Unit 2: Internet

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Contents

Textos Marea Verde

Prior knowledge

Activity: Summarize your general knowledge on this topic.

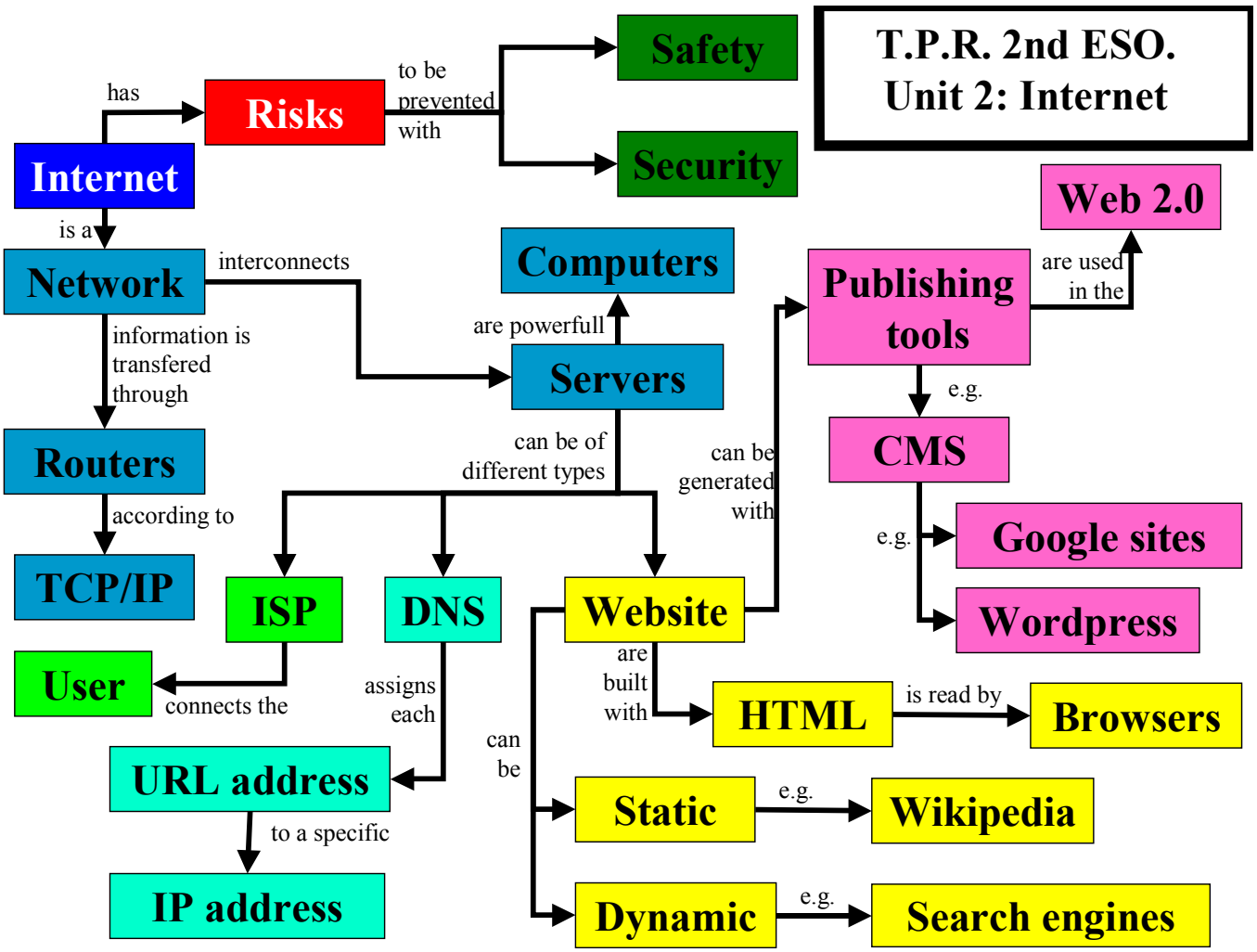
Keywords

Activity: Copy following keywords, explaining their meaning and translate them into Spanish.

Browser	Firewall	Publishing tool
Internet	phishing	Source code
IP address	Spyware	Web 2.0
Router	virus	Webmaster
Search engine	CMS	Website
Server	hosting	
Black hacker	HTML	

Mindmap of the unit

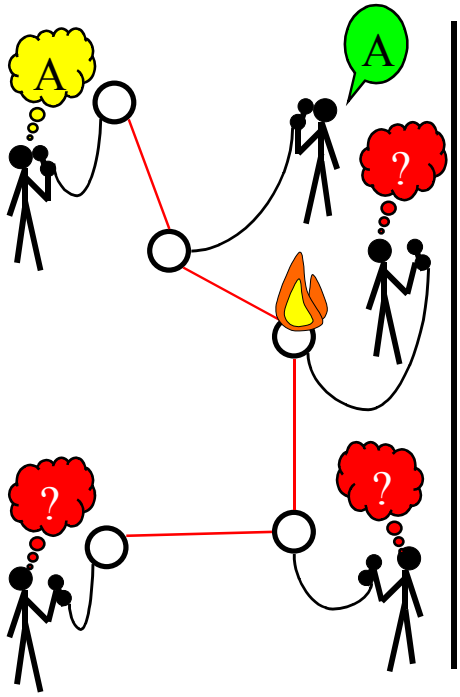
Activity: Analize and try to understand following mindmap



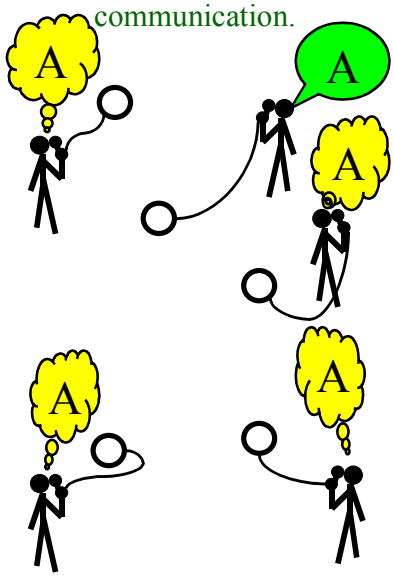
2.1. Internet

Activity: *Copy the text, look for information and fill in with following words: Network, Nodes, Advanced, Research, Communications, Department, 1969, Agency, Defense, 1965, Projects, Secure, Even.*

Between _____ and _____ the United States _____of _____ developed the ARPAnet (_____ _____ _____ _____), a _____ _____ _____, that worked _____ if one of its _____ failed.



Connect following five nodes in a way, that, if two nodes fail, the resting three still stay in communication.



Activity: *Copy the first drawing and explain what is the problem. Copy the second at follow the instructions to solve the problem*

Activity: *Copy the text, look for information and fill in with following words: access, tablets, interact, evolve, rapidly, objects, becoming, nobody, internet, service, mobile phones, context, security .*

Back then, _____ really thought that it would _____ to the _____ of nowadays, a _____ we can _____ from anywhere using our _____, _____ and personal computers, and that already allows us to _____ with everyday _____.

But in this _____ evolving _____, the need for _____ in all its different forms is _____ of great importance.

2.1.1. Internet basics

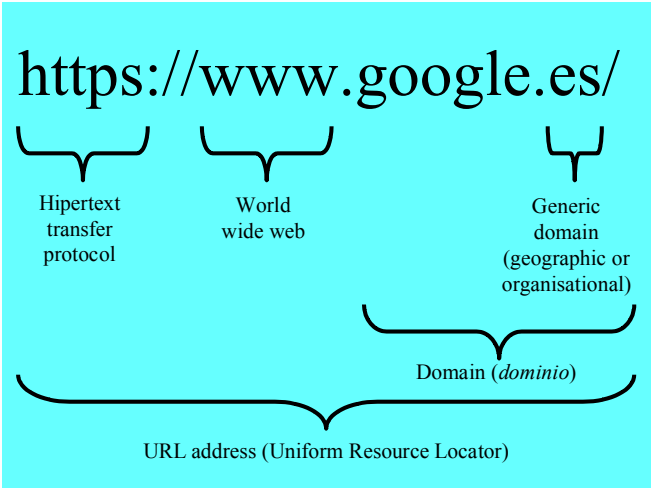
Activity: *Copy the text, look for information and fill in with following words: key words, simultaneously, websites, website, server, wireless connections, contents, internet, interact, browser, URL, things, Google, buscador, computers, networks, users, network, collection, copper wire, two, network, worldwide, location, program, uninterrupted, inmediate, internet of things.*

- A _____ (*red*) is _____ or more _____ connected to one another (by _____, optic fibre, _____, etc) that can share documents, files, printers, etc.
- Internet is a huge _____ of _____ interconnected _____.

- On the internet you can access the World Wide Web (= enormous _____ of _____).

- A _____ (*navegador*) (i.e. Internet Explorer, Mozilla Firefox, Google Chrome,...) is a _____that finds and opens the websites or web pages. The ____ **address** of a website indicates its exact _____.

- A search engine (_____) (i.e. _____, Yahoo, Ixquick, ...) is a _____ that enables us to find _____ of web pages according to _____.

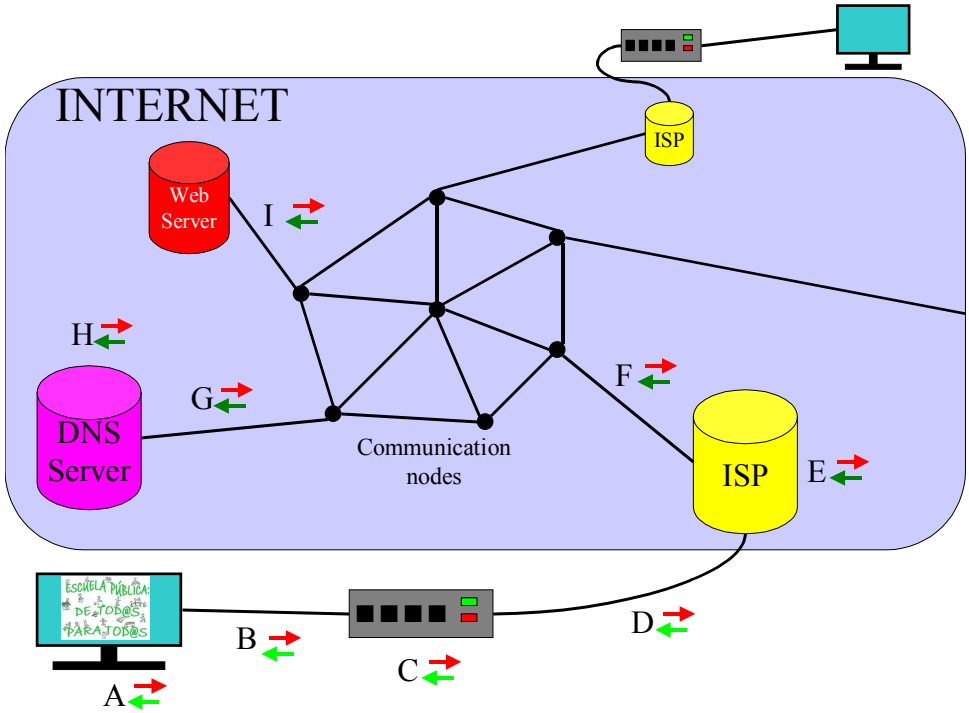


- A _____ is a computer prepared to provide _____ services _____ to lots of _____.

- In the _____ future not only people, but everyday _____ will be connected to the_____, so we can _____ with them. This next revolution is called _____ .

How internet works

Activity: *Copy the drawing, look for information and explain how internet works copying and filling in the table with following information:*



•Information is sent to the server that host the web page; • Packets of information according to TCP/IP; • Information (TCP/IP) including your IP address; • Assigns you an IP address (internet protocol address); • Typing URL web address in the browser; • Information that make up the website (TCP/IP) ; • Access to Internet ; • Information of web address we want to visit; • The browser reassembles the information and displays the web page; • Travels back over the network along the quickest path; • Checks your physical location; • Domain name system server; • applies the TCP/IP (transfer control protocol / Internet protocol)

Step	Location in the network	Description
1st	A →	Users computer: •
2nd	B →	•
3rd	C →	Router: •
4th	D →	•
5th	E →	Internet Service Provider (e.g.: Movistar, Jazztel, Ono....): • • •
6th	F→, G →	•
7th	H → , H →	_____: • Uses a data base to "translate" human readable addresses (e.g. https://www.google.es) into binary identifiers (e.g. 64.233.189.104) in order to locate and address servers worldwide
8th	G →, I →	•
9th	I →, F →, E →, D →, C →, B →,	• •
10th	A →	Users computer: • .

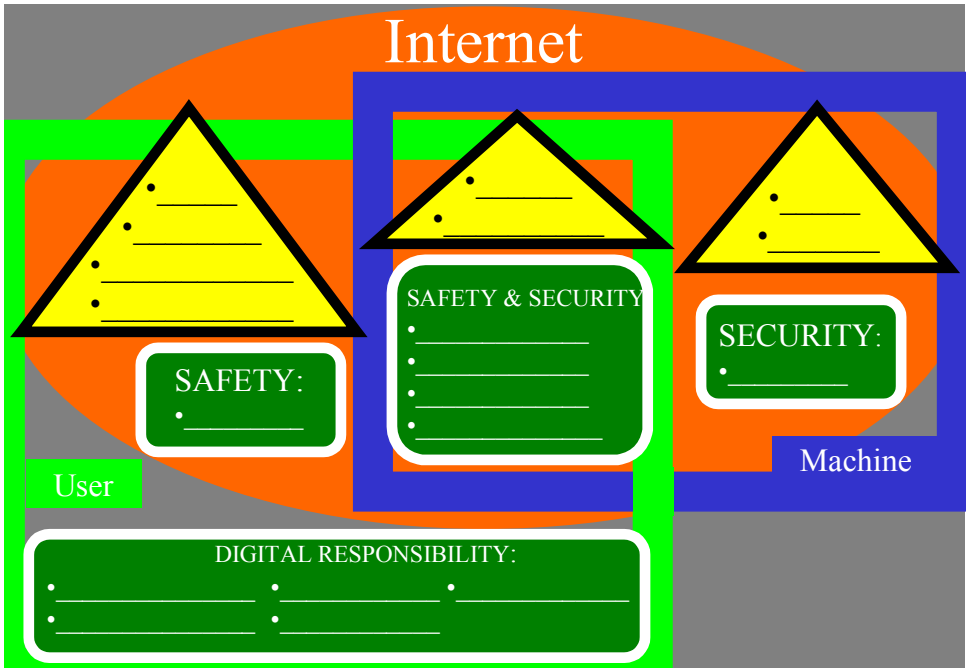
How internet works (video): https://www.youtube.com/watch?v=7_LPdttKXPc

2.1.2. Safety, security, responsibility

Activity: *Look for information, copy the internet map of the right and fill in with following concepts:*

• white hacking, •black hackers, • cryptography, • our attitude, • viruses, • passwords, • spyware, • phising, •cyberbulling, •respect to others, • firewall, • image damage, •loss of privacy, • antivirus, • Caution: images, web cameras...., • adults supervision, •limit of time, • use of aliases, • trojans

INTERNET MAP OF RISKS AND SOLUTIONS REGARDING USERS AND MACHINES



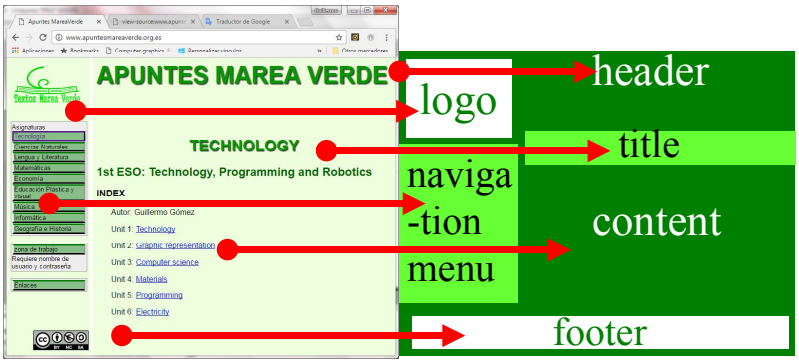
2.2. Web pages

2.2.1. Web pages basics

Activity: *Copy the text, look for information and fill in with following words: navigation Markup, web pages, footer, Website, HTML, address, htm, logo.*

- **Web page** = Document build with _____ (the extension of the file is "**html**" or "_____", e.g. "example.htm"), containig text, photos, buttons, icons, animations, hyperlinks, multimedia, graphics, tables, etc.
- **HTML** = **H**iper**T**ext _____**L**anguage, is the language used to build _____.
- _____= Series of linked web pages that can be accessed from a common _____.
- **Elements of a web page**: header, brand or _____, _____ menu, title, content and _____.

Elements of a webpage



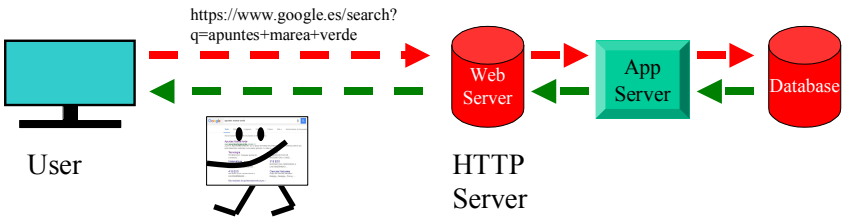
Classification of web pages

Activity: *Look for information, copy and fill in the table with following concepts:*

• Information webs, Wikipedia...; • HTML; • Search engines, Youtube, Facebook, ...; • Different depending what the user does; • HTML combined with dynamic languages; • Always the same

Static web page

Dynamic web page



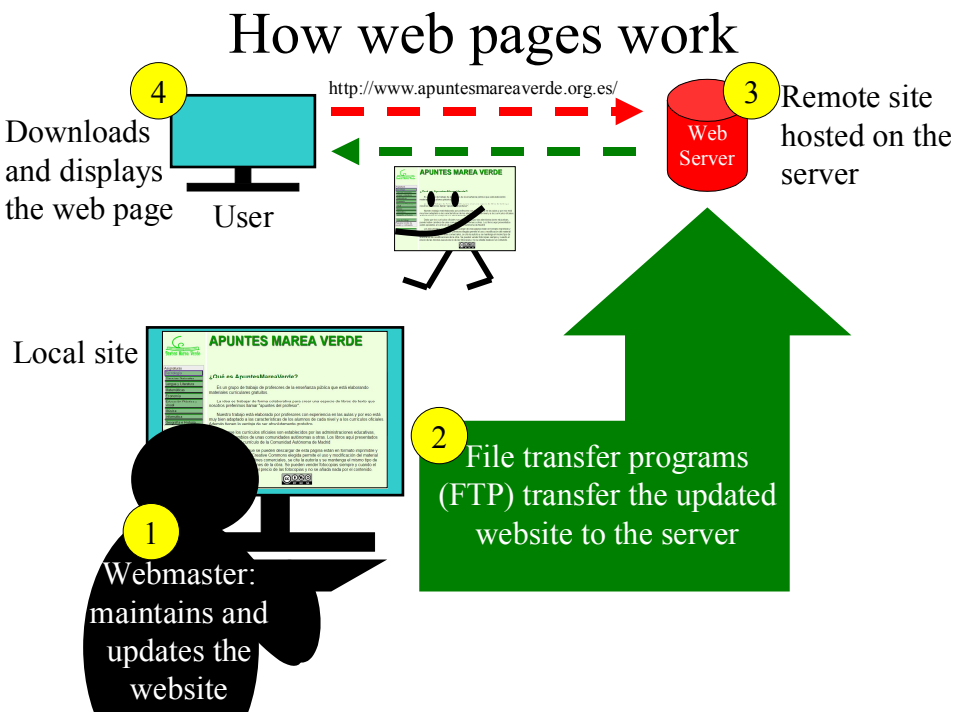
	Type of web page	
	Static	**Dynamic**
Content	•	•
Language	•	•
Example	•	•

Static vs Dynamic (video): https://www.youtube.com/watch?v=i1nJXL3IhwA
(spanish video): https://www.youtube.com/watch?v=B_O2pAwMoy4

How web pages work

Activity: *Look for information, copy and fill in the text with following words: Update, users, remote, local, computers, server, create, maintain*

- **Designer and developers**: _____websites.
- **Webmasters**: _____and _____ the website on their computers (_____ site) and transfers them to the _____ (_____ site).
- **Servers**: Are _____that host the remote site, making them available to the_____.



2.2.2. Publishing tools

Activity: *Look for information, copy and fill in the text with following words: interact and collaborate, generate content, Website, chronological, 2nd generation, non-expert, Content management system, 1st generation, World Wide Web, view content, "posts".*

- www =_____.
- Web 1.0 = _____of www, where users were limited to_____.
- Web 2.0 = _____of www, where users also_____, allowing them to _____with each other.
- Web 2.0 publishing tool = Tool for _____to generate content in WWW.
- CMS = _____, web publishing tools for web pages.
- Blog[1] = _____consisting of discrete, often informal diary-style text entries (_____) displayed in reverse _____order (most recent at the top).

[1] Blog is a truncation of the expression "weblog" (*log* = *bitácora*), which was jokingly broken into the phrase "we blog".

Activity: *Look for information, copy and fill in the table with following concepts:*
• Discussion website editable by any user, • Wordprocessor, Presentation, etc., • Wikipedia, • Wordpress, Google sites, Blogger, • Google drive, • Google Photos, Flickr, Youtube, SoundCloud, • Facebook, Twitter, Instagram, • Websites, blogs, • Websites for uploading images, video and audio files, • Personal page within the same network.

Web 2.0 Publishing tool	Generated content	Example
CMS	•	•
Wiki	•	•
Photo, video and audio hosting portals	•	•
Social networks	•	•
Online office automation[2]	•	•

CMS:
If you want to create your first web page, Google Sites or WordPress are good options:

	"easy CMS"	
	Google Sites	**WordPress**
Ease of use	No programming skills required	A bit more complex
Flexibility	Several users can work together	Create websites of any type
Designs	Limited set of themes	Themes are added daily (open source)
Hosting?	Included	Included
e-mail needed	gmail account	Any e-mail account
URL	sites.google.com/site/NAME	NAME.wordpress.com

Steps to create a 'website' with 'google-sites'

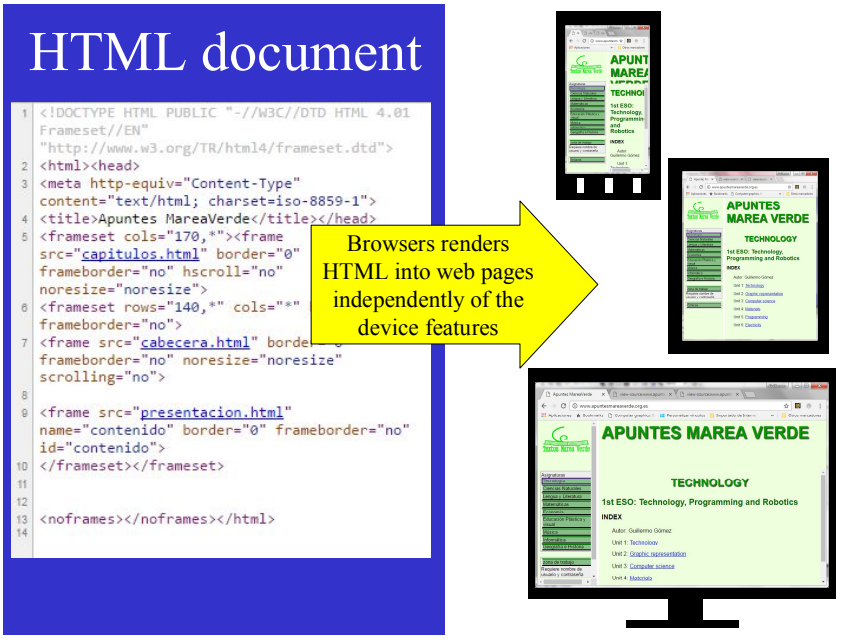
1. Log in: Select 'sites' in http://www.google.es/intl/es/about/products/
2. Enter username and password of your gmail account.
3. Select 'Create'
4. Select 'blank template', choose a NAME for your site and click 'create'.
5. Select a background,, enter the captcha[3] code and click 'create site'
6. Explore the three buttons at the top right
7. Editing the page: Click the "pen-button" and menu bar with 5 options (insert, format, table, design and help) and a tool bar for editing will be displayed.
8. After editing click 'Save', otherwise 'Cancel'
9. Add a new page: Click the "sheet-button", fill in the needed information (name of the new page, type of template, location of the page) and click 'create' or otherwise 'cancel'.
10. VERY IMPORTANT: Always when finished click on 'sign out'.

Website with Wordpress
For getting started, visit https://en.support.wordpress.com/five-step-website-setup/

[2] Office automation = ofimática.
[3] Completely Automated Public Turing test to tell Computers and Humans Apart

2.2.3. HTML

Activity: *Look for information, copy and fill in the text with following words: multimedia, text, HTML, browsers, location, features, web page, source.*



- HTML describes the structure of a _____ only with _____ (source code), making reference to the _____of external elements (photos, videos...).
- _____ render the documents writen with HTML into _____ web pages independently of the device _____ (PC, tablet, mobile phone...).
- To see the _____code of web page, right-click and select 'view page _____' ('ver código fuente').

How web pages work (video): https://www.youtube.com/watch?v=D8c4JZW73cM

Activity: *Look for information, copy and fill in the text with following words: closing, tags, slash, header, element, nested, brackets, paragraph, body, opening, content, markup, properties*

HTML tags

- HTML _____ consists of "printing instructions" in form of _____ (etiquetas).
- Tags are written inside angle _____ (corchetes angulares) and most commonly come in pairs like (_____ tag) and (_____ tag; always with a ____).

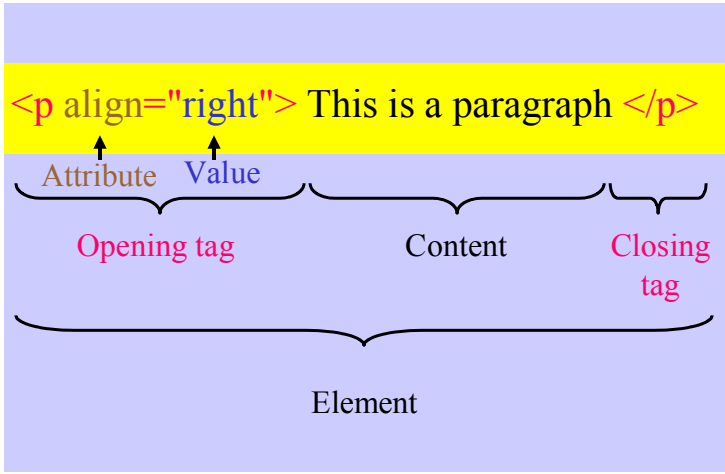
HTML elements

- The set of the opening and closing tags and the _____between them is called _____.
- The _____ of the element appear as attribute-value pairs, separated by "=" and written within the opening tag (e.g. Content , refers to 'a _____ aligned to the right')

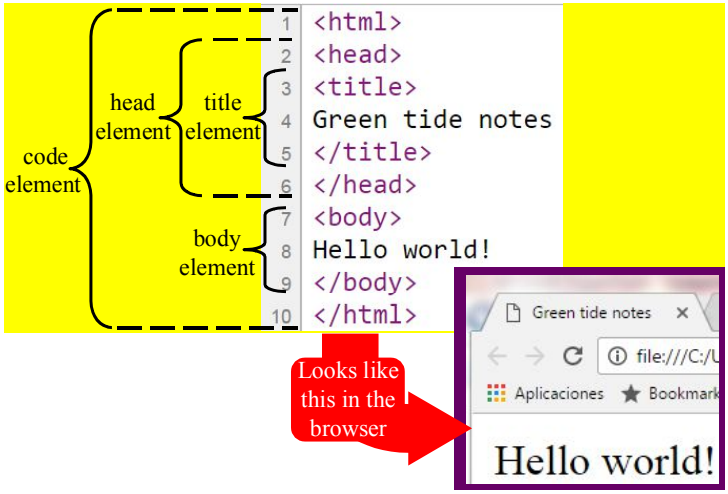
HTML documents

- HTML documents imply a structure of _____ (anidados) HTML elements.
- HTML documents have two main parts: _____ and_____.

General structure of a HTML code line



Basic structure of a web page: nested HTML elements



Examples of HTML elements		
Part of document	**Element**	**In the browser**
Document	<html> Document </html>	(Opens and closes the code)
Header	<head> Header </head>	(Open and closes the header)
	<title> Title </title>	Appears in the title bar
Body	<body> Body </ body >	Is the document you see
	<h1> Header </ h1 >	**Header**
	<font color="red"> red 	Red
	<p> paragraph </ p >	(Open and closes a paragraph)
	<p align="right"> paragraph </ p >	(Open and closes a paragraph)
	<b> Bold text </ b >	**Bold text**
	<i> Italic text </ i >	*Italic text*
	 search for more information 	Search for more information
		(Inserts an image)

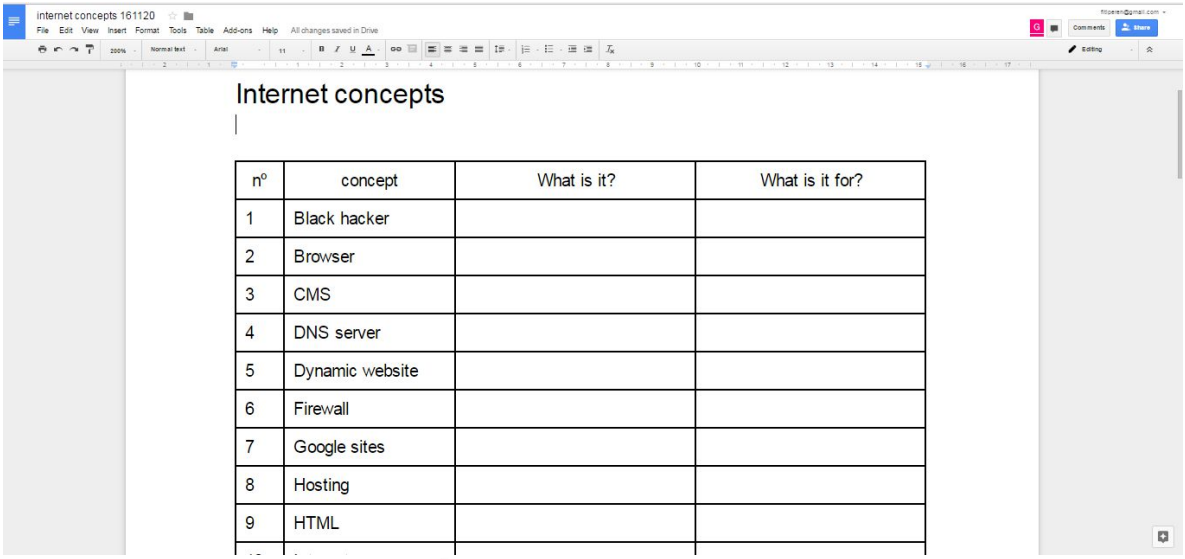
Activities: Solve following exercises in the computerroom

1) IP adress:

Enter http://whatismyipaddress.com/es/mi-ip an find out which is your ip-address at different dates. Fill in following table.

Location	Dates			
	20-11-2016			
Mobile phone				
Home computer	88.1.151.169			
School computer				

2) 'Google drive': Preparing the exam in collaboration. The aim is to prepare a table like in the image in order to study the following 30 concepts: Black hacker, Browser, CMS, DNS server, Dynamic website, Firewall, Google sites,Hosting, HTML, Internet, IP address, ISP, Network, Phishing, Publishing tool, Router, Safety, Search engine, Security, Server, Source code, Spyware, Static website, TCP/IP, URL address, Virus, Web 2.0, Webmaster, Website, Website server



nº	concept	What is it?	What is it for?
1	Black hacker		
2	Browser		
3	CMS		
4	DNS server		
5	Dynamic website		
6	Firewall		
7	Google sites		
8	Hosting		
9	HTML		

i. Make a group of 5-6 classmates; decide who is going to be the coordinator (must have a gmail account).
ii. The coordinator:
    1. enters https://drive.google.com/ and logs in her / his gmail account
    2. click 'new':create a folder with the group name (e.g. 2nd D)
    3. enter your group folder and click 'new' and click on 'google documents'
    4. click on 'file' and rename the documen to 'Internet concepts' (each change is saved automatically!).
    5. Insert a page break and in each page a table of 4x16, leave the first row of each table blanc and fill the first colums with the numbers 1 to 15 in the first table and 16 to 30 in the second one.
    6. click on 'file' and share the document with two members of the group that have gmail account (you are going to work in pairs). Make sure your are sending an 'editing invitation'.
iii. Rest of the members:
    1. Log in your gmail account and open the invitation e-mail the coordinator has send you. Click on 'open docs'.
iv. All the group: Now you can edit the table simultaneously from your computer. Decide which pair is working on the different concepts (e.g. from 1 to 10; 11 to 20; 21 to 30). Start filling in! Your work will be saved automatically!
v. VERY IMPORTANT: Always when finished click on 'sign out'.

3) 'Google Slides': Internet risks. Based on the 'Internet map of risks and solutions' of page 5, prepare a presentation of ad least 10 slides. Add images from internet. Do it in collaboration, following similar steps as in the 'Google docs' exercise.

4) 'Google sites': Creating a web-site.
    i. Choose within your group (5-6 members) a topic on which you can consider you are specialists (Please, if possible, other than football)
    ii. Make a design on a paper of how the structure of the site will be. Following example consists of 12 pages and 3 different levels (We recommend you to start with 4 pages and 2 levels).
        1. Pumpkin Recipes
            a. European Recipes
                i. Germany
                ii. France
            b. Other recipes
                i. Pumpkin Ice Cream
                ii. Pumpkin Beverages
            c. Curiositues about pumpkin
                i. History Pumpkin
                ii. Types of Pumpkin
                iii. Growing Pumpkin
                iv. Pumpkin in popular culture

iii. Create the site using the 'Quick guide sites' (see page 8). Work in collaboration, following similar steps as in the 'Google docs' exercise.

iv. When your are editing a page ('pencil-button' clicked), you will find on the tool bar an 'HTLM' option. Click on it to view the HTLM-code of your page.

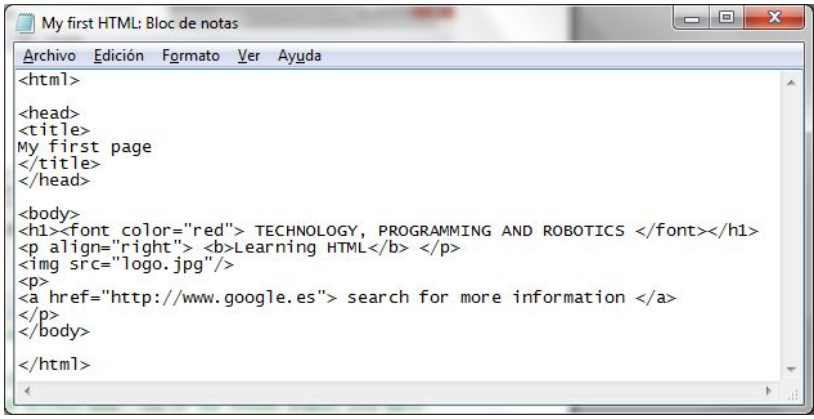
v. VERY IMPORTANT: Always when finished click on 'sign out'.

5) HTML:

i. Open Notepad by going to **Inicio / Todos los programas / Accesorios / Bloc de notas**.

ii. Save it as 'My first HTML.txt' in your folder.

iii. Copy the following text, being careful about typing tags and attributes. Identify every element and try to understand how it will appear in the browser (in line 12, instead of "logo.jpg" , type the name of the image you want to include.



iv. Save it as 'My first HTML.htm'. Go to your folder and double –click on this file to open the default browser. The web page should appear similar to the that of the image. If not check the code and try to find the error.

v. Right-click on the web page and select 'view page source' to see the code.