

INTRODUCTION TO ICT

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COURSE INTRODUCTIONS - 40MN - ME

- Welcome to the course
- Introducing the instructors
- Each student introduce themselves: name, why they want to learn ICT, what ICT means to them, what they want to learn from ICT, what they think they already know - 20 minutes – instructors/students will write 5-10 words about what users know of ICT
- Instructors gather the words together in order to categorise them e.g. hardware versus software, desktop versus Internet, markup versus programming, etc 20 minutes

HARDWARE VS SOFTWARE – 30 MINS – AB

- Laptops, mobile devices etc
- Parts of a computer
- Software
 - Operating systems
 - Desktop applications e.g. MS Word

THE INTERNET, THE WEB

What is the internet?

People often confuse the Internet and the World Wide Web.

The Internet is a network of networks and is ~45 years old

What is the web?

Exercise:

- Get into groups (3, 3, 4). Come up with all you think can be done on the web e.g. socialise and the tools they think are used (e.g. social media)
- Only your imagination is the limit. The web is only 28 years old! Tim Berners-Lee, a British scientist at CERN, invented the World Wide Web (WWW) in 1989 at 34. In 1993 CERN put the World Wide Web software in the public domain. Today there are 40000 searches on Google alone every second and growing! There is still everything to be done.
- Before Facebook, social media did not exist and that was only 13 years ago! Mark Zuckerberg, an American computer programmer was 20 when he co-founded/launched Facebook from his University dormitory room. Now he is the fifth richest person in the world, with 1,878,845,203 active Facebook users today. You might just be the first to invent the next best thing.

What is web coding?

- Looking at various web sites and applications: 1 In Music, Tiki Black, EvoSoft, 3E Web Media, Google, Facebook...

- All these use codes or tools that tell your browser what to show to your users / users
- A lot of tools allow you to build your website without knowing any code and in many different ways. WordPress leads the pack, followed by Joomla and many others such as Drupal. However, coding skills give you transferable skills and a better understanding of how the web works. It allows you to create simple, light pages at a moment's notice without the need to download heavy applications. Finally, even with these sophisticated applications, it allows you to troubleshoot issues and even customise code further. This is for example, what makes two website using the same underlying codes different from each other and even unique altogether.
- Exercise: how much do you know about the web and programming – find out (by show of hands) how many know about: HTML? CSS?; JavaScript?; XML; PHP? Java? (show if possible)

Different web coding

You can code web pages in different ways: Frontend languages control what you see on your web browser, especially the structure, the format and the function on your web pages.

- The simplest is **marking up** or **structuring** content e.g. HTML or Wiki markup. This allows your content to have structure and sense and make it more than just a lot of text put together. With markup, you can say where a paragraph starts, what your heading is and in more recent versions, where a footer or header are.
- You can format a page or a set of pages using what is called a style sheet, or cascading style sheets. This allows you to specify the look and feel, including the layout CSS, Client-side coding etc – Everything you see on the web is coded

- Exercise: What code style is used where? 7 examples: wiki markup, form, formatting, server-side programming, client-side programming, JAVA, etc + examples of codes used
 - Wikipedia page
 - Google search
 - WordPress e-commerce 3-e web media
 - WordPress e-commerce 3-e web media Selector
 - Tiki Black page layout and look
 - <https://notepad-plus-plus.org/>
 - Social Media
 - Games
 - 1 in music app or any other app
 - News website BBC
 - Radio website

HANDS-ON HTML CODING (2H)

Example of html coding and resulting pages to build

1. show content unformatted and unstructured – both code and then results lesson: Unlike Microsoft Word (and other so-called “WYSIWIG” applications, in Notepad, you will need to code your breaks, and everything else (structure). This will allow you to see where HTML markups come in place

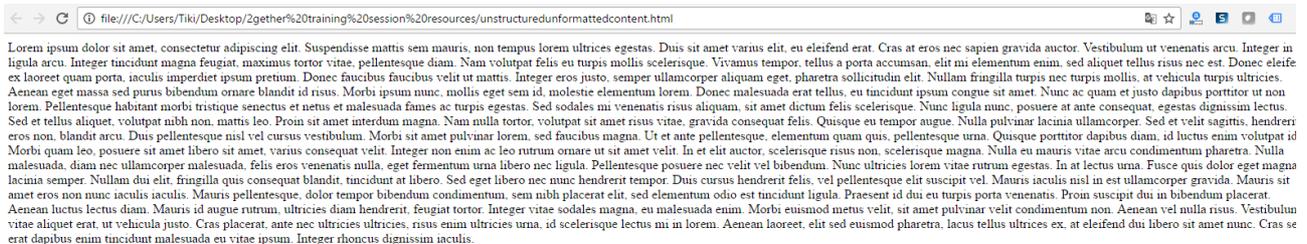
```
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```



2. show content structured

1. paragraphs, headings

2. links

3. images...

3. show content formatted

4. show interactive content

INTRODUCTION TO HTML

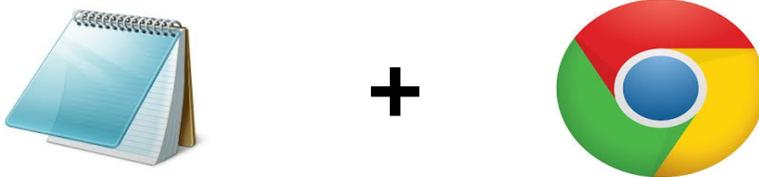
- HTML allows you to create web pages
- It stands for HyperText Markup Language
- the simplest coding just marking up content to tell the browser how to show your content
- You markup content with tags like so `<a_tag>content </a_tag>`.

Tools you need for HTML

You need an **editor** to write your code and a **web browser** to view it.

HTML Editor: Write your content and mark it up.

A simple editor like *NotePad* is the best way to learn HTML and how to mark up



your content. NotePad can be found free on your computer. That is the main reason we chose it as an editor.

More sophisticated HTML editors will allow you to see your code more clearly (using e.g. different colours to differentiate between code and content), auto-complete code (ensuring e.g. that your open markups are closed), preview your content and a lot more. The best ones include [NotePad++](#), Brackets and are also free. Some of them require more familiarisation with their environment than others, e.g. Eclipse or Aptana.

HTML Wiewer i.e. Web browser: View your web pages

Your every day web browser, e.g. Google Chrome, is used to view your HTML content or web pages. Other web browsers include e.g. Internet Explorer, Mozilla Firefox, Safari (on Mac),

The browser used to be called a navigator because it navigates through web pages. Imagine that it is a traveller who can go and see all the people you want to talk to. You have to write what it is going to say (your content) and how you want it to come across (structure, e.g. first I want to talk about who I am, which is Manuella Essaka, a passionate of ICT and so on...).

We are doing work locally (so not online), so only you will be able to access the resulting web pages for viewing. In order for others to see your web pages via the web and eventually using a search engine (e.g. via Google), your web content will need to be put on a server. We are not covering this aspect today (we can show you examples if time permits but we will be showing you how to do this on the next session).

Part 3 – hands on HTML markup

For example, let's create a page showing the list of places we like (or use Lorem ipsum fake content) and structure them into places we like to play games, places we like to socialise etc. Below are the step-by-step Instructions on how to create your page

- add content
- save as html
- structure content
 - add paragraphs – start each paragraph with `<p>` and end each paragraph with `</p>`


```
<!DOCTYPE html> -  
<html>  
<head>  
<title>Page Title</title>  
</head>  
<body>  
  
<h1>This is a Heading</h1>  
<p>This is a paragraph.</p>  
  
</body>  
</html>
```

An introduction to style sheets (CSS)

Style sheets control the appearance of your web pages. We look into adding an existing style sheet to your html.

- Instructors will provide 5 different style sheets and students will apply them and check the differences to their HTML file
- Adding a link to a style sheet: The `<link>` tag is used to add a link between your web/HTML page and an external resource such as a style sheet. Adding a link to a style sheet allows all the elements of your web page (tags) defined in the style sheet to get the format defined for them in the style sheet. The link tag is placed within the `<head></head>` tags like so:

```
<head>  
    <link    rel="stylesheet"    type="text/css"    href="style4.css">  
</head>
```

- Exercice:
 - Add the style sheets to the same folder as your html page.
 - Add the <link> tag to your webpage to link to one of these external style sheets, either style1.css or ... style4.css.
 - Watch the changes to your document after you refresh/reload it.
- Formatting in CSS: You could of course change or add formatting into the CSS, including change the colour, font size, police, weight and a lot more of the characteristics that define the look and feel of the elements of your web pages.

JavaScript

- creating a button that goes to a link
- if we have time create a form that goes to an email address

What next?

- Create as many pages as you need we are going to put them on a server next time!
- We create a space for you to host your pages. It is not a full website but a little space on our website for you to view your web pages
 1. Open File Explorer
 2. Type in <ftp://tech2gether.evosoftware.co.uk/trainx> where x is the number given to you and press Enter
 3. It will prompt you for a username and password

4. your username is `trainx@evosoft.co.uk` and the password is `train321`

5. You've logged in to the server now so you can upload your files. One way of doing the upload is to open your local folder in another window where your files are being created. You put the windows side by side and all you need to do is to drag your files from one window to the other.

6. You will notice that when you go to your web pages e.g. <http://tech2gether.evosoft.co.uk/me> will just list your files rather than showing your page. This is because you will need an index or default page, generally used as the homepage for your web pages. For our particular hosting, this would be `index.html`.

- The whole creating a website process (exercise) including:
 - What are and how to chose Domains?
 - What is, how to chose and how to upload content to Hosting?
 - How would you go about it?

RESOURCES

<https://3ewebmedia.com/tech2gether-ict-training-html-resources/>

Your resources will allow you to find more help with your web pages e.g. a list of more web colours, where and how to generate fake content (Lorem ipsum), other tools that you can use and a lot more.