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SOFIA UNIVERSITY
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EST. 1888



ICT-TEX course on Digital skills

Topic 5: Development and maintenance of websites

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ICT IN TEXTILE AND CLOTHING HIGHER EDUCATION AND BUSINESS

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Introduction

In today's digital age, it is becoming increasingly important to possess computer-related skills. A good example of this is the ability to create a website, be it an e-commerce one, a business one, or simply a personal portfolio, and put it up on the Web. Is it really as hard as it is sometimes made out to be? This lesson aims to give a basic guide on the steps necessary to get a website up and running and maintain it as time goes on.



How to get a good website

- The first and most important step is to carefully plan what the website
- This includes
 - Is it going to be static (no or rare information change) or dynamic (information on it is going to change more than once a week)
 - What is the target group and the main users of your site
 - What is the structure of information that is going to be presented on the web site
 - Etc.



How to get a good website

- In order to do the step on the previous slide correctly, some basic information about how Internet works is necessary.
- Basically, from user perspective Internet is a very large set of interconnected computers that constantly communicate with each other.
- Users usually have access to the top level of this communication, called World Wide Web (WWW)



The basics of WWW

- A system where documents and other resources are organized and each of them is accessible over the Internet via a so-called *Uniform Resource Locator* (URL)
- URL may be regarded as an identifier, used to uniquely identify a given resource on the Internet. It is the text that users type into the address bar of their browsers

- Any website is a document stored on some computer (called a server) that is connected to the Internet and accessible on some address (a web-address).
- In other words, the two essential steps that must be taken to get the website up are:
 - hosting – acquire the privilege to use a server, to keep all the data that make up our website
 - getting a domain name for the site.

Hosting

- Most basically the hosting is the server computer, where the website is physically stored and located.
- In order to host a website, you can either buy the server and other necessary equipment and manage them within the organization or use a dedicated hosting service
- In most cases it is advised that any individual or a company host their web site using a hosting provider, than to invest in the necessary infrastructure by themselves

Hosting

- In the most basic case if the website is static (e.g. it doesn't have a Database) it may be hosted on any storage provider over the net
- If there is a need for a web-application, then more sophisticated hosting service is needed

Hosting

- Each year there are many rankings of hosting providers around the world – both free and paid ones.
 - You can search over the internet for “hosting providers” and choose the best that suits you
- Next slide shows some notable examples, up to the time this presentation has been released

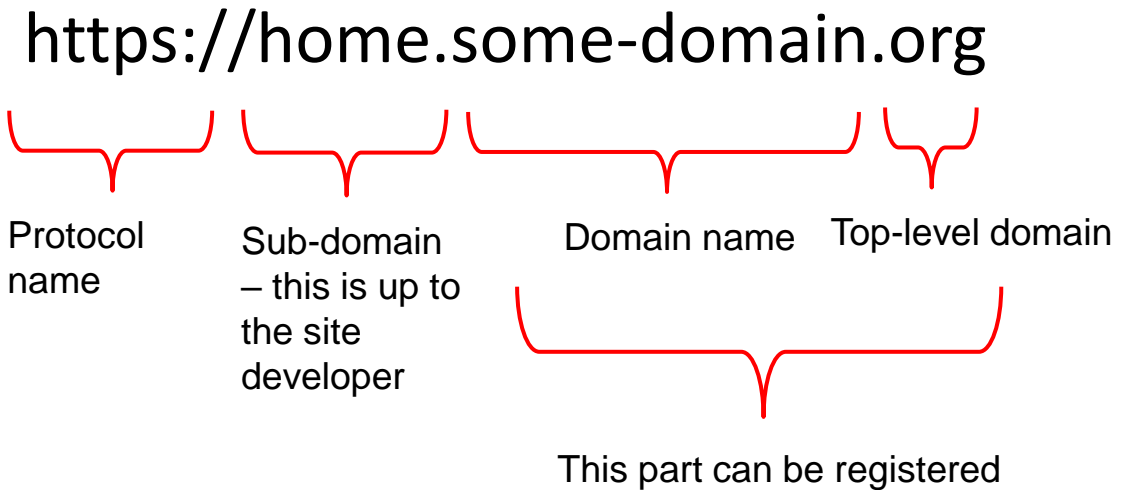
Where can we get hosting?





Domain name

- The domain name is what is typed into the browser's address bar
- It allows the Web to know which server the browser to communicate with whenever we type the address in (e.g. google.com) and hit the enter key.





Tips for a successful website

- Carefully select your target audience
 - For example, a general-purpose travelling website would have less success than a targeted one, e.g. for exploring craft beer shops around the world
 - By focusing this way, your site is easier to get noticed because of the reduced competition in that particular part of the market.



Building a web site

- Basically, there exist three different ways to build a website
 - Using a so-called Website Builder
 - Using a so-called Content Management System (CMS)
 - Build the site from scratch by coding

Website builders

- Website builders are software platforms that facilitate creation of a website
 - It usually doesn't require using programming skills or writing any code like HTML
 - Website builders offer a number of predetermined basic designs and templates that can be customized via automation and simple visual editing
 - They usually offer an intuitive editor that should be used to customize the web-site.



How to choose a website builder

- As with hosting and domain providers, the list of best website builders would probably evolve and change over time.
- Each year there exist various rankings of website builders
- Probably one of the most popular is Wix, which is easy to use and offers free account to create a basic website:
 - <https://www.wix.com/>



Content management systems (CMS)

- A content management system, has much broader functionality than website builder and it helps users to develop, maintain, and modify website content with minimal requirements for technical expertise.
- Due to the increased functionality, it is more difficult to use for creation of websites, however it makes the site very easy to maintain and modify afterwards, especially for dynamic sites where information is changed and added frequently.



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Popular Content Management Systems





Build a site from scratch

- This option is relevant in the rare cases when there is need to develop a unique functionality for the website which is not available with the use of website builder or CMS.
- Usually computer languages like HTML, CSS and JavaScript are used for this purpose
- It is a common practice to use a CMS or a builder to create the initial infrastructure of the site and then dig into the code in order to get what is needed.





Search Engine Optimization

- One of the most important things for a website to be noticed is to properly position it so search engines may easily rank it in the search results they provide to potential users
- In other words – you don't want your textile production web site to appear into the first page of results where the user searched for cars spare parts for example, or even worse – to not appear within the first 20-30 result in more relevant searches
- Mastering how a web site is positioned into search engine results is called Search Engine Optimization (SEO)

General SEO rule

- A website needs to be fast, filled with great content, and that content needs to be easily browsed between, meaning there need to be relevant links to allow clients and any of search engines robots to absorb and comprehend as much of that content as possible.
- Under the basics SEO can get rather complex, however there are a number of practices that is good to be followed

Good SEO practices

- Setup a unique context-oriented page name of all pages on the web site
 - For example, if you have a textile company web site, don't use just the name of the company as a page heading
 - Headings should explain the content of the specific page, e.g. "our products", "company team", etc...
- Use a good platform. Some platforms and hosting providers also offer SEO tools that help in better positioning of the site on search engines
- Use logical site structure in case if the site has many pages
 - This is usually very context dependent and specific for each site
 - However, a good practice is to create a mind map



Good SEO practices

- Use a logical URLs – let the URL also help to describe what information is stored into the website
- Select number of key words and key phrases that best describe the content and use them on the right places into the site



Website maintenance

- There exist only very rare cases when the lifecycle of a website ends up with the initial creation and deployment onto the hosting server
- The bigger part of the efforts concern website maintenance – the process when you update information on you site and remove bugs from it



Website maintenance

- Once the website has been launched, unless it is quite a simple one, maintenance and a path for growth will be necessary. This level is dependent on the site development method
- For example, whenever a bug occurs, if the website was built from scratch, it is likely that bug was introduced by the developer and will they need to fix it. Moreover changes in website may become tedious over time.
- As already mentioned, using CMS is best if you have to do intensive maintenance.



WEBSITE MAINTENANCE



Bugs in CMS-based sites may be common too, but there is a big community around all of them, which makes it easier to recover. Additionally, static site generators and especially CMSs are going to make the process of adding new content very simple.



Additional resources

- What is the best way to make a website? Beginners Guide:
<https://www.youtube.com/watch?v=TFZb2nxQzX0> (7:40 min)
- Best Website Builders 2020:
https://www.youtube.com/watch?v=E_JHmju1zf0 (14:27 min)
- How to Make a Website from Scratch | Step-by-Step for Beginners:
<https://www.youtube.com/watch?v=CIPdU6RqBqk> (53:53 min)

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