Università di Pavia
Computer Engineering

Web and Multimedia Technologies – Project Report

Surname	Crescenti
Name	Riccardo
Student ID	486280
E-mail	riccardo.crescenti01@universitadipavia.it
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Project title (website subject)
Website for sharing scientific articles

HTML version

X HTML5 ☐ HTML4 ☐ XHTML

Client-side technologies used

HTML, CSS, JavaScript

Server-side technologies used

PHP, MySQL, WAMP server

Website content description

Describe the website in terms of:

- *Content of the single pages* and/or of the *main sections* (e.g., “The products page lists all the…”, “The ‘News’ section presents…”)
- *Graphic design* (e.g., “The navigation menu is located in the left part of the page, immediately below the header, and…”)

Specify whether, for the definition of the content and/or of the graphic structure of your site, you have “drawn inspiration” from one or more existing websites (indicating their URLs).

This section can be extended to the next page, if necessary—but possibly avoid exceeding 50 lines.

The website allows registered users to download scientific articles on request from the database.
The website is composed of five pages: two for registration and login phases; and three for the actual content (Homepage, Search, Contacts).

The login and registration pages have a simple and intuitive layout consisting mainly of a form in which the user can enter their username and password. The style was inspired by https://www.facebook.com/ .
All pages of the website have the same basic structure:
At the top there is a header that specifies the main topic of the page.
A horizontal navigation bar allows the user to move across pages.
In the centre, the main content varies between pages.
At bottom of the page there is the footer.

- Login (login.php): This page consists of a form in a centered position in which there are two input fields: username, and password. At bottom there is a link that allows the user to go to the registration page, if not registered yet. Otherwise, the user can access the site with the "Login" button.
- Registration (registration.html): This page has a similar structure to the Login page. It allows the user to register on the site by means of a form.
- Homepage (home.php): This is the home page of the website. Contains a textual presentation of the site's content. On the right there is a welcome image (with the alt attribute for accessibility reasons). The navigation menu allows the user to move across other pages. If necessary, the user can log out using the corresponding button on the right of the page.
- Search for an Article (dbinteraction.php): This is the main page of the site. The user can search for scientific articles through a simple interface. The user can search articles by title, year, or author. The user can also search for all available articles. The results are shown in tabular format.
- Contacts (contatti.php): This page contains the contacts. The layout is similar to the home page, with some text and an image on the right.

The registration and login pages consist of a white background, a grey form and a blue button for user interaction, which color changes with a mouse hover effect.
The Homepage, Search, Contacts pages are characterized by a light blue header, a blue navigation bar (with mouse hover effect). The main body is grey and the footer is light blue.

Technical description of the website

Describe the website implementation in terms of:

- *Folders (directories) and files*: list the folders that are part of the project, describing their content (e.g., "The folder `img` contains all the images of the website, while the folder…"). Clearly specify the name of the Home Page file
- *HTML structure of pages*: indicate whether there are "structures" shared by all or many pages of the website, such as headers (e.g., `<header>` tag), generic containers (`<div>`, `<section>`), navigation sections (`<nav>`), main content (`<article>`), footer (`<footer>`), etc.
- *CSS*: indicate the main selectors for which you have defined styles (shortly describing them), including possible classes or pseudo-classes (e.g., "The style for the `#main` selector defines an absolute positioning and…"; "The generic class `.ital` specifies that…")
- *JavaScript (and other possible client-side technologies used)*: illustrate the purpose of the employed JavaScript code (as well as of other possible client-side codes), shortly describing it (without necessarily providing all technical details, however); e.g., "The JavaScript function `slideSh()` allows to display a sequence of images which are placed in the folder …"). Indicate the URL(s) of the possible page(s) from which the JavaScript (or other technology) code has been "copied" and adapted to your own needs
- *Server-side technologies*: indicate the purpose of the employed server-side code (e.g., PHP, ASP, Node.js, etc.), shortly describing it (without necessarily providing all technical details, however); e.g., "The PHP code at the beginning of the `<body>` of the page is used to…"
- *Development tools employed*: HTML/CSS/JavaScript/etc. editors, possible image editing tools (e.g., Gimp, Photoshop, …), etc.

Specify whether, for the creation of the website, you have "drawn inspiration" from existing websites or templates (indicating their URLs), and whether you have used specific frameworks (such as Bootstrap). Also indicate anything you deem useful to make your implementation choices clear.

This section can be extended to the next page, if necessary—but possibly avoid exceeding 90 lines.

- The main folder ("progetto") contains all .php and .html files that are essential for the proper functioning of the website. Inside of it there are four subfolders:
  - "articoli", contains the pdf files of the scientific articles,
  - "css", contains the styles for graphic element properties,
  - "js", contains the JavaScript code,
  - "images", contains the images to be displayed on the website.

- The structure is shared between the pages for the access (Registration and Login) and the pages of the actual website content (Homepage, Search, Contacts).
The first group shares the <form> tag within the <body> tag. The second shares the <header> tag within the <body> tag; <nav> for navigation; <article> which is the main content, and finally the <footer> tag.

- In pagestyle.css are defined the styles of the body, header, navigation bar, table. The style of the #formdb selector (for input type text and submit), defines the float positioning of the elements, the corresponding width, padding, margin, and borders. In loginstyle.css is defined the style of the #formlogin selector, that defines an absolute positioning, background-color properties and uses the mouse hover property to change submit color button.

- JavaScript technology was used in login.php and registration.html.
The function checkFormL() is used in the first file: it allows to control if the user puts the correct values of username and password.
The function checkFormR() is used in the second file: it ensures that the user chooses a username with more than 4 characters and the corresponding password with more than 8 characters.

- PHP technology was used in order to interact with the database (MySQL).
For what concerns the users table, the "session_start()" and "check_logged()" functions at the beginning of the <body> in PHP code allowed to recognize the logged user between pages. "session_destroy()" function in logout.php allowed to end the session when the specific button was pressed.

The user can interact with the articles table in the database through dbinteraction.php page. The user can look for the entire content of the database, or search articles by specifying the fields: title, author, and year.

- No HTML/CSS/JavaScript and no image editing tools were used. Images were downloaded from the internet, https://www.w3schools.com/css/ tutorials were very helpful in website graphics design.