



Prifysgol Cymru
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University of Wales
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Introduction to HTML

Man Geni Addysg Uwch yng Nghymru
Where Higher Education Began in Wales

www.uwtsd.ac.uk

Today's Lecture

- Overview
- Introduction to HTML
- Notepad++

Module Aim

The aim of **this half of the module** is to provide you with an understanding of the underlying concepts and principles necessary for the implementation of **web technologies**.

Put simply, in this half of the module you will be learning about **Web Development** using:



Website Creation Roles

Content

Design

Coding: Frontend

Coding: Backend

Content

- Text, images, videos, and other media that populate the website.
- essential for engaging visitors and conveying the website's message, purpose, or services.
- Content needs to be well-organized, relevant, and easily readable.

Design

*feeling you get
when using a
website or product*

User Experience (UX)

Makes sure whole experience with the site and the product is favorable based on user testing

designing the actions and interactions—how users move through the site,

Interaction Design (IxD)

Focuses on how to use the site, including its User Interface (UI)

designing the visual aspects like buttons, colors, fonts, layout and much more

User interface Design

Creates the “look and feel” of the site

Coding: Frontend Development

- deals with the part of the website that users interact with directly

Authoring/Markup (HTML)

Styling (CSS)

JavaScript and DOM Scripting

Frameworks

Coding: Backend Development

Server software (ex: Apache, MS IIS)

Web application languages (ex: PHP, Ruby, .NET)

Database software (ex: MySQL, Oracle)

Anatomy of a Web Page

The page you see in the browser window is nearly always made up of multiple files, including:

- An **HTML document** (gives the content structure)
- **Style sheets** (describes how it should look)
- **Images and other media** (embedded on the page)
- **Scripts** (add behaviors and functionality)

A Web Page and Its Components



index.html

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>Jen's Kitchen</title>
  <link rel="stylesheet" href="kitchen.css" type="text/css">
</head>

<body>
<h1> Jen's Kitchen</h1>

<p>If you love to read about <strong>cooking and eating</strong>, would like to learn about some of the best
restaurants in the world, or just want a few choice recipes to add to your collection, <em>this is the site
for you!</em></p>

<p> Your pal, Jen at Jen's Kitchen</p>

<hr>
<small>Copyright 2018, Jennifer Robbins</small>
</body>
</html>
```

kitchen.css

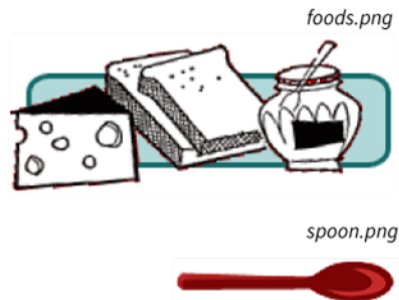
```
body { font: normal 1em Verdana; width: 80%; margin: 1em auto; }

h1 { font: italic 3em Georgia; color: rgb(23, 109, 109);
    margin: 1em 0 1em; }

img { margin: 0 20px 0 0; }

h1 img { margin-bottom: -20px; }

small { color: #666666; }
```



What Style Sheets Do



Browser's default rendering



Simple style sheet applied

Browser (Client)

- 1 Type in a URL or click a link in the browser.

http://jenskitchensite.com

- 2 The browser sends an HTTP request.

HTTP request

HTTP response



"I see that you requested a directory, so I'm sending you the default file, index.html. Here you go."

- 4 The browser parses the document. If it has images, style sheets, and scripts, the browser contacts the server again for each resource.

foods.png



kitchen.css

spoon.png



Server

Files on Server



index.html



foods.png



spoon.png

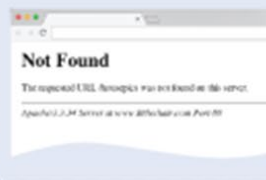


kitchen.css

- 3 The server looks for or assembles the file and responds with an HTTP response.

Oops, no file

If the file is not on the server, it returns an error message.



- 5 The page is assembled in the browser window.



Web Page Assembly Process

1. Request a page using its URL
2. Browser sends HTTP request to server
3. Server returns the file (or a “404 Not Found” message)
4. Browser looks at the HTML document. If there are external files (like images or style sheets), it contacts the server again for each resource
5. The server returns the additional files, and the browser assembles the final page

Content Without Markup-Activity

Note: Copy this text in a notepad++ and save the text file as index.html in it

The Rosewood Eatery

The Business:

The Rosewood Eatery is a local restaurant in Bath, offering fresh, seasonal meals and catering services.

You've been asked to rewrite and organize the content for their website, focusing on the restaurant, catering, and opening hours.

The Restaurant:

The Rosewood Eatery serves a variety of seasonal lunch and dinner dishes in a warm, welcoming environment.

We pride ourselves on using fresh, locally sourced ingredients.

Our menu is updated regularly to reflect what's in season and to offer our guests new, exciting meals.

Location and Hours:

The Rosewood Eatery is located in the heart of Bath.

We are open Monday through Thursday from 11am to 10pm, and on Fridays and Saturdays from 11am to midnight.

What Browsers Ignore

- Multiple character spaces (white space)
- Line breaks (carriage returns)
- Tabs
- Unrecognized markup

HyperText Markup Language (HTML overview)

- HTML stands for **H**yper**T**ext **M**arkup **L**anguage.
- It is not a programming language; it is a ***text encoded markup language***.
- Text encoding is a method of representing complex information in a simple and short way.
 - It is written in **plain text**.
 - Special **tags** are used to add meaning to the text by encoding, i.e. marking out and describing its structure and content e.g. paragraphs, headings, images, etc..
 - And, ***both humans and computers can understand it!***

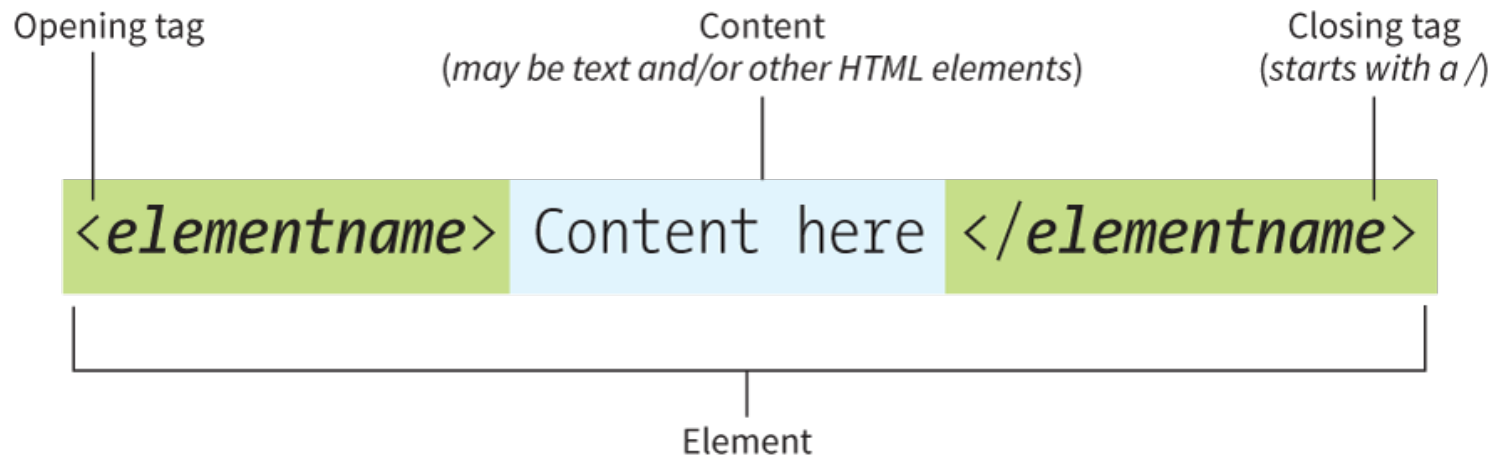
Anatomy of an HTML Element

tag

The element name in angle brackets

element

The content and its markup (start and end tags)



Example:

```
<h1>Black Goose Bistro</h1>
```

Some Elements Are Empty

Some elements have no content and provide a simple directive. They are called empty elements:

`<element-name>`

Example: The `br` element inserts a line break.

`<p>1005 Gravenstein Highway North<br>Sebastopol, CA 95472</p>`

Basic HTML Document Structure

- **Activity:** Create a "Hello, World!" Page

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Hello World Page</title>
```

```
  </head>
```

```
  <body>
```

```
    <h1>Hello, World!</h1>
```

```
  </body>
```

```
</html>
```

Creating a Heading and Paragraph

- **Activity:** Write a Short Bio

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>About Me</title>
```

```
</head>
```

```
<body>
```

```
<h1>John Doe</h1>
```

```
<h2>About Me</h2>
```

```
<p>I'm passionate about coding and technology. I love learning new things and working on creative projects.</p>
```

```
<h3>My Interests</h3>
```

```
<p>Some of my interests include web development, reading, and traveling.</p>
```

```
</body>
```

```
</html>
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta name="keywords" content="pests, weeds, fungus, plants, flowers,  
vegetables">
```

```
<meta charset="utf-8">
```

```
<title>The Garden Company</title>
```

```
</head>
```

```
<p>Welcome to The Garden Company! We hope you will find our site a  
useful resource for becoming a better gardener.</p>
```

```
<p>Our main store is located at:<br>
```

```
108 Ponting Street<br>
```

```
Macon, IN 46062</p>
```

```
<p>Please stop by and browse our extensive inventory from Monday through  
Saturday, 7:00 a.m. to 8:00 p.m.</p>
```

```
</html>
```

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <title>Character Encoding Example</title>
</head>
<body>
  <p>iHola! ¿Cómo estás?</p> <!-- Spanish text -->
</body>
</html>
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta name="keywords" content="pests, weeds, fungus, plants, flowers,  
vegetables">
```

```
<meta charset="utf-8">
```

```
<title>The Garden Company</title>
```

```
</head>
```

```
<p>Welcome to The Garden Company! We hope you will find our site a  
useful resource for becoming a better gardener.<p>
```

```
<p>Our main store is located at:<br>
```

```
108 Ponting Street<br>
```

```
Macon, IN 46062</p>
```

```
<p>Please stop by and browse our extensive inventory from Monday  
through
```

```
Saturday, 7:00 a.m. to 8:00 p.m.</p> </html>
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Citation</title>
</head>
<body>
  <h1>Inspiration from Robert Louis Stevenson</h1>
</body>
</html>
```

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>My Simple Image Gallery</title>
```

```
</head>
```

specifies that the meta tag is
for viewport settings.

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>My Simple Image Gallery</title>
```

```
</head>
```

sets the viewport width to the device's width, the content will match the screen size (whether on a desktop, tablet, or smartphone).

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>My Simple Image Gallery</title>
```

```
</head>
```

sets the initial zoom level, so the page loads at 100% scale.

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <meta charset="UTF-8">  
  <title>English Language Example</title>  
</head>  
<body>  
  <h1>Hello, World!</h1>  
  <p>This page is in English.</p>  
</body>  
</html>
```

```
<!DOCTYPE html>
<html lang="cy">
<head>
  <meta charset="UTF-8">
  <title>Welsh Language Example</title>
</head>
<body>
  <h1>Helo, Byd!</h1>
  <p>Mae'r dudalen hon yn Gymraeg.</p>
</body>
</html>
```

Bilingual (English and Welsh)

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Bilingual Example</title>
</head>
<body>
  <h1 lang="en">Hello, World!</h1>
  <p lang="en">This section is in English.</p>

  <h1 lang="cy">Helo, Byd!</h1>
  <p lang="cy">Mae'r adran hon yn Gymraeg.</p>
</body>
</html>
```

Adding Links

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>My Favourite Website and Image</title>
```

```
</head> <body>
```

```
<h1>Visit My Favourite Website</h1>
```

```
<p>Check out this awesome site:</p>
```

```
<a href="https://www.wikipedia.org" target="_blank">Wikipedia</a>
```

```
<p>Visit <a href="https://www.wikipedia.org">Wikipedia</a> to learn more about  
various topics.</p>
```

```
<iframe src="https://en.wikipedia.org/wiki/Web_development" width="600"  
height="400"> Your browser does not support iframes.
```

```
</iframe>
```

```
</body>
```

```
</html>
```

Adding Placeholder Images

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>My Favourite Website and Image</title>
```

```
</head> <body>
```

```
<h2>Here is a picture I like:</h2>
```

```

```

```

```

```

```

```
</body>
```

```
</html>
```

beginning of a **query string**

Adding Images with Dimensions

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>My Favourite Website and Image</title>
```

```
</head> <body>
```

```
<h2>Here is a picture I like:</h2>
```

```
<!-- Image 1 with specified dimensions -->
```

```
<img src= "https://cdn.pixabay.com/photo/2015/04/23/22/00/tree-736885_1280.jpg" alt = "tree" width="250" height="150">
```

```

```

```
</body>
```

```
</html>
```

Create a basic website about a "**Favourite Hobby**" (e.g., cooking, traveling, gaming) with three pages: **Home**, **About**, and **Gallery**.

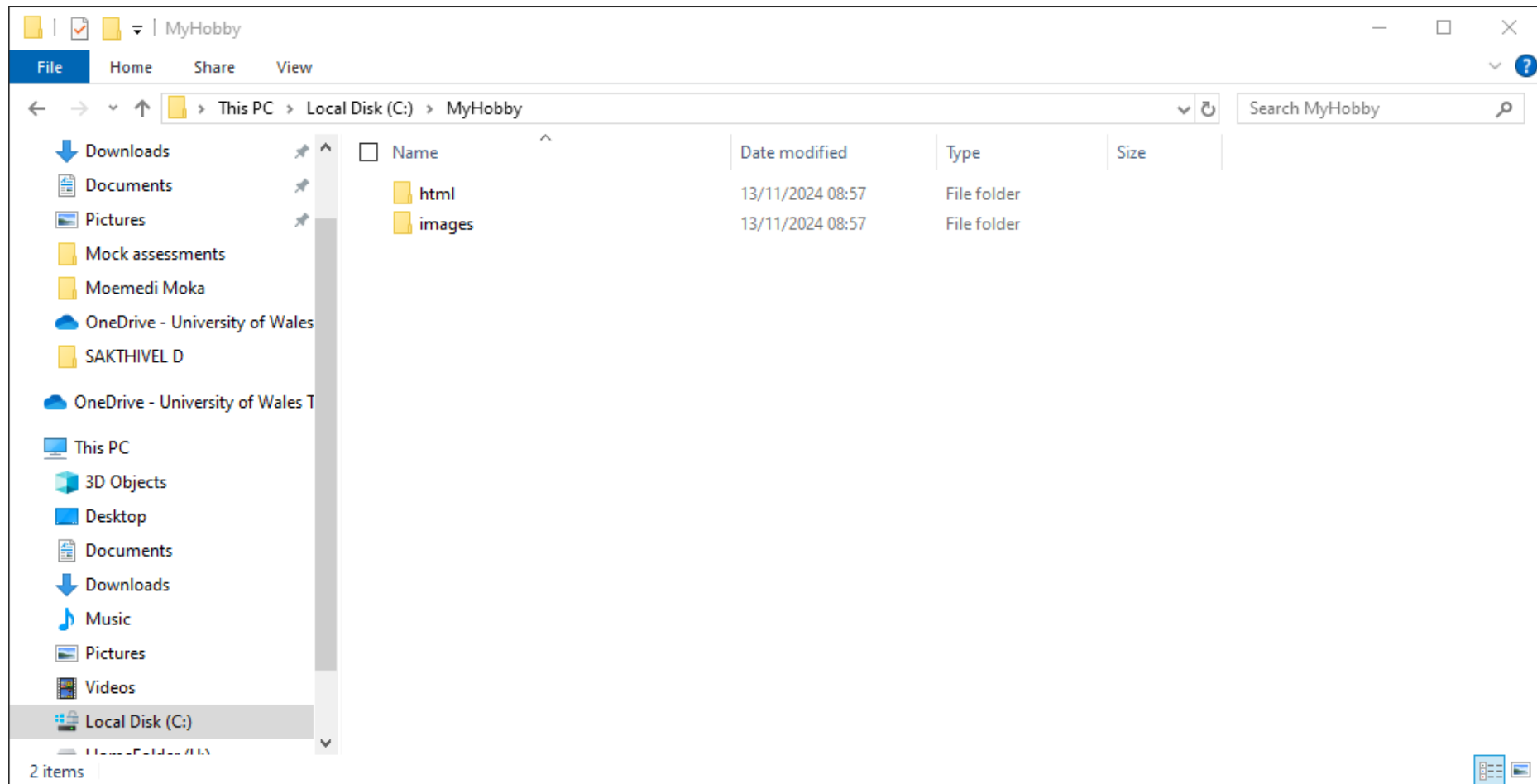
Create a new folder on your computer named MyHobby.

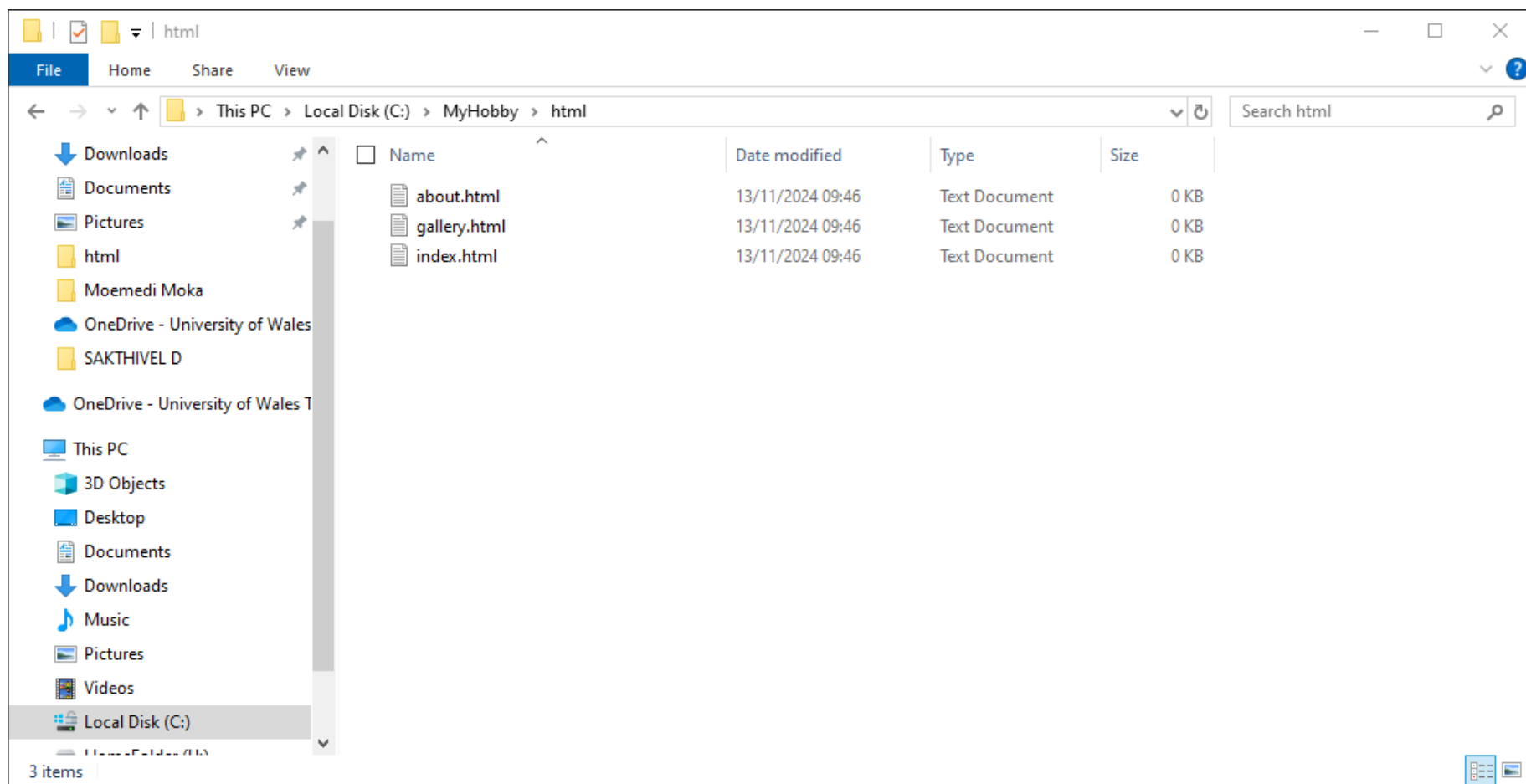
Create two subfolders html & images

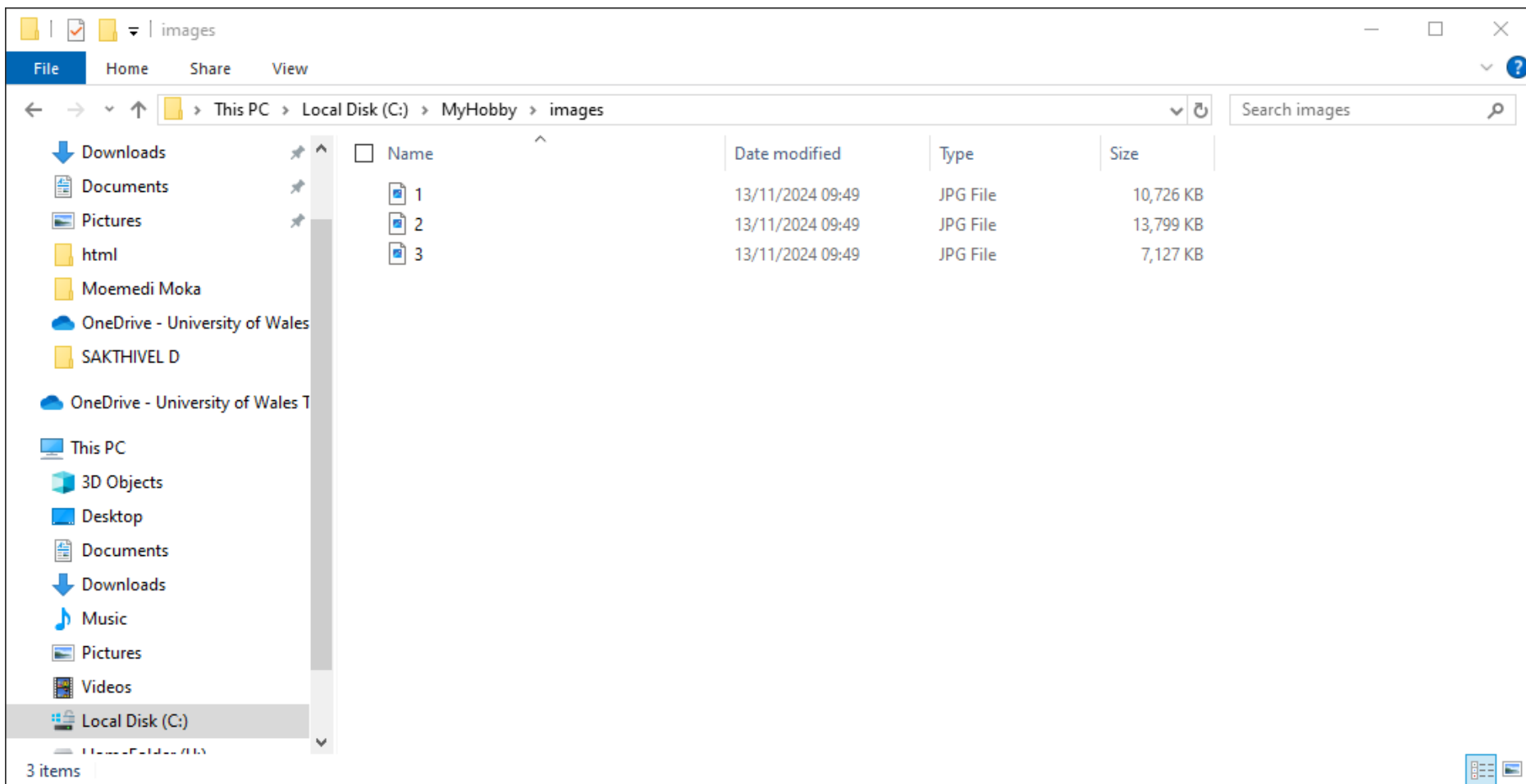
Inside the html folder, create three HTML files:

- index.html (Home Page)
- about.html (About Page)
- gallery.html (Gallery Page)

Inside the images folder, save all the required images





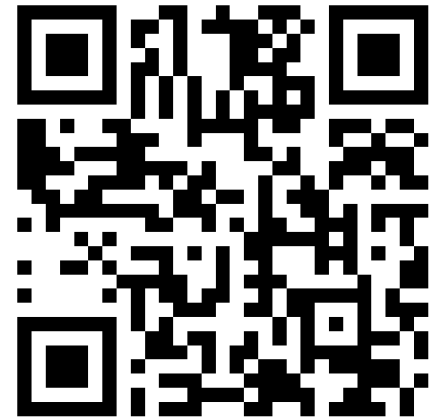


Activity

<https://forms.office.com/e/AQpNsqSjrF>

Compare the process of booking a car rental for a one-week trip in London from [NationalCar.co.uk](https://www.nationalcar.co.uk) and [LingCars.com](https://www.lingcars.com), evaluating the pros and cons of each website list your observations regarding:

- Website design and layout.
- Ease of navigation.
- Clarity of information.
- Overall user experience.



Further Reading :

Part I: Getting Started

Part II: HTML Markup for Structure

Robbins, J., 2018, Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics, O'Reilly Media