

Web Application Development

Lab 01: HTML & CSS Basics

Topic: Creating Web Pages with HTML and CSS

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1 Objective

The objective of this lab is to:

- Learn to set up a GitHub repository for web development projects
- Create HTML files with proper structure
- Apply CSS styling using classes
- Understand the basics of web page layout and design

2 Prerequisites

- A computer with internet access
- A web browser (Chrome, Firefox, or Edge)
- A text editor (VS Code, Sublime Text, or Notepad++)
- Basic understanding of file and folder management

3 Lab Steps

3.1 Step 1: Create GitHub Account

1. Navigate to <https://github.com>
2. If you already have an account, sign in
3. If you don't have an account:
 - Click on "Sign up"
 - Enter your email address
 - Create a password
 - Choose a username
 - Verify your account through email

3.2 Step 2: Create 'Web' Repository

1. Once logged in, click the "+" icon in the top-right corner
2. Select "New repository"
3. Enter repository name: **Web**
4. Add a description (optional): "Web Application Development Labs"
5. Choose "Public" or "Private" based on your preference
6. Check "Add a README file"
7. Click "Create repository"

3.3 Step 3: Create File Structure

1. In your 'Web' repository, create a folder named `lab1`
2. Inside the `lab1` folder, create a file named `index.html`
3. The file path should be: `/lab1/index.html` under the 'Web' repository
4. You can do this by:
 - Clicking "Add file" → "Create new file" in GitHub
 - Typing `lab1/index.html` in the name field
 - Or cloning the repository to your local machine and creating the folders manually

3.4 Step 4: Write HTML Code

Write the HTML code for the web page shown in Figure 1.

Requirements:

- Create a proper HTML document structure
- Include appropriate HTML tags
- Match the content and layout shown in Figure 1
- Save the file as `index.html` in the `lab1` folder

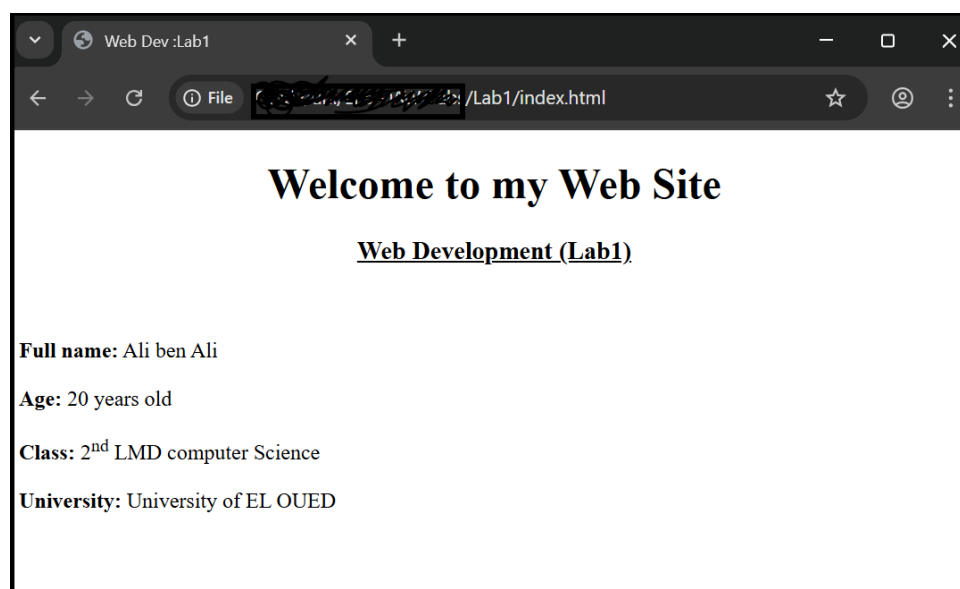


Figure 1: Simple web page

4 Homework - Step 5: Update with CSS Styling

Update your `index.html` file to match the web page shown in Figure 2 by adding CSS classes with the following numbered styles:

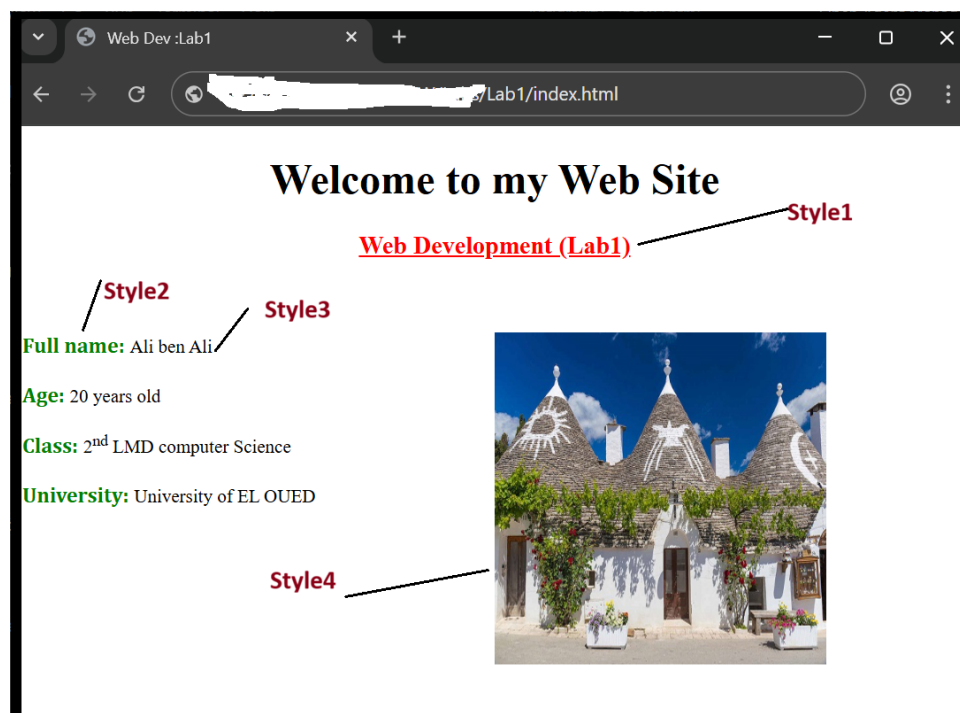


Figure 2: Styled web page

4.1 CSS Requirements

Create the following CSS classes and apply them to appropriate HTML elements:

1. **Style 1:** Use red color
2. **Style 2:** Green color, font size 16px, bold, font family 'Cambria'
3. **Style 3:** Font size 14px
4. **Style 4:** Add picture of size 250 × 250 pixels

4.2 Tasks

- Add CSS styling to your HTML file (you can use internal CSS in the `<style>` tag or create a separate CSS file)
- Create CSS classes for each of the four styles listed above
- Apply these classes to the appropriate HTML elements to match Figure 2
- Ensure your image is properly displayed with the correct dimensions

4.3 Hints

- CSS classes are defined using a dot (.) before the class name
- Apply classes to HTML elements using the `class` attribute
- You can apply multiple classes to a single element
- Remember to include a valid image file in your repository

5 Submission Guidelines

1. Complete all steps including the homework
2. Ensure your code is properly formatted and commented
3. Commit and push your changes to GitHub
4. Submit the GitHub repository URL
5. Include screenshots of Figure 1 and Figure 2 results

6 Additional Resources

- HTML Documentation: <https://developer.mozilla.org/en-US/docs/Web/HTML>
- CSS Documentation: <https://developer.mozilla.org/en-US/docs/Web/CSS>
- GitHub Guides: <https://guides.github.com/>
- W3Schools: <https://www.w3schools.com/>