism.

More services are provided to authenticated users. In the personal home page of the protected section of the web site, the system shows a welcome message, the username of the logged user, and the list of preferred artists, and related albums, for the current user. The set of preferred artists is managed by each user by means of a preferred artist selection page. In the preferred artist selection page, the authenticated user can add new artists to his/her preferred list or remove artists from his/her list.

A browsing area, similar to that available in the public part of the web site, can be used to browse artists. However, authenticated users can also use a searching area. This area allows searching artists and albums.

The artist searching page allows searching the albums of an artist based on the first name of the artist. Given a first name, all the artists with the provided first name are shown. By clicking on an artist all artist's albums and the related tracks are visualized (in the same page).

Another page allows users to search albums. The album searching page should allow searching albums by means of the title of the album (a complete title or part of a title) and/or by inserting the maximum duration of the album.

The searching area includes also an album searching page based on track selection. From the whole list of tracks, users can select a subset of tracks. The albums containing at least one of the selected tracks are shown.

Logged users can also add comments about authors. The comment page shows the list of artists. By clicking on the button associated to an artist, the comments related to the selected artist are showed. Users can also add new comments. The user selects the artist of interest and then inserts a new comment.

## **1.1 Administration pages**

The administrators of the system need an administration area in order to be able to manage the content of the web site. In particular, they need to manage artists, albums, and tracks. Design the required pages. Remember that only administrators can use the administration part of the web site.

### **Goal**

Design the web site (data model and hypertext model). Define also the groups of users required to protect the access to the different pages of the web site.