Building Simple Webpages

What is a web page?

A web page is a single page on a website which you can view using a web browser. Let's look at this below!

How to view a web page

A web browser, when you open it, can go to an address (URL), like www.google.co.uk and it will load the web page. Try it!

Some web browsers we can use…:

Google Chrome

Mozilla Firefox

Microsoft Edge

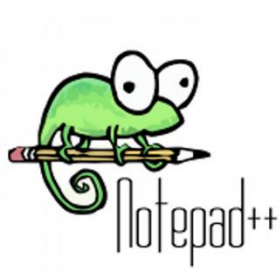
Safari

There are many more, but these are the most popular. Websites like Google are a search engine that help us find web pages on the internet. Website is plural, so it is a collection of webpages about a similar topic!

How to create and edit a web page

We can make webpages viewable in a browser, and if we pay a web host company to host us, we can have it on the Internet!

Primarily, we use text editors to write the webpage code from scratch. It's a good idea to understand the beginnings of a web page to understand some more of the complicated web pages that exist today. We will explore this later.



Here at Coderdojo North East, we like to use **Notepad++** to write the code.

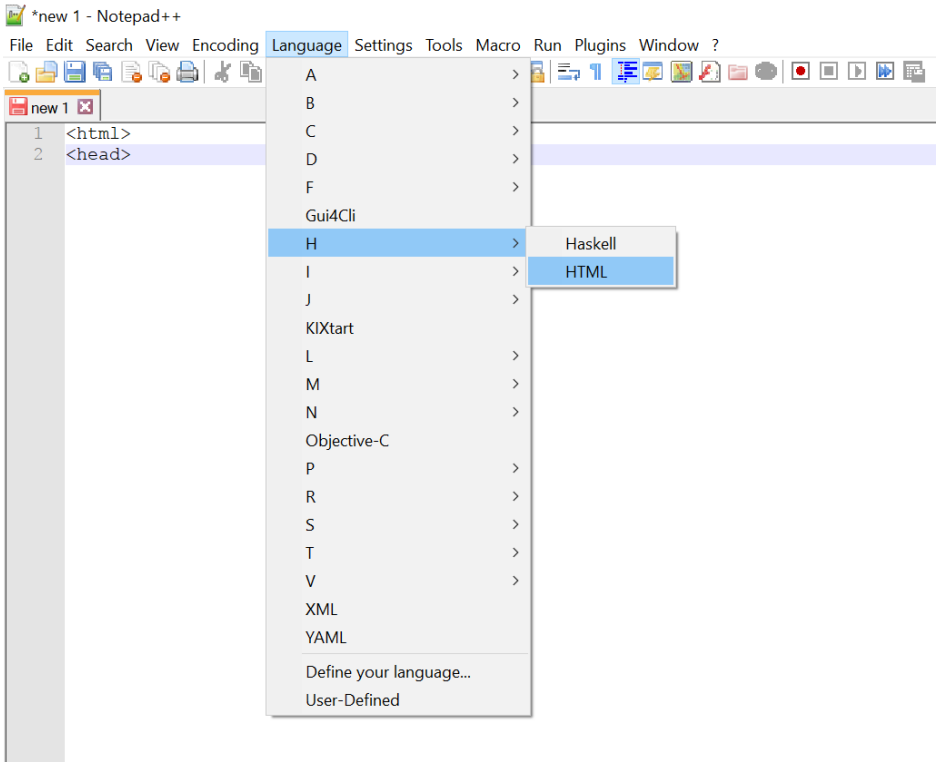
1. Download Notepad++ if you do not already have it. Google "Notepad++" and download.
2. Install Notepad++.

Tip: Have the code open on one side of the screen and your web browser open with your page your editing on the other side! Ask a mentor to show you.

Notepad++ Introduction

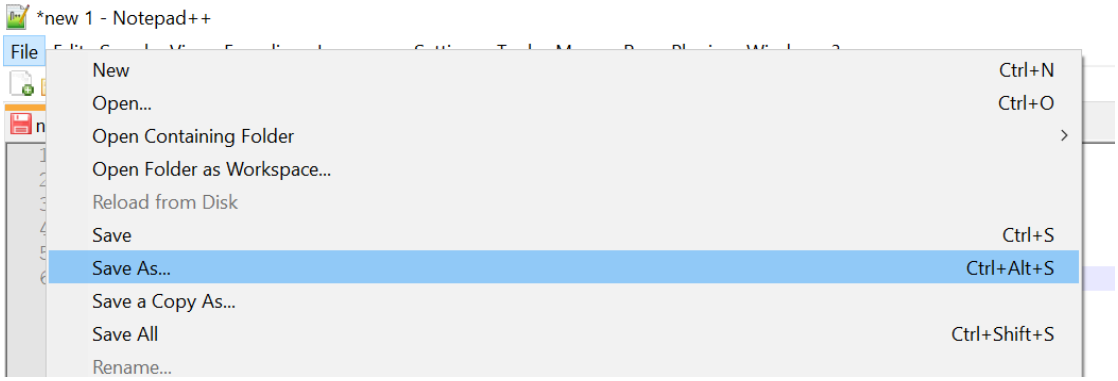
Open up Notepad++.

Notepad++ lets you write in a wide range of languages. Select HTML from the options as shown on the right.



Before we start writing any of the code, we should save it so we can open it in a web browser.

How do I save my web page!?



In the file menu, you can select the 'Save As' option to save the webpage. To make sure that the computer recognises our web page, we should save it as an HTML file. *Like images, that have .jpeg or .gif as a name, web pages are .html.*

So now save as a .html file. For example: home.html

Advanced: Index is the name of the main page of a website.

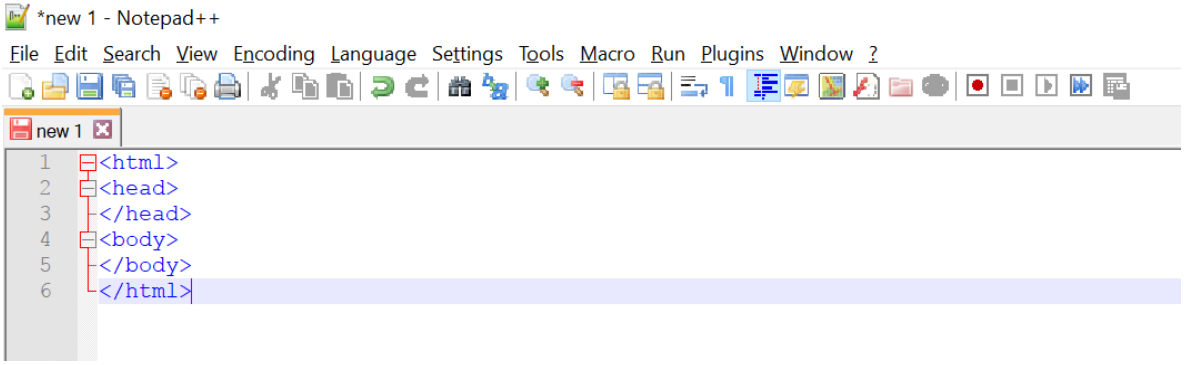
<HTML Introduction>

Now we know how we need Notepad++ to write code, and we should save the file as a HTML file... let's talk about HTML!

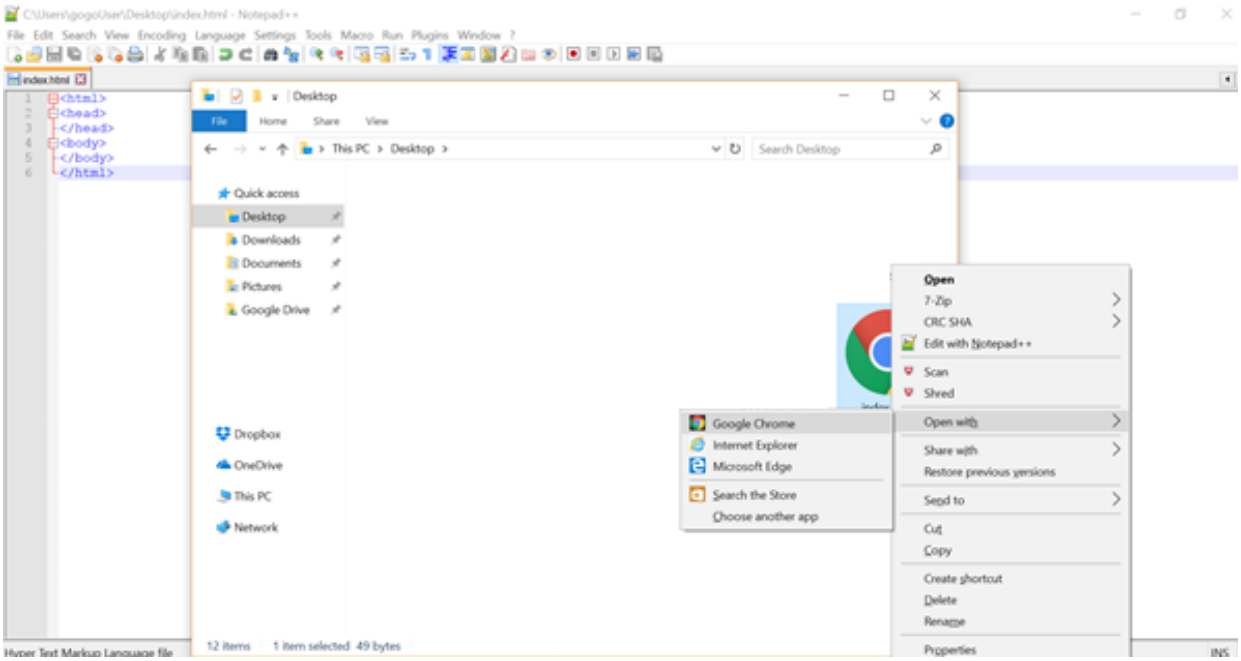
HTML is the web language used to structure a webpage. It stands for HyperText Markup Language.

CSS, which will we look at later, styles and formats the webpage.

In HTML, we have two big sections we must write the code for: the Head, and the Body. Look at the image below and type it into your new webpage.



Remember to Save often! When you're ready to see your webpage, go to where you saved your web page and you can RIGHT-CLICK, OPEN WITH -> (Pick a web browser)



HTML tags

OVERVIEW

The most important thing to remember about using HTML is learning to use HTML tags. Every tag starts with an open and a close tag.

Open: <head>

Close: </head> *Notice the backslash*

Let's start with some tags that we can put into the HEAD. The HEAD executes/runs first when you open up the webpage. So here will can add the TITLE of the webpage and scripts and stylesheets later on.

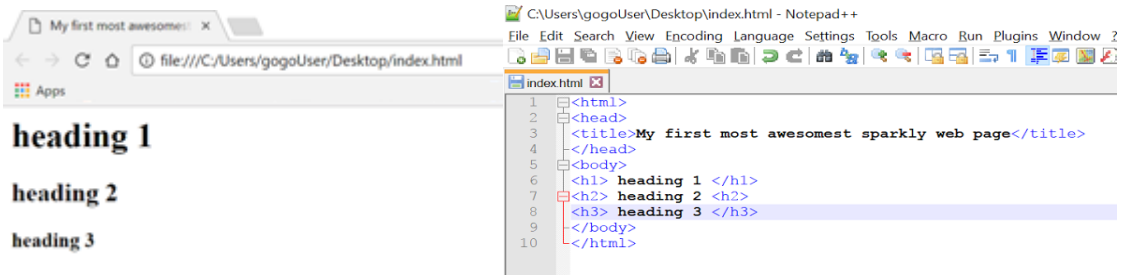
TASK 1: ADD A TITLE TO THE HEAD SECTION OF YOUR WEBPAGE.

See below, I made a title for my web page when I opened it up in my web browser.

We can leave the HEAD for now. The BODY part of the page is everything you want to show the user when they open up the page.

TASK 2: ADD HEADINGS TO THE BODY SECTION OF YOUR WEBPAGE.

H1, H2 and H3 tags will create titles that are different sizes. Which one is biggest?



Remember, you can put your CODE and your WEB PAGE on the same screen. If you need help, ask a mentor to show you.

The different heading tags help you organise content on your page. H1 is the main heading (or most important). **H2** is a sub section of **H1** and so on. See example below.

```
<h1>About me</h1>

<h2>My hobbies</h2>
```

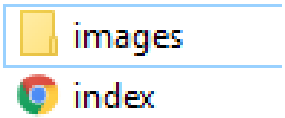
TASK 3: ADD SOME TEXT TO THE BODY SECTION OF YOUR WEBPAGE.

The **<p>** tag wraps around a paragraph and is used for the main text on your webpage. The example below shows the main text enclosed with the **<p>** tag

```
<h1>About me</h1>

<p>My name is Sophia, I am 11 years old and I live in Newcastle. I have a pet cat
called smudge and my favourite food is pizza! </p>

<h2>My hobbies</h2>

<p>I have a lot of hobbies and I really enjoy reading and swimming, but not at
the same time! I also enjoy learning how to create webpages.</p>
```

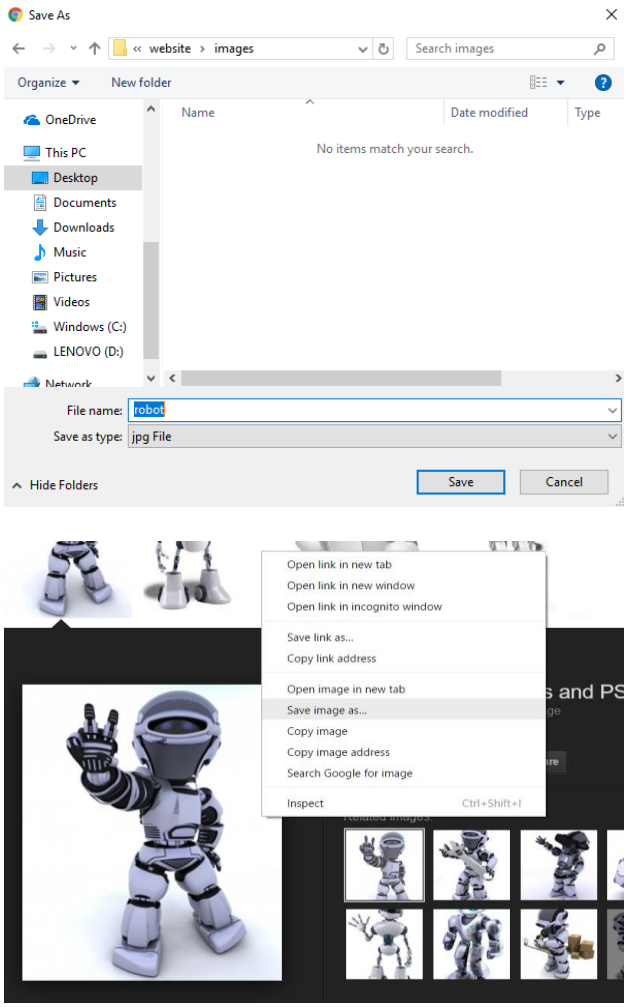
TASK 4: ADD AN IMAGE TO THE BODY SECTION OF YOUR WEBPAGE.

The **<img>** tag is used to add images to your webpage. Inside the folder where your index.html is, create a folder called images.



Next, we need to find an image and save it to your images folder. If you already have an image on your computer you would like to use you can copy it to that folder. If not we can find an image on the internet and save it to your images folder.

- Search for a picture of a robot, then right click and select **'save image as..'**
- Locate your website **'images'** folder, rename the image to something simple like 'robot' and then click the **save button**.



In your code, use the **<img>** tag to add an image. The tag has 2 required attributes, **src** and **alt** as well as the size attributes.

src: This points to the location of the image

alt: This is used to include a brief description of the image to help make your page accessible to a wide range of people. Accessibility is very important and you will learn more about it later on.

This code will add the robot image assuming you have the image in your images folder and named it robot. Note that you also need to include the correct file extension, in this case .jpg

```
<img src="images/robot.jpg" alt="robot">
```

{ What is CSS }

CSS stands for **Cascading Style Sheets**. It is used to describe how elements are to be displayed on a **web page**.

In other words, CSS can define the **colour**, **position** and even **animation** of an element in a web page.

CSS can be added to your HTML in 3 ways.

- External Style Sheet ☺
- Internal Style Sheet
- Inline Style

All are fine to use but external style sheets are preferable; an advantage of using an external CSS file is that it can define the layout and design of multiple web pages all at once and save you repeating a lot of work!

TASK: *Go through the introduction to CSS here*:

http://www.w3schools.com/css/default.asp

```
.fear {
  display: none;
}
```

Well done on completing getting your first web page ready. You may notice the background colour is white and text is black. We can change this using CSS!

The important bit to remember is that CSS helps us to format our webpage! Let's think about this in terms of cake.

HTML tells us what the cake layers should be: **the structure of the web page.**

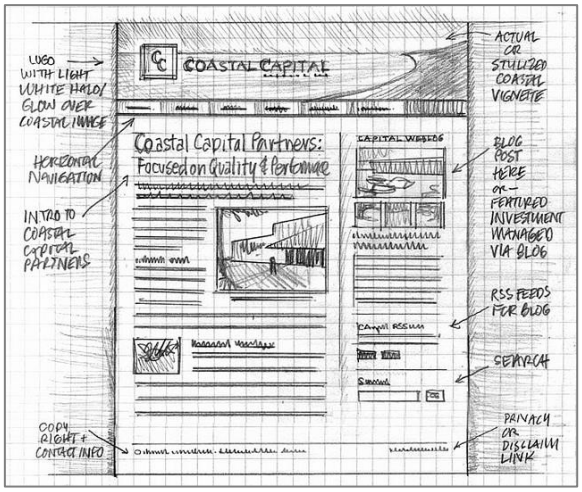
CSS tells us what colour icing we want, and the flavours. **The styling and formatting!**

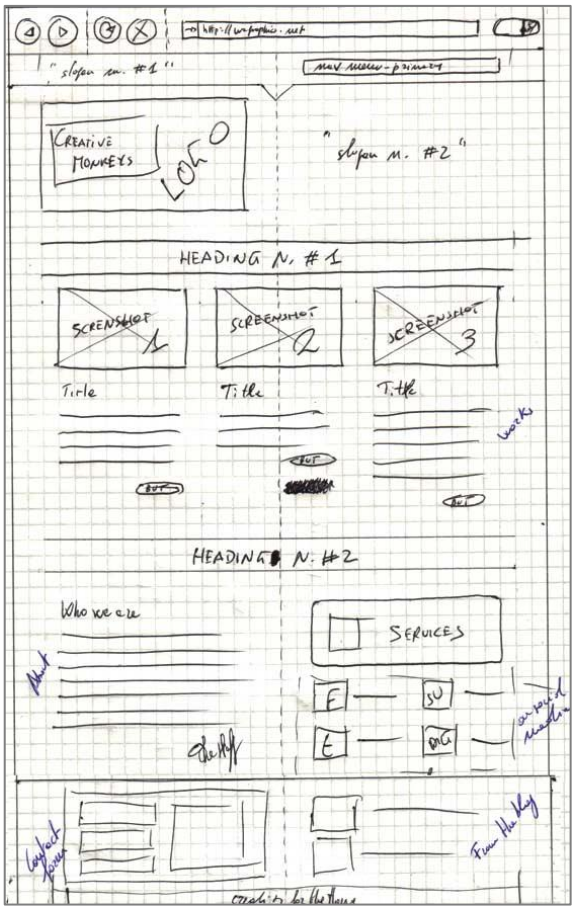
Wireframes

Now you've done some basic HTML, here's a new concept: Wireframes!

A great way to design how your website will look is to use wireframes, a simple way to do this is with pencil and paper, or if you are more confident you could use a computer application.

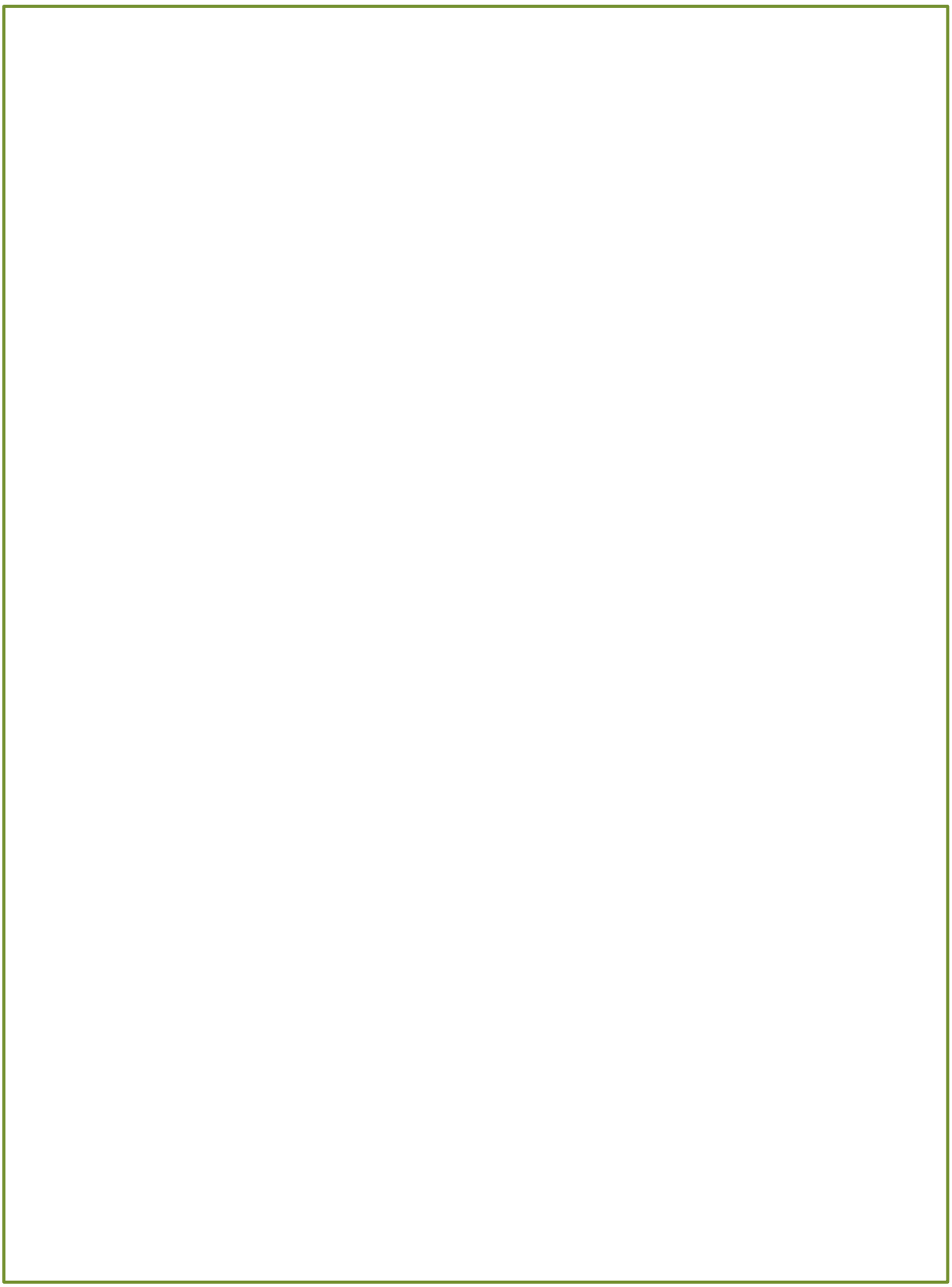
Here are a few examples:





Use the template on the next page to design your own:

Think about: Title, Pictures, Text, Buttons, Videos. There is a wireframe on the next page.



The following wireframe is an example of how most websites follow a similar design. They usually contain a header, a navigation menu a logo and a footer.

It is perfectly OK to use a similar layout. Your choice of colours, logo design and content will make your site design look unique.