

Lecture 7 (w8)

2023/2024

# Databases, Web Programming and Interfacing

# DWPI

- Databases, Web Programming and Interfacing
  - An VI IT4T
    - 1C/1L/1P
- Timetable
  - Friday, every week (fiecare saptamana) 1C + 2L (17-20)
  - 1<sup>st</sup> December -> Test + Project Presentation **not** last Friday

# Grade

- 10% - Test/Exam – last week – 1h
- 40% - Project
  - Personal(80%)/Team(20%)
- Previous database project
  - receives a **web user interface**
  - **split** in individual assignments
  - bonus for unitary team application

# Info

- [http://rf-opto.eti.tuiasi.ro/master\\_it.php](http://rf-opto.eti.tuiasi.ro/master_it.php)

The screenshot shows a web browser window with the following details:

- Title Bar:** Laboratorul de Microunde și Optică
- Address Bar:** Not secure | rf-opto.eti.tuiasi.ro/master\_it.php
- Header:** RF-OPTO (with logo) - INSTITUȚIA DE ÎNVĂȚAMÂNT UNIVERSITAR ETI TURDA
- Language Links:** English | Romana |
- Main Navigation:** Main, Courses, **Master**, Staff, Research, Students
- Sub-navigation:** Radiocommunication Systems, Microwave IC, Satellite Comm., **Web Design**, Ethics
- Course Title:** Databases, Web Programming and Interfacing
- Course Details:**
  - Course:** DWPI (2021-2022)
  - Course Coordinator:** Assoc.P. Dr. Radu-Florin Damian
  - Code:** ITI.IA.601
  - Discipline Type:** DIS; Required, Specialty
  - Credits:** 5
  - Enrollment Year:** 6, Sem. 11
- Activities:** Instructor: Assoc.P. Dr. Radu-Florin Damian, 1 Hours/Week, Year, Timetable; Laboratory: Assoc.P. Dr. Radu-Florin Damian, 1 Hours/Week, Year, Timetable; Project: Instructor: Assoc.P. Dr. Radu-Florin Damian, 1 Hours/Week, Year, Timetable;
- Evaluation:** Type: Verification
  - C: 10%, (Tests during semester)
  - C: 10%, (Tests during semester)
  - D: 40%, (Homework/Specialty papers)
  - D: 40%, (Homework/Specialty papers)
- Materials:**
  - Textbooks:** PHP5 and MySQL Bible (pdf, 15.97 MB, en, ), PAW 2021 Curs 1 (pdf, 15.1 MB, ro, )
  - Project/Design:** Server CentOS pentru VMWare Player (cloud) (link, 0 Bytes, en, )

# Access

- Not customized



Date:

Grupa	5304 (2015/2016)
Specializarea	Tehnologii si sisteme de telecomunicatii
Marca	5184

[Acceseaza ca acest student](#)

Note obtinute

Disciplina	Tip	Data	Descriere	Nota	Puncte	Obs.
TW	Tehnologii Web					
	N	17/01/2014	Nota finala	10	-	
	A	17/01/2014	Colocviu Tehnologii Web 2013/2014	10	7.55	
	B	17/01/2014	Laborator Tehnologii Web 2013/2014	9	-	
	D	17/01/2014	Tema Tehnologii Web 2013/2014	9	-	

Nume

Email

Cod de verificare

Trimite

# Online

- access to **online exams** requires the **password** received by email

English | Romana |

Main Courses Master Staff Research **Student List**

Grades Student List Exams Photos

## POPESCU GOPO ION

Fotografia nu există

Date:

Grupa	5700 (2019/2020)
Specializarea	Inginerie electronica si telecomunicatii
Marca	7000000

[Access the site as this student](#) | [Request access to software](#)

**Grades**

Inca nu a fost notat.

Main Courses Master Staff Research

Grades **Student List** Exams Photos

### Login

Use the last name and email stored in the database

Name  
POPESCU GOPO

Email/Password

Write the code below

828f26b

Send

# Online

- access email/password

Main Courses Master Staff Research

Grades Student List Exams Photos

## POPESCU GOPO ION

**Fotografia nu există**

Date:

Grupa	5700 (2019/2020)
Specializarea	Inginerie electronica si teleco...
Marca	7000000

You access the site as **this student!**

Main Courses Master Staff Research

Grades Student List Exams Photos

## POPESCU GOPO ION

**Fotografia nu există**

Date:

Grupa	5700 (2019/2020)
Specializarea	Inginerie electronica si teleco...
Marca	7000000

You access the site as **this student (including exams)!**

# Password

## ■ received by email

Important message from RF-OPTO Inbox x

Radu-Florin Damian  
to me, POPESCU ▾

Romanian ▾ English ▾ Translate message

 Laboratorul de Microunde si Optoelectronica  
Facultatea de Electronica, Telecomunicatii si Tehnologia Informatiei  
Universitatea Tehnica "Gh. Asachi" Iasi

In atentia: POPESCU GOPO ION  
Parola pentru a accesa examenele pe server-ul rf-opto este  
Parola: [REDACTED]

Identificati-vla pe [server](#), cu parola, cat mai rapid, pentru confirmare.

Memorati acest mesaj intr-un loc sigur, pentru utilizare ulterioara

---

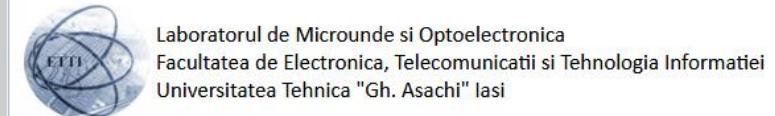
Attention: POPESCU GOPO ION  
The password to access the exams on the rf-opto server is  
Password: [REDACTED]

Login to the [server](#), with this password, as soon as possible, for confirmation.  
Save this message in a safe place for later use

Reply Reply all Forward

Subject: Important message from RF-OPTO Correspondents: POPESCU GOPO ION

From: Me <[rdamian@etti.tuiasi.ro](mailto:rdamian@etti.tuiasi.ro)> ★  
Subject: Important message from RF-OPTO (highlighted)  
To: [REDACTED]  
Cc: Me <[rdamian@etti.tuiasi.ro](mailto:rdamian@etti.tuiasi.ro)> ★



In atentia: POPESCU GOPO ION  
Parola pentru a accesa examenele pe server-ul rf-opto este  
Parola: [REDACTED]

Identificati-vla pe [server](#), cu parola, cat mai rapid, pentru confirmare.

Memorati acest mesaj intr-un loc sigur, pentru utilizare ulterioara

---

Attention: POPESCU GOPO ION  
The password to access the exams on the rf-opto server is  
Password: [REDACTED]

Login to the [server](#), with this password, as soon as possible, for confirmation.  
Save this message in a safe place for later use

# Manual examen online

- The online exam app used for:
  - lectures (attendance)
  - laboratory
  - project
  - examinations

## Materials

### Other data

[Manual examen on-line \(pdf, 2.65 MB, ro, !\[\]\(71ceb62b681518c82e95d615e7265d66\_img.jpg\)](#)

[Simulare Examen \(video\) \(mp4, 65.12 MB, ro, !\[\]\(e10773081adcaeab632f9dd4c8931cd5\_img.jpg\)](#)

# Examen online

- always against a **timetable**
  - long period (lecture attendance/laboratory results)
  - short period (tests: 15min, exam: 2h)

Announcement 23:59 (10/05/2020)	Support material 00:05 (11/05/2020)	Exam Topics 00:07 (11/05/2020)	Results 00:10 (11/05/2020)	End 00:20 (15/05/2020)	Confirmation 00:20 (16/05/2020)	Next timeframe in: <b>05 m 43 s</b> <a href="#">Refresh now</a>
------------------------------------	--	-----------------------------------	-------------------------------	---------------------------	------------------------------------	---

**Announcement**

This is a "fake" exam, introduced to familiarize you with the server interface and to perform the necessary actions during an exam: thesis scan, selfie, use email for co...

**Server Time**

All exams are based on the server's time zone (it may be different from local time). For reference time on the server is now:

**10/05/2020 23:59:16**

# Email addresses

- Team representative
  - list of **active** email addresses for all students
    - can be @student.eti.tuiasi.ro (also @gmail ~~@yahoo~~ etc.)
  - **rdamian@etti.tuiasi.ro**

2023/2024

# Project

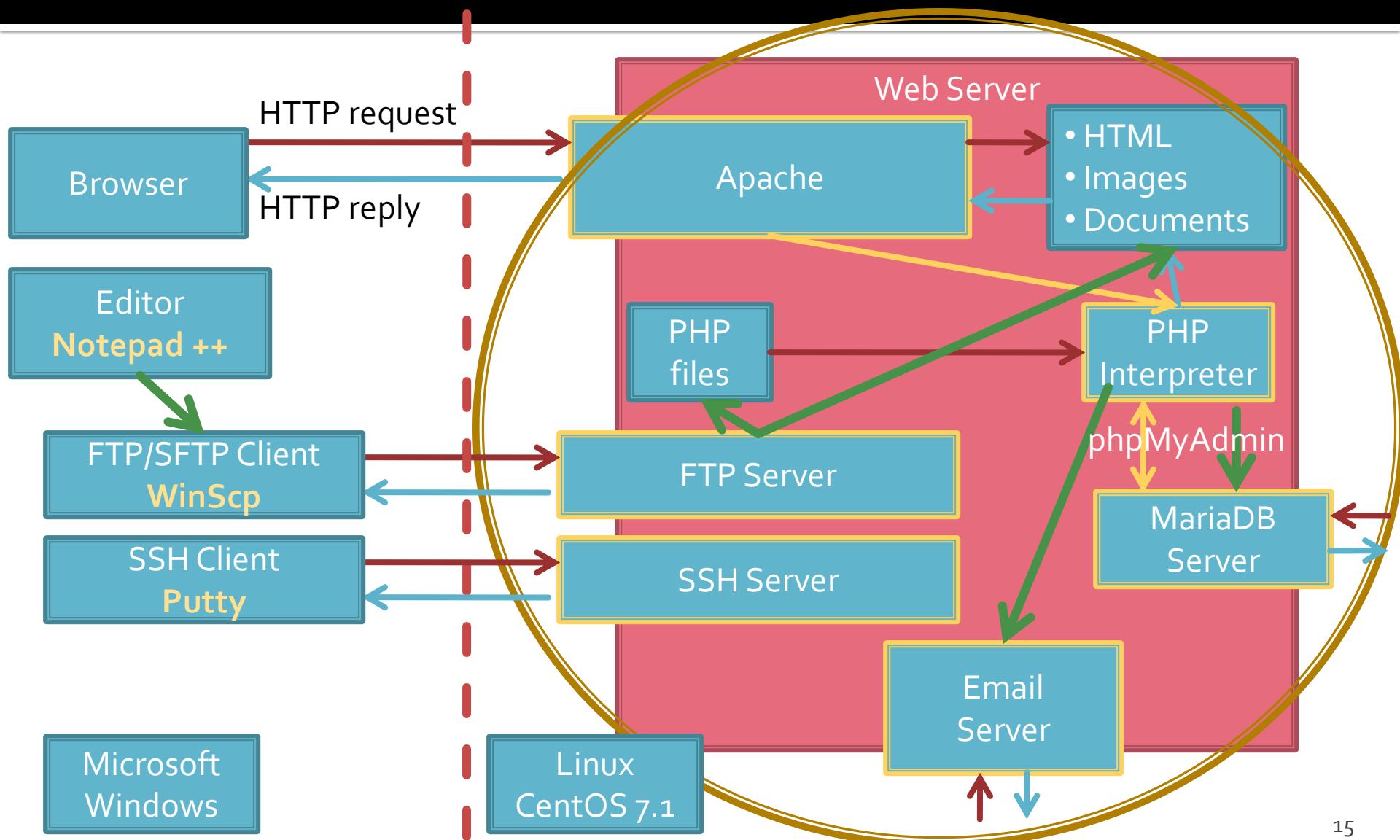
# Project

- Submission: **On-site**
- Presentation (in front of the colleagues) + files submission
- 3 files
  - **1 \*.pdf** (print-screen while using the application, short usage instructions, a mini-user manual for the application) (**personal**)
  - **1 \*.sql** (backup of the database required to run the application) (**team**)
  - archive of the application (inside: files \*.php, \*.jpg, folder tree etc., archived: **\*.zip, \*.7z** etc.)  
**(team/personal)**

# Project grading

- **(2p)** the application runs on the **reference server** (can be downloaded from [rf-opto](#): Ubuntu, php 7 or CentOS 7, php 5): extract files from the **\*.zip** archive in a folder on the server, restore database from the **\*.sql** backup file
- **(2p)** the **\*.pdf** file containing the user manual exists and is appropriate for the submitted application
- **(2p)** the application **flowchart** has been submitted and contains appropriate data
- **(4p)** presentation on-site of the **application**

# Using LAMP



# Using LAMP

- differences from a Windows computer
  - system commands difficult
    - command prompt, SSH, Putty
  - files submitted by FTP
    - Copy/Paste unavailable
  - administration of MySql server:
    - using PhpMyAdmin (preloaded)
    - using other software on the host computer (MySQL Workbench)

# Using LAMP – Advantages

## ■ Advantages

- Available applications have newer versions (**2020 ~**)
  - CentOS/7.1, Apache/2.4.6, PHP/5.4.16, MariaDB/5.5.44, PhpMyAdmin/4.4.15
  - Ubuntu/20.04, Apache/ 2.4.41, PHP/ 7.4.3, MariaDB/ 10.3.31, PhpMyAdmin/4.9.5
- Available applications very similar with real life hosting solutions
  - SSH
  - FTP
  - Email
    - for full functionaly the network interface for the VM must be changed  
**Host-only -> Bridged**

# Reference Server

- rf-opto.etti.tuiasi.ro > Master > Web Design

**Project/Design**

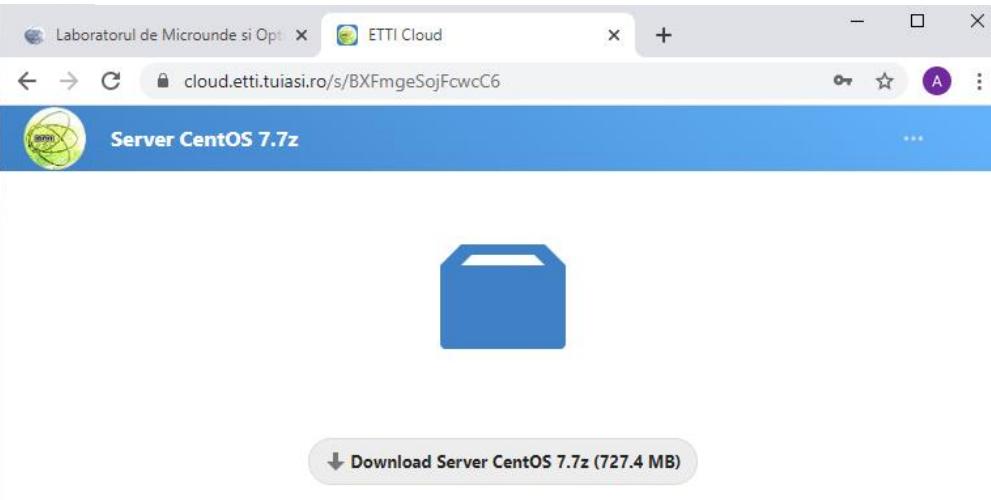
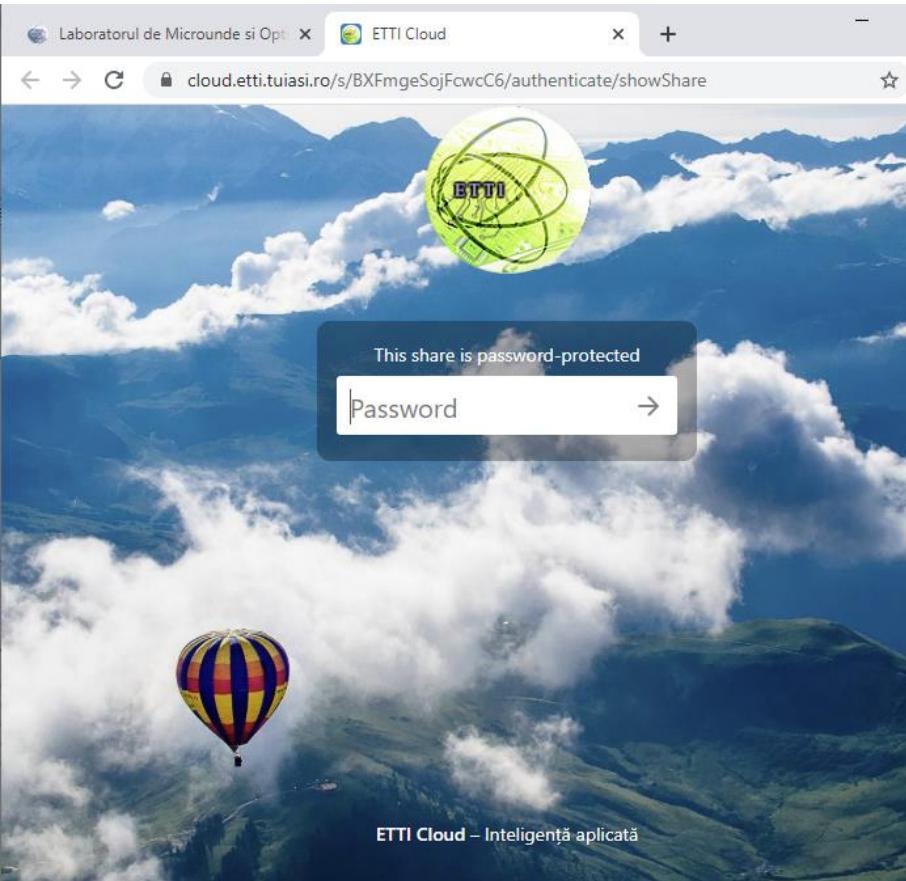
[VMware Workstation Player](#) (link, 0 Bytes, en, [Ubuntu VM for VMWare](#) (link, 0 Bytes, en, [Ubuntu Setup](#) (pdf, 1.83 MB, en, [Centos VM for VMWare](#) (link, 0 Bytes, en, [Centos Setup](#) (pdf, 2.54 MB, en, 

**Examen**

[Online Exam manual](#) (pdf, 2.56 MB, en, [Manual examen on-line](#) (pdf, 2.65 MB, ro, 

# Reference Server

- Cloud ETTI: **RF-opto3#**



# Reference Server

- Virtual Machine
- VMware Workstation Player Windows/Linux
  - Free (non-commercial use)
  - <https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html>

# Reference Server

The screenshot shows the VMware Workstation 15 Player application window. On the left, the 'Home' screen displays a list of existing virtual machines: 'RF XP Professional', 'PAW CentOS 64-bit' (which is circled in red), and 'Server CentOS 64-bit'. On the right, the 'Welcome to VMware Workstation 15 Player' screen features several options:

- Create a New Virtual Machine**: Create a new virtual machine, which will then be added to the top of your library.
- Open a Virtual Machine**: Open an existing virtual machine, which will then be added to the top of your library. This option is highlighted with a large red oval.
- Upgrade to VMware Workstation Pro**: Get advanced features such as snapshots, virtual network management, and more.
- Help**: View online help.

At the bottom, a note states: "This product is not licensed and is authorized for non-commercial use only. For commercial use, purchase a license. [Buy now.](#)"

# Possible problems

- Current VMWare Player runs **only** on **64bit** operating systems Windows/Linux
  - for 32bit operating systems previous (**certified originals**) can be made available on rf-opto
- The host computer **must** enable **Hardware Virtualization**
  - Hardware Virtualization is enabled in BIOS, depending on the PC manufacturer: Processor, Chipset, Northbridge
  - Options name: VT-x, AMD-V, Vanderpool, Hyper-V, SVM, Intel Virtualization Technology. if available: Intel VT-d, AMD IOMMU
- VM archive requires **7zip** native to the target operating system

# Support applications

- WinSCP (FTP client, free)
  - <https://winscp.net/eng/download.php>
- Notepad ++ (text editor, advanced, free)
  - <https://notepad-plus-plus.org/downloads/>
- Putty (remote access)
  - <https://www.putty.org/>
- MySQL Workbench (gratuit, cont Oracle)
  - <https://www.mysql.com/products/workbench/>

# IP address

- login, ifconfig
  - Ctrl + Alt + mouse

PAW CentOS 64-bit - VMware Workstation 15 Player (Non-commercial use only)

Player | || |

CentOS Linux 7 (Core)  
Kernel 3.10.0-229.20.1.el7.x86\_64 on an x86\_64

```
tmpaw login: root
Password:
Last login: Wed Jun 17 05:35:16 from 192.168.0.106
[root@tmpaw ~]# ifconfig
```

PAW CentOS 64-bit - VMware Workstation 15 Player (Non-commercial use only)

Player | 

CentOS Linux 7 (Core)  
Kernel 3.10.0-229.20.1.el7.x86\_64 on an x86\_64

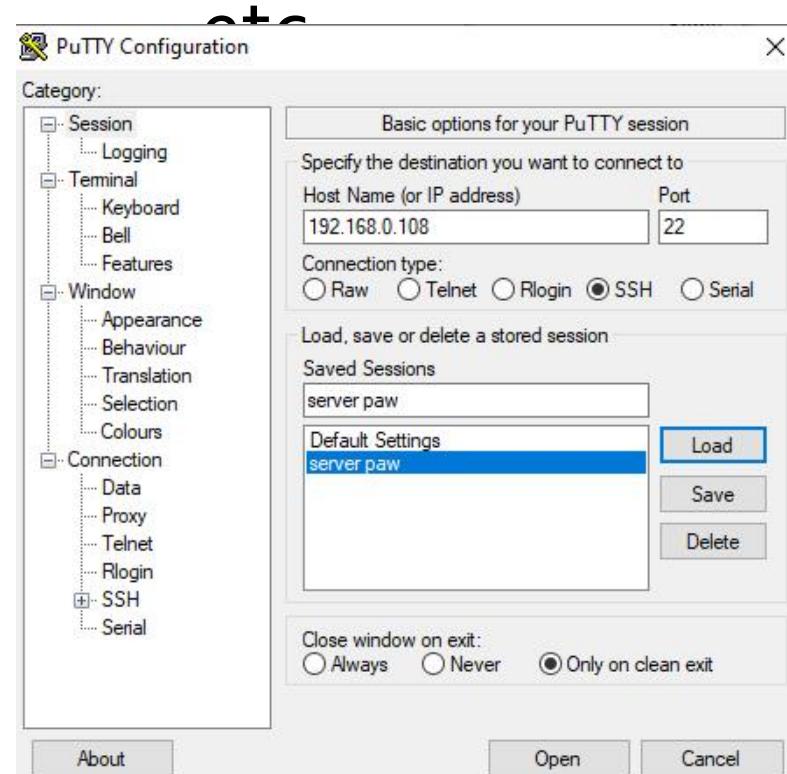
```
tmpaw login: root
Password:
Last login: Wed Jun 17 05:35:16 from 192.168.0.106
[root@tmpaw ~]# ifconfig
eno1677736: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.108 netmask 255.255.255.0 broadcast 192.168.0.255
        inet6 fe80::250:56ff:fe3e:1693 prefixlen 64 scopeid 0x20<link>
        ether 00:50:56:3e:16:93 txqueuelen 1000 (Ethernet)
        RX packets 104 bytes 12814 (12.5 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 99 bytes 11847 (11.5 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 0 (Local Loopback)
    RX packets 16 bytes 1774 (1.7 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 16 bytes 1774 (1.7 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@tmpaw ~]#
```

# Putty

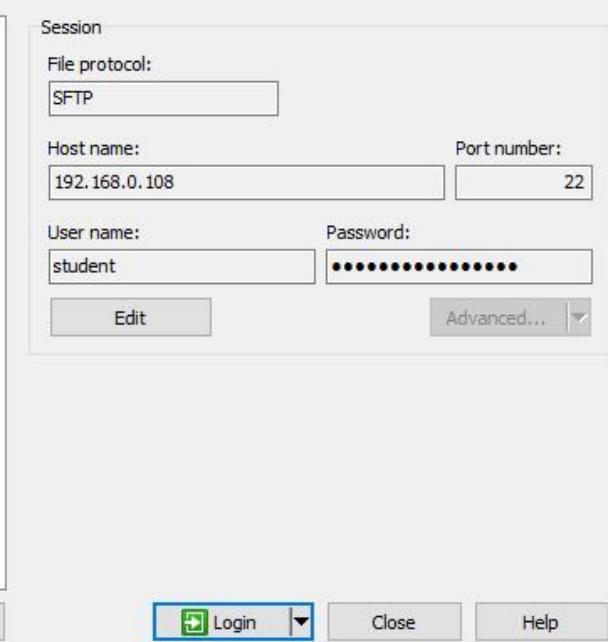
- putty.exe
- avoids mouse capture (CentOS), copy/paste



A terminal window titled 'root@tmpaw:~' is shown. The session starts with 'login as: root', followed by 'root@192.168.0.108's password:'. The last line of output is '[root@tmpaw ~]#'. The terminal window has standard window controls (minimize, maximize, close) at the top right.

# WinSCP

- FTP client
- upload files

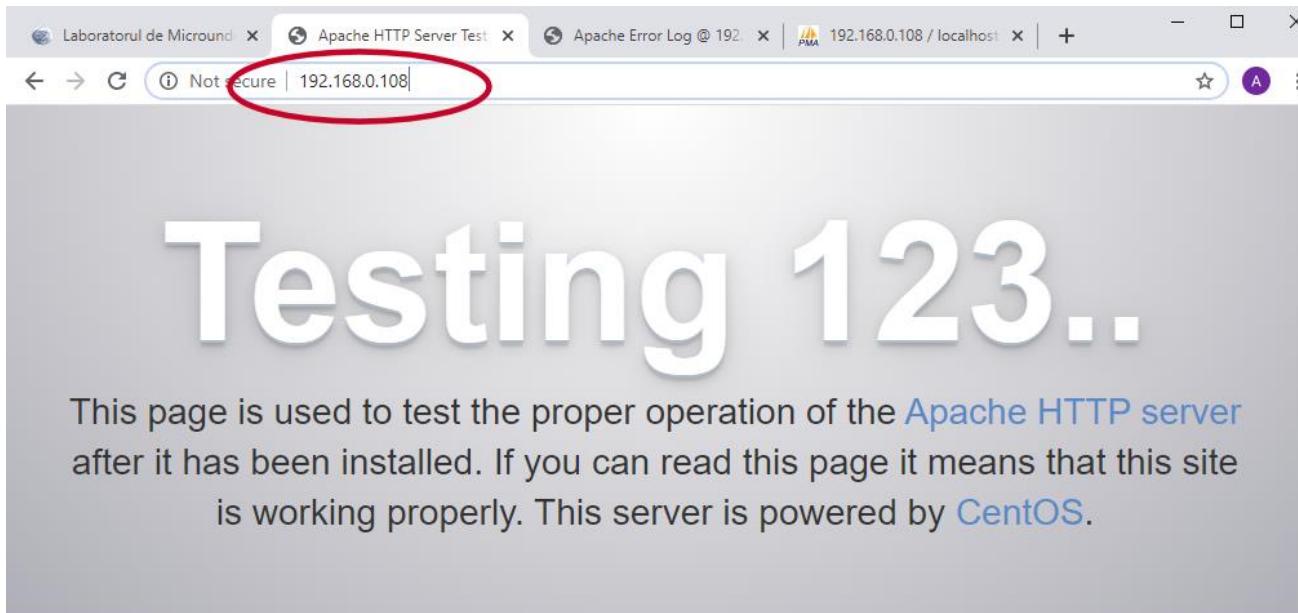


The WinSCP interface showing the results of an SFTP upload. The left pane shows the directory structure: /root/var/www/html. The right pane lists the transferred files:

Name	Size	Changed	Rights
ap.log	1 KB	2/29/2016 11:28:50 AM	rwxrwxr
info.php	1 KB	9/30/2009 3:23:00 PM	rw-rw-r
logfile.php	4 KB	12/6/2015 12:05:08 PM	rw-rw-r
test.php	2 KB	2/29/2016 12:04:12 PM	rw-rw-r

At the bottom, it shows 0 B of 5.09 KB in 0 of 4. The status bar indicates SFTP-3 and 1, 21:06:30.

# Browser



## Just visiting?

The website you just visited is either experiencing problems or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting [www.example.com](http://www.example.com), you should send e-mail to "webmaster@example.com".

## Are you the Administrator?

You should add your website content to the directory `/var/www/html/`.

To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

## Promoting Apache and CentOS

You are free to use the images below on Apache and CentOS Linux powered HTTP servers. Thanks for using Apache and CentOS!



# Server MySQL/MariaDB

The screenshot shows the phpMyAdmin interface running on a local host at 192.168.0.108. The browser tab displays the URL: 192.168.0.108/phpmyadmin/#PMAURL-5:index.php?db=&table=&server=1&target=&token=f7dda12d42a1... .

**General Settings:**

- Change password
- Server connection collation: utf8mb4\_unicode\_ci

**Appearance Settings:**

- Language: English
- Theme: pmahomme
- Font size: 82%

**Database server:**

- Server: Localhost via UNIX socket
- Server type: MariaDB
- Server version: 5.5.44-MariaDB - MariaDB Server
- Protocol version: 10
- User: root@localhost
- Server charset: UTF-8 Unicode (utf8)

**Web server:**

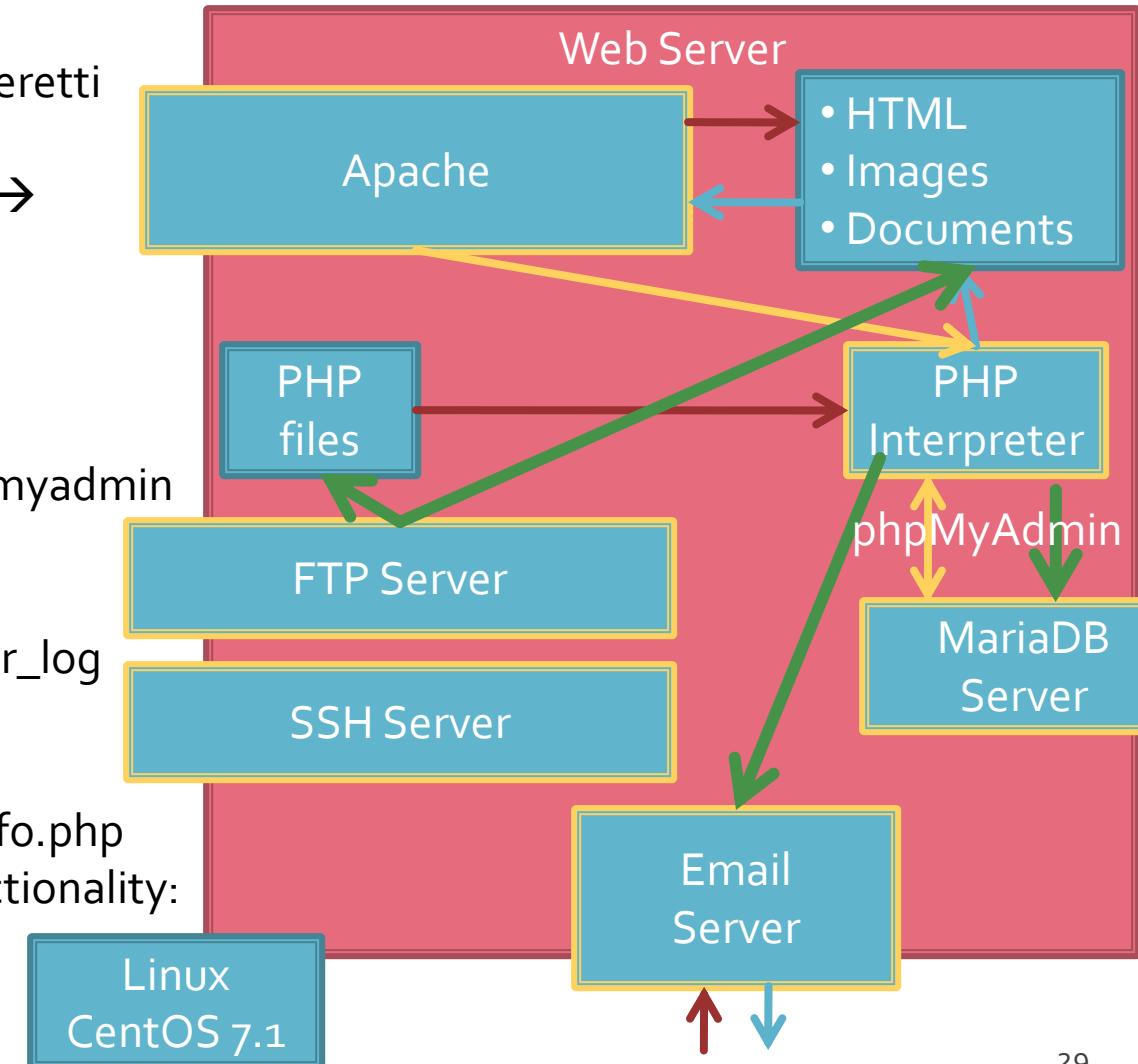
- Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips mod\_fcgid/2.3.9 PHP/5.4.16 mod\_python/3.5.0- Python/2.7.5
- Database client version: libmysql - 5.5.44-MariaDB
- PHP extension: mysqli
- PHP version: 5.4.16

**phpMyAdmin:**

- Version information: 4.4.15.1
- Documentation
- Wiki
- Official Homepage
- Contribute
- Get support
- List of changes

# Using LAMP

1. login → root:masterrc / paw:masteretti
2. ifconfig → 192.168.30.5
3. putty.exe → 192.168.30.5 → SSH →  
root:masterrc (remote login)
4. [other linux command line]
5. FTP → Winscp → SFTP →  
student:masterrc@192.168.30.5
6. MySQL → http://192.168.30.5/phpmyadmin  
→ root:masterrc / root:masteretti
7. Apache Error Log →
- 7a. putty → nano /var/log/httpd/error\_log
- 7b. http://192.168.30.5/logfile.php  
(nonstandard)
8. PHP info → http://192.168.30.5/info.php
9. if DHCP service stops Apache functionality:  
service httpd restart



# LAMP Reference Server

- Linux, two variants
  - Centos 7.1
    - PHP 5.4.16
    - MariaDB 5.5.44
    - Apache 2.4.6
    - **root/student:masterrc**
  - Ubuntu 20.04 (**recommended**)
    - PHP 7.4.3
    - MariaDB 10.3.31
    - Apache 2.4.41
    - **paw/student:masteretti**
    - correction **paw FTP access:**
      - sudo usermod -a -G upload paw
      - sudo chmod -R 775 /var/www

# Introduction

# Applications

The screenshot shows the BCC e-SMART internet banking interface. At the top, there is a navigation bar with links for Conturi, Plati, Depozite, Rapoarte, Setari, AJUTOR, and Deconectare. A red box highlights a warning message in a blue-bordered box:

**ATENTIE!**  
Va reamintim ca BCC nu solicita informatii confidentiale (user, parola, numar de card, data expirarii cardului, codul PIN) prin e-mail.  
Acesta informatii nu trebuie divulgata nimeniui, sub niciun motiv.  
Pentru alte lamuriri, puteti apela 0800.807.807 (numar accesibil din reteaua Romtelecom).  
Aveti posibilitatea sa alegeti procesarea in regim de urgență a platilor. Aceasta opțiune se comisionează suplimentar.

Below the warning, there is a form titled "Rulare raport" with fields for "Report" (dropdown menu), "Ruleaza raportul" (radio buttons for "immediat" or "la data [03.03.2010] ora [23:59]"), and a "Ruleaza" button. A "top" link is also present.

At the bottom of the page, there is a footer note in red text: "surati activitate pe Internet, va rugam sa consultati periodic documentul SECURITATE INTERNET \*\*\* BCC informeaza ca SWIFT poate furniza autor".

# Applications

The screenshot shows the BCR Click 24Banking interface. The top navigation bar includes links for Home, Contact, English, Contact center, Cauta (Search), and Go. The main menu has categories like 24 Banking, Persoane fizice, Private banking, Tineri, PFA, Micro, Corporatii, IMM, Municipalitati, Despre noi, Cariere, and Presa. Below the menu, tabs for Lista de conturi, Conturi curente, and Economisire | Finantare are been selected.

The central area displays the 'Ordin de Plata - Creare' form. It shows a table with columns for Stare cont (Account status), Tip (Type), Numar cont (Account number), Sold disponibil (Available balance), and Valuta (Currency). The account number is masked, and the balance is shown as RON.

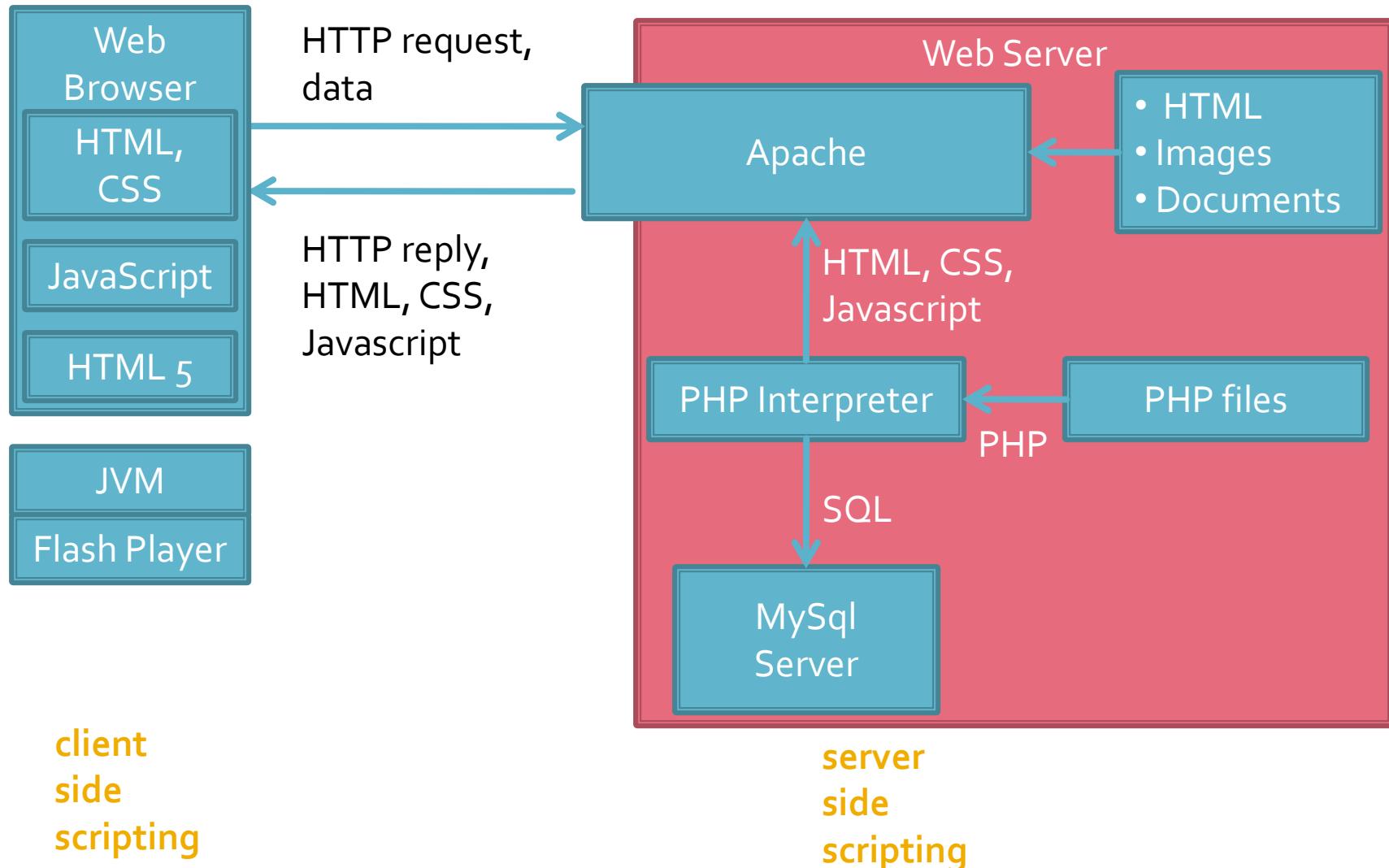
Below the table, the 'Detalii' (Details) section includes fields for Sablon personal (Personal template) and Sablon furnizor (Supplier template), both set to 'Selectati sablon'. There is also a field for IBAN beneficiar (Beneficiary IBAN) which is empty. A 'Verificare IBAN' button is available.

A note at the bottom of the form states: "Pentru a ordona o plata, va rugam fie sa introduceti IBAN beneficiar, fie sa selectati un sablon personal sau pentru furnizori. Atentie : Transferurile se pot efectua doar catre conturi deschise in aceeasi valuta!" (For a payment, please enter the beneficiary IBAN or select a personal or supplier template. Attention: Transfers can only be made to open accounts in the same currency!).

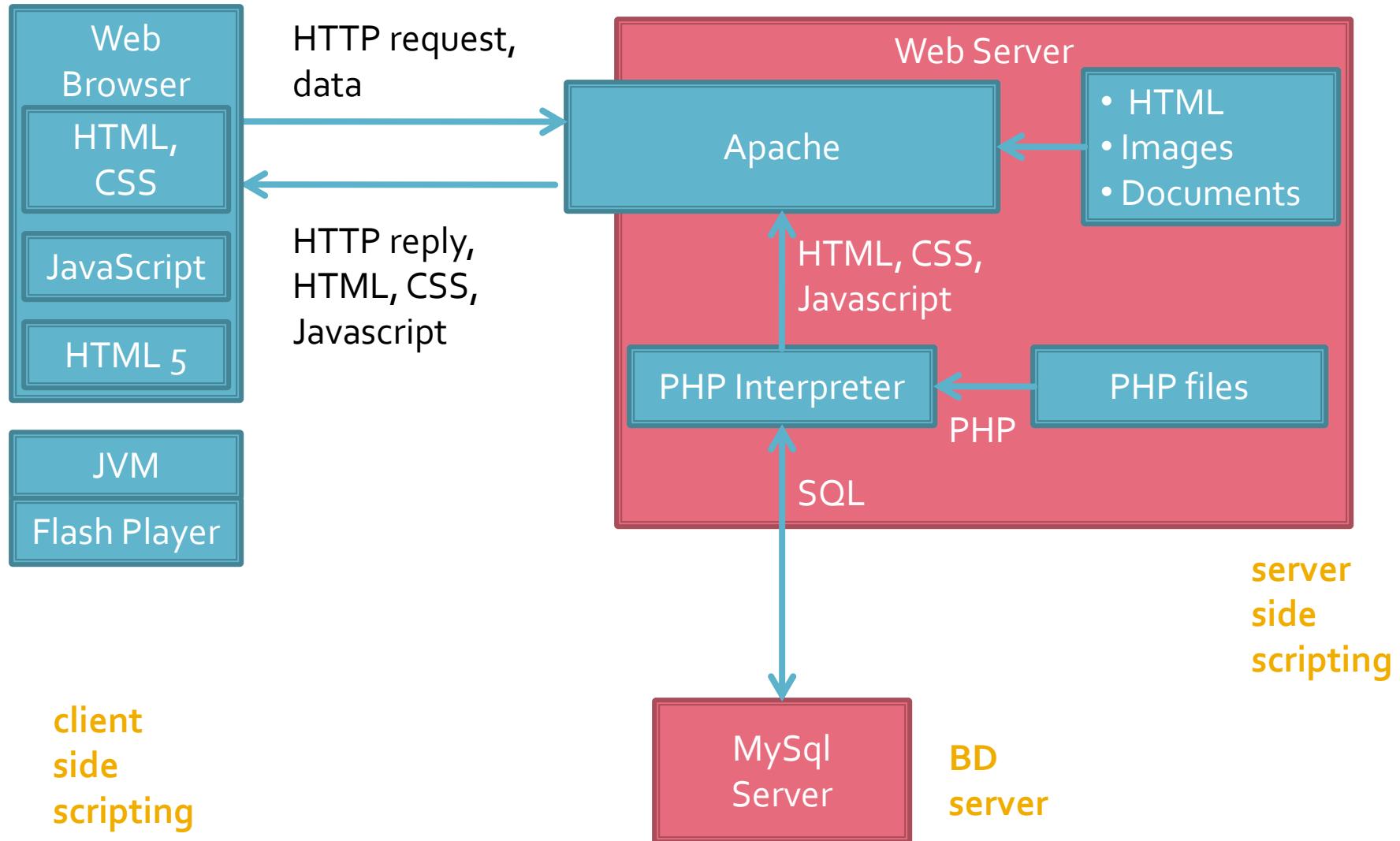
At the bottom of the page, there are several links: Tarife si comisioane (Fees and commissions), Intrebari si Raspunsuri (FAQ), 24 Banking, Contact center, and a message area with a red exclamation mark indicating new messages.

At the very bottom, a footer contains the text: BANCA COMERCIALA ROMANA - SOCIETATE ADMINISTRATA IN SISTEM DUALIST, Bucuresti, B-dul Regina Elisabeta nr.5, Sector 3 | mentiuni legale - © 2008 BCR SA – Toate drepturile rezervate | site map |.

# Client/Server Scripting



# Client/Server Scripting



client  
side  
scripting

BD  
server

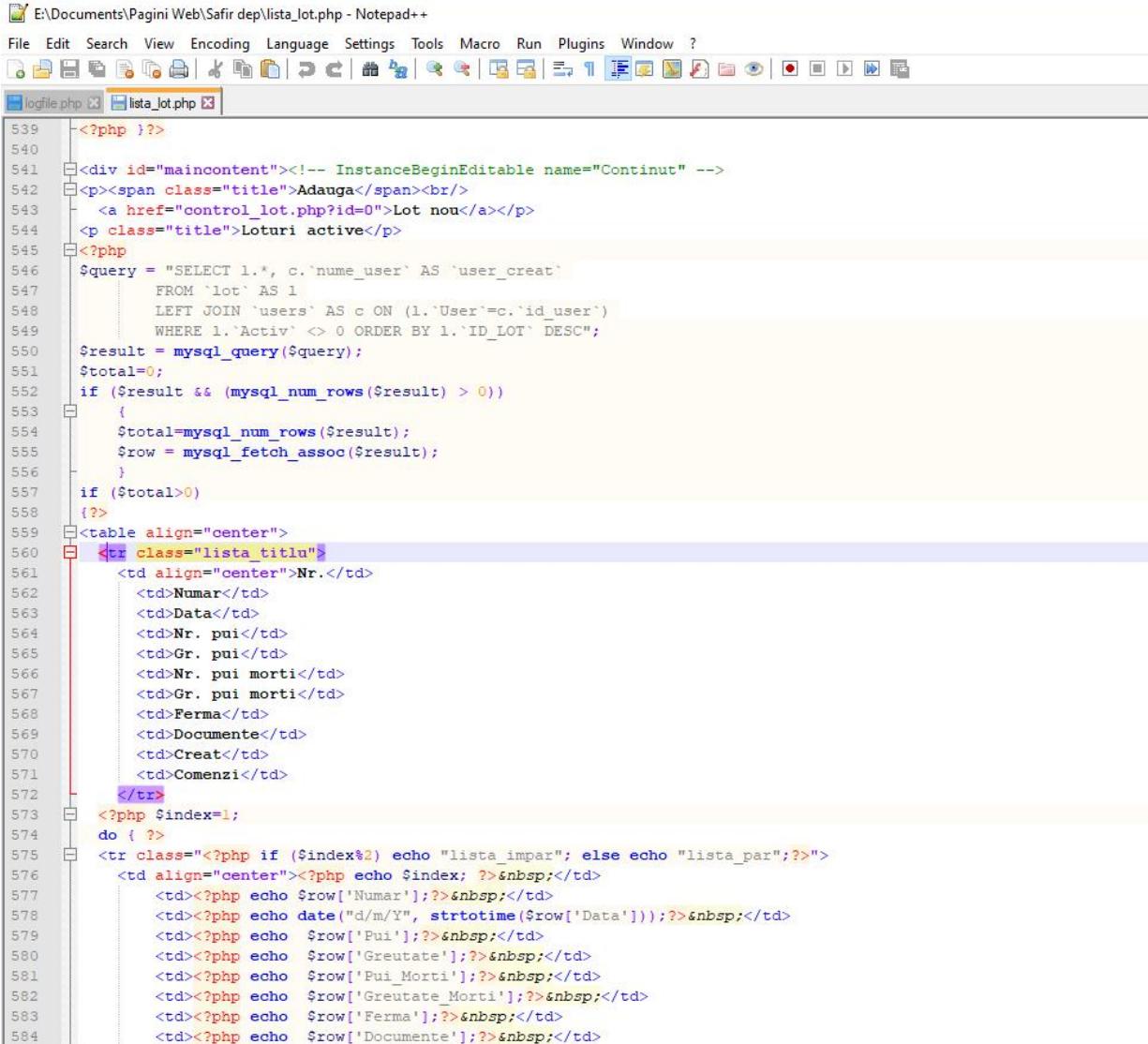
server  
side  
scripting

# Necessity

```
<td><?php echo $row['Documente'];?>&ampnbsp</td>
<td><?php echo $row['user_creat'];?>&ampnbsp</td>
<td class="smaller"><a href="control_lot.php?id=-<?php echo $row['ID_LOT'];?>">dezactiveaza</a><br /><a href=
"control_lot.php?id=<?php echo $row['ID_LOT'];?>">modifica</a></td>
</tr>
<?php $index++;
} while ( $row = mysql_fetch_assoc($result));?>
</table><?php
}
else
{
echo "<p>Nu exista loturi active</p>";
}
?>

<p class="title">Loturi inactive</p>
<?php
$query = "SELECT l.*, c.`nume_user` AS `user_creat`
    FROM `lot` AS l
    LEFT JOIN `users` AS c ON (l.`User`=c.`id_user`)
    WHERE l.`Activ` = 0 ORDER BY l.`ID_LOT` DESC";
$result = mysql_query($query);
$total=0;
if ($result && (mysql_num_rows($result) > 0))
{
    $total=mysql_num_rows($result);
    $row = mysql_fetch_assoc($result);
}
if ($total>0)
{?>
<table align="center">
<tr class="lista_titlu">
<td align="center" style="background-color: #cccccc;">ID
<td align="center" style="background-color: #cccccc;">Titlu
<td align="center" style="background-color: #cccccc;">Documente
<td align="center" style="background-color: #cccccc;">User Creat
<td align="center" style="background-color: #cccccc;">Opereaza
</tr>
```

# Necessity



The screenshot shows a Notepad++ window displaying a PHP script named `lista_lot.php`. The code is used to generate a table of deaths from a MySQL database. The table includes columns for Numar, Data, Nr. pui, Gr. pui, Nr. pui morti, Gr. pui morti, Ferma, Documente, Creat, and Comenzi. The script uses conditional logic to determine whether to echo "lista\_impar" or "lista\_par" based on the value of \$index. It also includes date conversion logic using `date("d/m/Y", strtotime($row['Data']))`.

```
<?php }?>
<div id="maincontent"><!-- InstanceBeginEditable name="Continut" -->
<p><span class="title">Adauga</span><br/>
<a href="control_lot.php?id=0">Lot nou</a></p>
<p class="title">Loturi active</p>
<?php
$query = "SELECT l.*, c.`nume_user` AS `user_creat`
FROM `lot` AS l
LEFT JOIN `users` AS c ON (l.`User`=c.`id user`)
WHERE l.`Activ` <> 0 ORDER BY l.`ID_LOT` DESC";
$result = mysql_query($query);
$total=0;
if ($result && (mysql_num_rows($result) > 0))
{
    $total=mysql_num_rows($result);
    $row = mysql_fetch_assoc($result);
}
if ($total>0)
{?>
<table align="center">
<tr class="lista_titlu">
<td align="center">Nr.</td>
<td>Numar</td>
<td>Data</td>
<td>Nr. pui</td>
<td>Gr. pui</td>
<td>Nr. pui morti</td>
<td>Gr. pui morti</td>
<td>Ferma</td>
<td>Documente</td>
<td>Creat</td>
<td>Comenzi</td>
</tr>
<?php $index=1;
do { ?>
<tr class="<?php if ($index%2) echo "lista_impar"; else echo "lista_par";?>">
<td align="center"><?php echo $index; ?>&ampnbsp</td>
<td><?php echo $row['Numar'];?>&ampnbsp</td>
<td><?php echo date("d/m/Y", strtotime($row['Data']));?>&ampnbsp</td>
<td><?php echo $row['Pui'];?>&ampnbsp</td>
<td><?php echo $row['Gruitate'];?>&ampnbsp</td>
<td><?php echo $row['Pui_Morti'];?>&ampnbsp</td>
<td><?php echo $row['Gruitate_Morti'];?>&ampnbsp</td>
<td><?php echo $row['Ferma'];?>&ampnbsp</td>
<td><?php echo $row['Documente'];?>&ampnbsp</td>
```

# HTML

E:\Documents\Pagini Web\Safir dep\lista\_lot.php - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Win

logfile.php lista\_lot.php

```
<?php }?>
540
541 <div id="maincontent"><!-- InstanceBeginEditable name="Conti
542 <p><span class="title">Adauga</span><br/>
543 <a href="control_lot.php?id=0">Lot nou</a></p>
544 <p class="title">Loturi active</p>
545 <?php
546 $query = "SELECT l.*, c.'nume_user' AS 'user_creat'
547     FROM `lot` AS l
548     LEFT JOIN `users` AS c ON (l.'User'=c.'id_user')
549     WHERE l.'Activ' <> 0 ORDER BY l.'ID_LOT' DESC";
550 $result = mysql_query($query);
551 $total=0;
552 if ($result && (mysql_num_rows($result) > 0))
553 {
554     $total=mysql_num_rows($result);
555     $row = mysql_fetch_assoc($result);
556 }
557 if ($total>0)
558 {?>
559 <table align="center">
560 <tr class="lista_titlu">
561 <td align="center">Nr.</td>
562 <td>Numar</td>
563 <td>Data</td>
564 <td>Nr. pui</td>
565 <td>Gr. pui</td>
566 <td>Nr. pui morti</td>
567 <td>Gr. pui morti</td>
568 <td>Ferma</td>
569 <td>Documente</td>
570 <td>Creat</td>
571 <td>Comenzi</td>
572 </tr>
573 <?php $index=1;
574 do { ?>
575 <tr class=<?php if ($index%2) echo "lista_in
576 <td align="center"><?php echo $index; ?>&nbsp;</td>
577 <td><?php echo $row['Numar'];?>&nbsp;</td>
578 <td><?php echo date("d/m/Y", strtotime($row['Data'])) ?>&nbsp;</td>
579 <td><?php echo $row['Pui'];?>&nbsp;</td>
580 <td><?php echo $row['Greutate'];?>&nbsp;</td>
581 <td><?php echo $row['Pui_Morti'];?>&nbsp;</td>
582 <td><?php echo $row['Greutate_Morti'];?>&nbsp;</td>
583 <td><?php echo $row['Ferma'];?>&nbsp;</td>
584 <td><?php echo $row['Documente'];?>&nbsp;</td>
```

<b>Nr.</b>	<b>Numar</b>	<b>Data</b>	<b>Nr. pui</b>	<b>Gr. pui</b>
------------	--------------	-------------	----------------	----------------

# HTML + PHP

E:\Documents\Pagini Web\Safir dep\lista\_lot.php - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

logfile.php lista\_lot.php

```
539 <?php ?>
540
541 <div id="maincontent"><!-- InstanceBeginEditable name="Continut" -->
542 <p><span class="title">Adauga</span><br/>
543 <a href="control_lot.php?id=0">Lot nou</a></p>
544 <p class="title">Loturi active</p>
545 <?php
546 $query = "SELECT l.*, c.`nume_user` AS `user_creat`
547     FROM `lot` AS l
548     LEFT JOIN `users` AS c ON (l.`User`=c.`id_user`)
549     WHERE l.`Activ` <> 0 ORDER BY l.`ID_LOT` DESC";
550 $result = mysql_query($query);
551 $total=0;
552 if ($result && (mysql_num_rows($result) > 0))
553 {
554     $total=mysql_num_rows($result);
555     $row = mysql_fetch_assoc($result);
556 }
557 if ($total>0)
558 {?
559 <table align="center">
560 <tr class="lista_titlu">
561 <td align="center">Nr.</td>
562 <td>Numar</td>
563 <td>Data</td>
564 <td>Nr. pui</td>
565 <td>Gr. pui</td>
566 <td>Nr. pui morti</td>
567 <td>Gr. pui morti</td>
568 <td>Ferma</td>
569 <td>Documente</td>
570 <td>Creat</td>
571 <td>Comenzi</td>
572 </tr>
573 <?php $index=1;
574 do { ?
575 <tr class="<?php if ($index%2) echo "lista_impar"; else echo "lista_p
576 <td align="center"><?php echo $index; ?>&ampnbsp</td>
577 <td><?php echo $row['Numar'];?>&ampnbsp</td>
578 <td><?php echo date("d/m/Y", strtotime($row['Data']));?>&ampnbsp</td>
579 <td><?php echo $row['Pui'];?>&ampnbsp</td>
580 <td><?php echo $row['Greutate'];?>&ampnbsp</td>
581 <td><?php echo $row['Pui_Morti'];?>&ampnbsp</td>
582 <td><?php echo $row['Greutate_Morti'];?>&ampnbsp</td>
583 <td><?php echo $row['Ferma'];?>&ampnbsp</td>
584 <td><?php echo $row['Documente'];?>&ampnbsp</td>
```

The code block shows a PHP script for generating a table of lot information. It includes logic for alternating row classes ('lista\_impar' or 'lista\_p'), displaying indices, and echoing data from a MySQL result set. A red box highlights a section of the code where the 'Pui' column is displayed.

# HTML + PHP + SQL

E:\Documents\Pagini Web\Safir dep\lista\_lot.php - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

file.php lista\_lot.php

```
539 <?php }?>
540
541 <div id="maincontent"><!-- InstanceBeginEditable name="Continut" -->
542 <p><span class="title">Adauga</span><br/>
543 <a href="control_lot.php?id=0">Lot nou</a></p>
544 <p class="title">Loturi active</p>
545 <?php
546 $query = "SELECT l.*, c.`nume_user` AS `user_creat`
547 FROM `lot` AS l
548 LEFT JOIN `users` AS c ON (l.`User`=c.`id_user`)
549 WHERE l.`Activ` <> 0 ORDER BY l.`ID_LOT` DESC";
550 $result = mysql_query($query);
551 $total=0;
552 if ($result && (mysql_num_rows($result) > 0))
553 {
554 $total=mysql_num_rows($result);
555 $row = mysql_fetch_assoc($result);
556 }
557 if ($total>0)
558 {?>
559 <table align="center">
560 <tr class="lista_titlu">
561 <td align="center">Nr.</td>
562 <td>Numar</td>
563 <td>Data</td>
564 <td>Nr. pui</td>
565 <td>Gr. pui</td>
566 <td>Nr. pui morti</td>
567 <td>Gr. pui morti</td>
568 <td>Farma</td>
569 <td>Documente</td>
570 <td>Creat</td>
571 <td>Comenzi</td>
572 </tr>
573 <?php $index=1;
574 do { ?>
575 <tr class="<?php if ($index%2) echo "lista_impar"; else echo "lista_par";?>">
576 <td align="center"><?php echo $index; ?>&nbsp;</td>
577 <td><?php echo $row['Numar'];?>&nbsp;</td>
578 <td><?php echo date("d/m/Y", strtotime($row['Data']));?>&nbsp;</td>
579 <td><?php echo $row['Pui'];?>&nbsp;</td>
580 <td><?php echo $row['Greutate'];?>&nbsp;</td>
581 <td><?php echo $row['Pui_Morti'];?>&nbsp;</td>
582 <td><?php echo $row['Greutate_Morti'];?>&nbsp;</td>
583 <td><?php echo $row['Farma'];?>&nbsp;</td>
584 <td><?php echo $row['Documente'];?>&nbsp;</td>
```

```
<?php
$query = "SELECT l.* , c.`nume_user` AS `user_creat`
FROM `lot` AS l
LEFT JOIN `users` AS c ON (l.`User`=c.`id_user`)
WHERE l.`Activ` <> 0 ORDER BY l.`ID_LOT` DESC";
$result = mysql_query($query);
$total=0;
if ($result && (mysql_num_rows($result) > 0))
{
    $total=mysql_num_rows($result);
    $row = mysql_fetch_assoc($result);
}
```

# HTML

- Offers **the logical structure** of the document
- Required
  - the **final result** of any type of programming for a distributed application web is almost exclusively HTML code (HTML structure eventually manipulated by “client side scripting”/Javascript)
- Curs 1 PAW 2021-2022 – Recapitulare HTML (RO + video)
- Course: Web Technologies (2012-2013) (EN)
  - <http://rf-opto.eti.tuiasi.ro/internet.php>
  - Web Technologies, Lecture 5
  - Web Technologies, Lecture 6

# HTML 5

- (**Increasing!**) Support in browsers
  - Certain future
- Features
  - **Web Workers**: background threads for processing.
  - **Video**: Video becomes as easy as embedding an image.
  - **Canvas**: allows a web developer to render graphics on the fly.
  - **Application caches**: Web pages will start storing more and more information locally on the visitor's computer.
  - **Geolocation**: Best known for use on mobile devices, geolocation is coming with HTML5.

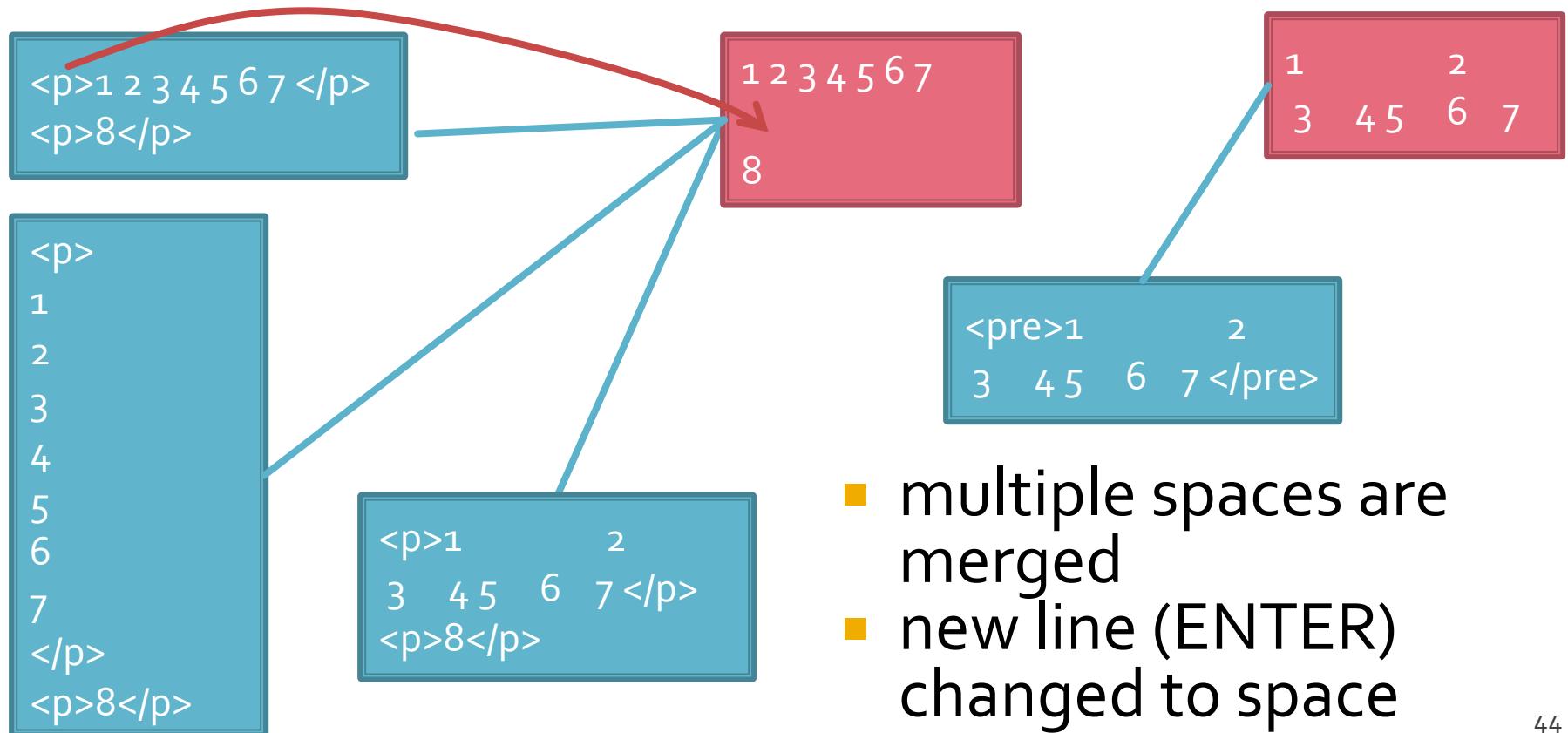


# HTML Concepts 1

- An HTML document is an **ASCII** document (Notepad) containing **tags**, interpreted and displayed by the browser (View Source)
- Tags: (etichete, marcaje – RO), <>
  - individual: <X>
  - ex: <br/> (<br> - HTML)
  - container: <X> Any\_Content</X>
  - ex: <p>One paragraph</p>
  - Tag **X** impose the way "**Any\_Content**" will be part of the document/be displayed on the screen
  - most tags are container

# HTML and Format

- Format of the source document (ASCII) is irrelevant
  - only exception: <pre>....</pre>



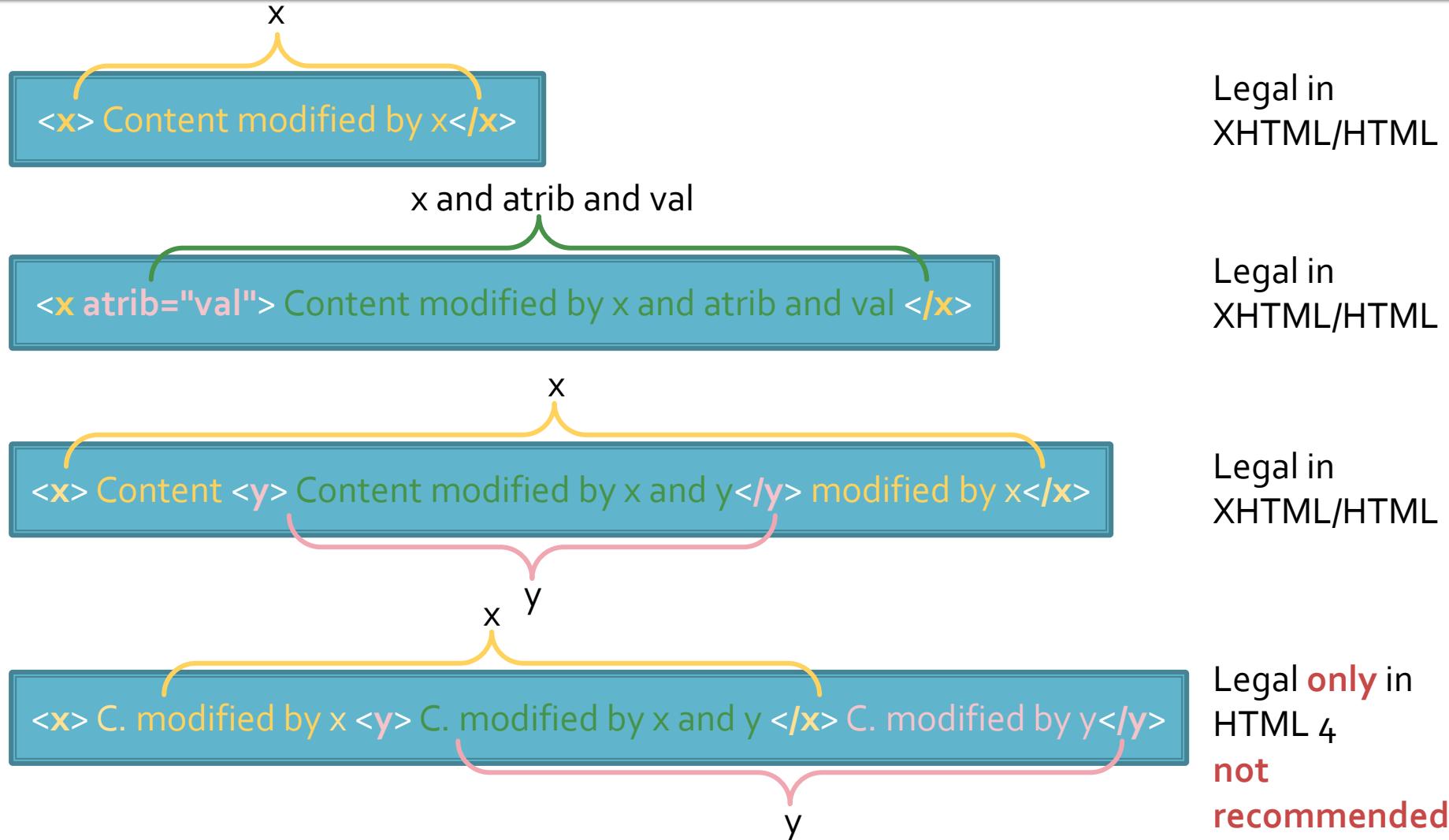
# Attributes

- Options (properties) of the tag, used to detail the effect of that particular tag
- In container tags, introduced only in the starting tag
  - <p id="un\_id" align="left">ceva </p>
- Attributes are keywords and their name must be correctly spelled. (XML allows user defined attributes, but not HTML and XHTML )
- Attribute value, both:
  - keywords
  - user defined

# Major differences XHTML vs. HTML

- Tag inclusion, mandatory
  - <X>....<Y>....</Y>.....</X> 
  - <X>....<Y>....</X>.....</Y> 
- Tags must be always closed
  - <p>....</p><p>.... </p>, <br />, <meta .... /> 
  - <p>....<p>.... , <br>, <meta .... > 
- Tags must be written in lower case
  - <p>, <br />, <frameset> 
  - <P>, <BR />, <FrAmesET> 
- Attributes must be lowercase and their values written between quotation marks
  - <p align="left">, <table width="100">, <font color="red"> 
  - <p Align="left">, <table width=100>, <font COLOR=red> 
- All information must be enclosed inside <html>... </html> container tag

# HTML Concepts 3



Legal in  
XHTML/HTML

Legal in  
XHTML/HTML

Legal in  
XHTML/HTML

Legal **only** in  
HTML 4  
**not**  
recommended

# Minimal HTML Document

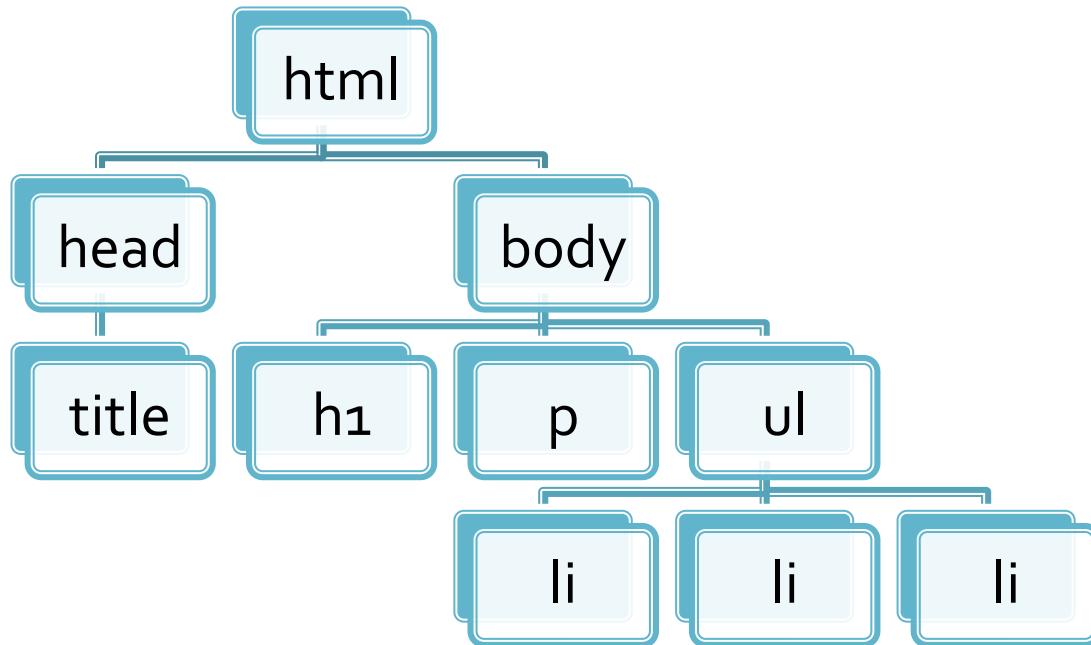
```
<!DOCTYPE .....>  
<html>  
<head>  
....  
</head>  
<body>  
....  
</body>  
</html>
```

<frameset> **not existent**  
in HTML 5

```
<!DOCTYPE .....>  
<html>  
<head>  
....  
</head>  
<frameset>  
....  
</frameset>  
</html>
```

# DOM

- DOM – Document Object Model: logical tree type structure



```
<html>
  <head>
    <title>pagina mea</title>
  </head>
  <body>
    <h1>Compozitori:</h1>
    <p>
      <ul>
        <li> elvis costello
        <li> johannes brahms
        <li> georges brassens
      </ul>
    </body>
  </html>
```

# CSS

- Cascading Style Sheets
- Introduced to separate the **content** of a document from its **presentation** (layout, colors, fonts)
- Allows:
  - Increased accessibility (same document can be displayed on multiple devices)
  - Multiple web pages can share formatting
  - Reduce complexity of content positioning

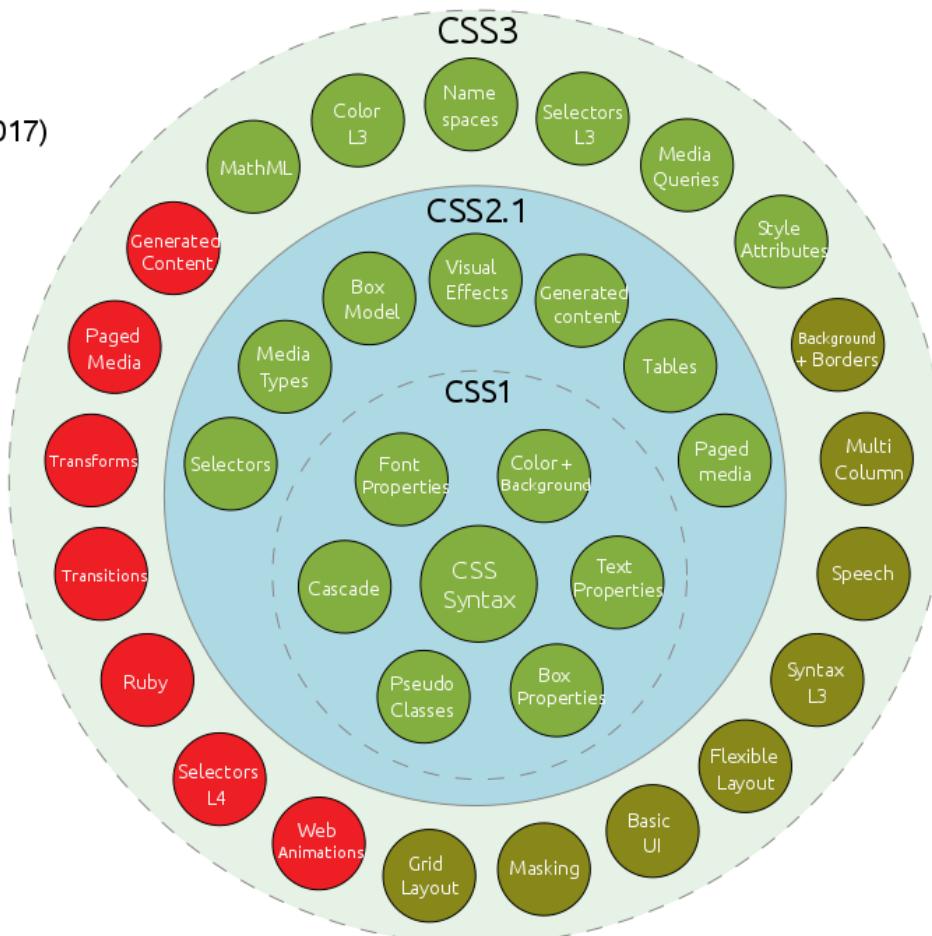
# CSS

- Offers **the form** of the document

## CSS3

Taxonomy & Status (September 2017)

- W3C Recommendation
- Candidate Recommendation
- Last Call
- Working Draft
- Obsolete or inactive



# CSS vs. HTML

- HTML
  - logical structure of the document
- CSS
  - effective form/shape of the document
- HTML 5
  - HTML tags regarding the form (<font>, color="red") were introduced in HTML 3.2 and declared deprecated in HTML 4.01
    - disappear in HTML 5

# CSS vs. HTML

```
<!DOCTYPE html PUBLIC  
<html>  
<!-- created 2003-12-12 -->  
<head>  
  <title>sample</title>  
</head>  
<body>  
  <p>Voluptatem accusantium  
    totam rem aperiam.</p>  
</body>  
</html>
```

HTML

```
h1 { color: white;  
background: orange;  
border: 1px solid bla  
padding: 0 0 0 0;  
font-weight: bold;  
}  
/* begin: seaside-theme */  
  
body {  
background-color:white;  
color:black;  
font-family:Arial,sans-serif;  
margin: 0 4px 0 0;  
border: 12px solid;  
}
```

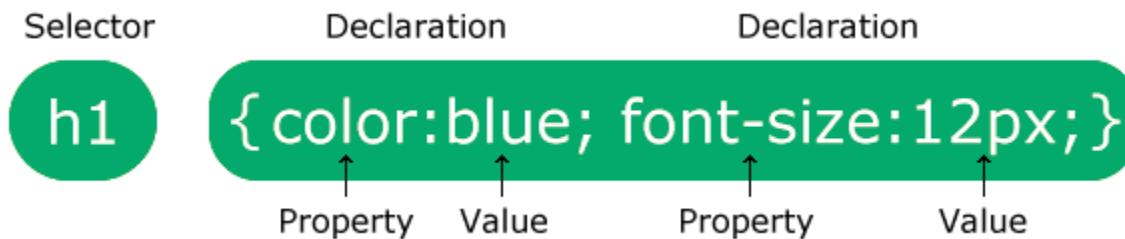
CSS

# CSS concepts

- Three ways of specifying styles
  - External styles (External style sheet)
  - Internal styles (Internal style sheet)
  - Inline styles (Inline style)
- Three entities which impose styles:
  - display device (browser default)
  - author of the document
  - reader of the document

# CSS Concepts

- A CSS rule: a selector and a declaration block:
  - Selector { “CSS declaration”; [“CSS declaration”; ] }
- CSS declaration:
  - `property:value;`
- CSS Comments
  - Similar with C/C++ , PHP, etc.
  - Between “/\*” and “\*/”

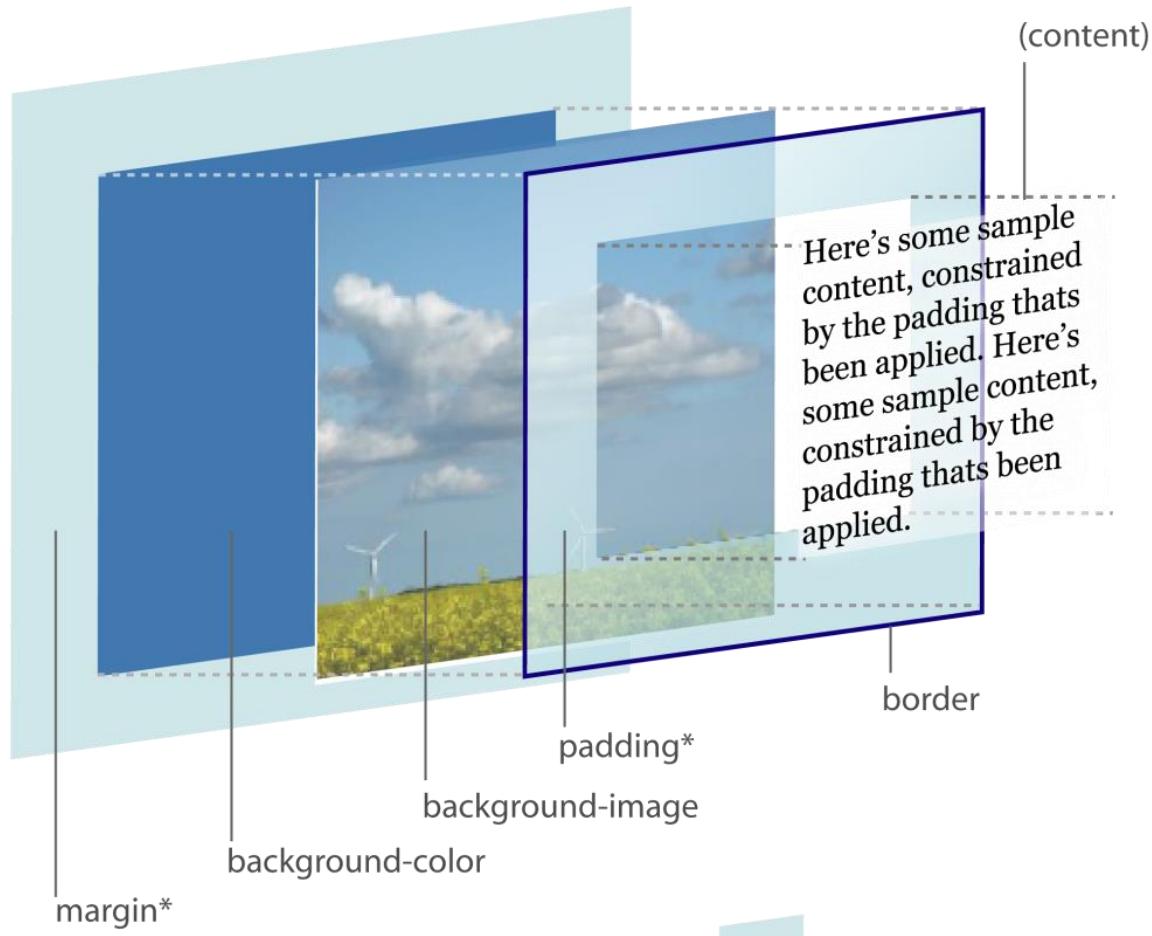


# CSS Selectors

- HTML element selector
  - introduced to modify the standard display of HTML tags
- CSS class Selector – “.”
  - introduced to work in conjunction with the HTML attribute class=“...”
  - useful for applying form uniformly to multiple elements in a document
- CSS id Selector – “#”
  - introduced to work in conjunction with the HTML attribute id=“...”
  - useful for applying a specific form to a single element in a document

# CSS Box Model

## THE CSS BOX MODEL HIERARCHY



# Usability rules

- Steve Krug: “**Don't Make Me Think, Revisited**”
- Users scan the pages, don't really read them
- Information must be reduced to the sufficient minimum in most places
- “If something is hard to use, I can live without it”
- Web users tend to act **shark like**
- Originality is not always recommended

# CSS Zen Garden

- <http://www.csszengarden.com/>
- fixed HTML file
- changing the form **only** allowed by changing the CSS styles

# CSS Zen Garden – HTML original

## css Zen Garden

### The Beauty of CSS Design

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from th

Download the sample [html file](#) and [css file](#)

### The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CS

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless eff

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with  
Become one with the web.

### So What is This About?

There is clearly a need for CSS to be taken seriously by graphic artists. The Zen Garden aims to excite, inspire, :  
one will load the style sheet into this very page. The code remains the same, the only thing that has changed is th

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrate  
placed in the hands of those able to create beauty from structure. To date, most examples of neat tricks and had

# CSS Zen Garden



## Css Zen Garden

*the beauty of css design.*

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

[Download the sample HTML file and CSS file](#)

### The Road To Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The CSS Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

### So What is This About

There is clearly a need for CSS to be taken seriously by graphic artists. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The code remains the same, the only thing that has changed is the external .css file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. To date, most examples of neat tricks and hacks have been

#### SELECT A DESIGN:

- [Under the Sea!](#)  
by Eric Sotlar
- [Make 'em Proud](#)  
by Michael McGinley and Scotty Refsnider
- [Orchid Beauty](#)  
by Kevin Addison
- [Oceanscape](#)  
by Justin Gray
- [CSS Co., Ltd](#)  
by Benjamin Klemm
- [Sakura](#)  
by Tatsuya Ueda
- [Kyoto Forest](#)  
by John Polowski
- [A Walk in the Garden](#)  
by Simon Van Hauwemeiren

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[View All Designs](#)

#### RESOURCES:

# CSS Zen Garden

Download the sample [html file](#) and [css file](#)

## CSS Zen Garden

A demonstration of what can be accomplished visually through CSS-based design. Select any stylesheet from the list to load it into this page.



### Select a Design

- [Under the Sea!](#)  
by Eric Stoltz
- [Make 'em Proud](#)  
by Michael McAgon and Scotty Reifsnyder
- [Orchid Beauty](#)  
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- [Kyoto Forest](#)  
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### The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible [DOMs](#), and broken [css](#) support. Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the [W3C](#), [WaSP](#) and the major browser creators. The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

### So What is This About



There is clearly a need for [css](#) to be taken seriously by graphic artists. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The code remains the same, the only thing that has changed is the external [.css](#) file. Yes, really. [css](#) allows complete and total control over the style of a hypertext document.

### Participation



Graphic artists only please. You are modifying this page, so strong [css](#) skills are necessary, but the example files are commented well enough that even [css](#) novices can use them as starting points. Please see the [css Resource Guide](#) for advanced tutorials and tips on working with [css](#). You may modify the style sheet in any way you wish, but not the [HTML](#). This may seem daunting at first if

### Archives

- [next designs »](#)
- [View All Designs](#)

### Resources

# CSS Zen Garden

The screenshot shows the homepage of the CSS Zen Garden. The background features a traditional Japanese-style illustration of a red umbrella with white floral patterns, green maple leaves, and blue sky with white clouds. On the left, there's a sidebar with a list of design names and authors. The main content area has several sections: "The Road to Enlightenment", "So What is This About?", and "Participation". Each section has decorative scrollwork borders.

*"A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page."*

**The Road to Enlightenment**

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

**So What is This About?**

There is clearly a need for CSS to be taken seriously by graphic artists. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The code remains the same, the only thing that has changed is the external.css file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. To date, most examples of neat tricks and hacks have been demonstrated by structurists and coders. Designers have yet to make their mark. This needs to change.

**Participation**

Graphic artists only please. You are modifying this page, so strong CSS skills are necessary, but the example files are commented well enough that even CSS novices can use them as starting points. Please see the [CSS Resource Guide](#) for advanced tutorials and tips on working with CSS.

You may modify the style sheet in any way you wish, but not the HTML. This may seem daunting at first if you've never worked this way before, but follow the listed links to learn more, and use the sample files as a

**Select a design**

- Under the Seal by Eric Stoltz
- Make 'em Proud by Michael McGaghon and Scotty Reifsnyder
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**Archives**

# CSS Zen Garden

The screenshot shows the homepage of the CSS Zen Garden. The header features a large yellow title "CSS Zen Garden" and a subtitle "The Beauty of CSS Design". Below the header is a dark blue banner with white text: "A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page." To the right of this text is a small orange button labeled "Download the sample [html file](#) and [css file](#)". The main content area has a dark blue background with a stylized illustration of clouds and a city skyline at the bottom. On the left, there's a yellow sidebar with the heading "So What is This About?". It contains two columns of text: the first column discusses the purpose of the garden, and the second column explains how CSS allows complete control over web documents. To the right of the sidebar is a vertical navigation menu titled "Select a Design:" which lists ten design options with their names and authors. Below this is an "Archives:" section with links to "next designs >" and "View All Designs". At the bottom is a "Resources:" section with links to "View This Design's CSS", "CSS Resources", "FAQ", "Submit a Design", and "Translations".

## CSS Zen Garden

The Beauty of CSS Design

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

Download the sample [html file](#) and [css file](#)

### The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

### So What is This About?

There is clearly a need for CSS to be taken seriously by graphic artists. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The code remains the same, the only thing that has changed is the external .css file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. To date, most examples of neat tricks and hacks have been demonstrated by structurists and coders. Designers have yet to make their mark. This needs to change.

### Select a Design:

- Under the Sea! by Eric Stoltz
- Make 'em Proud by Michael McAgan and Scotty Reifsnnyder
- Orchid Beauty by Kevin Addison
- Oceanscape by Justin Gray
- CSS Co., Ltd. by Benjamin Klemm
- Sakura by Tatsuya Uchida
- Kyoto Forest by John Politowski
- A Walk in the Garden by Simon Van Hauwermeiren

### Archives:

[next designs >](#)

[View All Designs](#)

### Resources:

[View This Design's CSS](#)

[CSS Resources](#)

[FAQ](#)

[Submit a Design](#)

[Translations](#)

# CSS Zen Garden

## The Beauty of CSS Design

A demonstration of what can be accomplished through CSS-based design. Select any style sheet from the list to load it into this page.

Download the example [html file](#) and [css file](#)



## The Road to Enlightenment

### So What Is This About?

There is a continuing need to show the power of CSS. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The HTML remains the same, the only thing that has changed is the external CSS file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. Designers and coders alike have contributed to the beauty of the web; we can always push it further.

HTML  
CSS  
CC  
A11y  
GH

### Participation

Strong visual design has always been our focus. You are modifying this page, so strong CSS skills are necessary too, but the example files are commented well enough that even CSS novices can use them as starting points. Please see the [CSS Resource Guide](#) for advanced tutorials and tips on working with CSS.

You may modify the style sheet in any way you wish, but not the HTML. This may seem daunting at first if



# CSS Zen Garden



5

3

cc

1

0

4

# CSS Zen Garden

CSS ZEN GARDEN

# The Beauty of CSS Design

A DEMONSTRATION OF WHAT CAN BE ACCOMPLISHED THROUGH CSS-BASED DESIGN. SELECT ANY STYLE SHEET FROM THE LIST TO LOAD IT INTO THIS PAGE.

---

DOWNLOAD THE EXAMPLE HTML FILE AND [CSS FILE](#)

## Select a Design:

[Mid Century Modern](#) by [Andrew Lohman](#)

[Garments](#) by [Dan Mall](#)

[Steel](#) by [Steffen Knoeller](#)

[Apothecary](#) by [Trent Walton](#)

[Screen Filler](#) by [Elliot Jay Stocks](#)

[Fountain Kiss](#) by [Jeremy Carlson](#)

[A Robot Named Jimmy](#) by [meltmedia](#)

[Verde Moderna](#) by [Dave Shea](#)

## Archives:

[Next Designs](#) ›

[View All Designs](#)

# Learn more

- Web Hypertext Application Technology Working Group (WHATWG) HTML Living Standard
  - <https://html.spec.whatwg.org/>
- W3Schools Online Web Tutorials
  - <https://www.w3schools.com/html/>
  - <https://www.w3schools.com/css/>
  - + JavaScript, PHP, SQL, Python

# Web application

# Web application

- Implies processing data and generating a customized document (direct result of the input data)
- input data can originate:
  - from the user
  - from an external source (DB)
  - a **combination** user/DB

# Forms in HTML

- required for the user to send data to the server
- <form>...</form>
- Specific attributes:
  - action: address of the document which receives the data
    - <form **action**="**<?php echo \$\_SERVER['PHP\_SELF'];?>**">
    - <form **action**="actiuni/file2.html">
  - method: method for transmitting data: post or get
    - <form **method**="post" **action**= ... >

# Methods

- **post** : data is transmitted as a block (inside the body of the HTTP request)
- **get** : appends form-data into the URL :  
`results.php?prob=81&an=2009`
- **get** must be used only for “idempotent” data,
  - no collateral effects
  - no change in server status (databases, etc)
- we can emulate a form (**get**) by writing links appropriately

# Form elements

- inside <form>...</form>
  - input
  - select/option
  - textarea
  - button
- **all** elements will have a name
  - attribute: **name=“”**
  - the name will be directly present in the URI generated by get, or will be a variable sent by post
- data is effectively sent by a **type="submit"** button

# INPUT

- <input .../>
- Attributes:
  - type: text | password | checkbox | radio | submit | reset | file | hidden | image | button
  - name: variable name
  - value: data to send to the server on submitting the form (initial data in some cases)
  - checked/src/size/maxlength depending on type

# Examples

```
<input name="textfield" type="text" value="ceva" />

<input name="Ok" type="submit" value="Trimite" />

<label><input name="check" type="checkbox" value="5" checked />check1</label>

<label><input name="RG1" type="radio" value="a" checked="checked" />but1</label>
<label><input name="RG1" type="radio" value="b" />but2</label>

<input name="hid" type="hidden" value="6" />
```

The screenshot shows a web page with the following elements:

- A text input field containing the value "ceva".
- A submit button labeled "Trimite".
- A checkbox labeled "check1" which is checked.
- Two radio buttons labeled "but1" and "but2".

# TEXTAREA/SELECT

```
<textarea name="textarea" cols="20" rows="5">Un text  
initial</textarea><br /><br />
```

```
<select name="select." size="3">  
  <option value="1" selected="selected">opt1</option>  
  <option value="2">opt2</option>  
  <option value="3">opt3</option>  
</select><br /><br />
```

```
<select name="select...">  
  <option value="1" selected="selected">opt1</option>  
  <option value="2">opt2</option>  
  <option value="3">opt3</option>  
</select>
```

The screenshot shows a web page with the following visual elements:

- A text area containing the text "Un text initial".
- A select element with a size of 3, displaying three options:
  - opt1 (selected)
  - opt2
  - opt3
- A smaller select element with one option:
  - opt1Followed by a dropdown arrow.

# BUTTON

```
<button type="button" onClick="do ()">Click Here</button>  
  
<button type="submit" value="infoOnly">Request Info</button>  
  
<button type="reset">Clear</button>  
  
<button type="submit" id="sender"  
value="infoOnly">Request<br />Info<br /></button>  
  
<button type="submit" id="sender"  
value="infoOnly"><p>Request</p><p><b><i>Info</i></b></p>  
</button>
```

- introduced to insert complex content in buttons (formatted text, images)
- Not always the best idea (Don't make me think!)

Click Here

Request Info 

 Clear

Request  
Info

Request

Info



# Exemplu – forma

- Mic magazin online
- Formular de comanda cu procesarea comenzii

```
<html>
<head>
<title>Magazin online XXX SRL</title>
</head>
<body>
<h1>Magazin online XXX SRL</h1>
<h2>Realizati comanda</h2>
<form action="rezultat.html" method="post">
<table border="0">
<tr bgcolor="#cccccc"><td width="150">Produs</td><td width="15">Cantitate</td></tr>
<tr><td>Carti</td><td align="center"><input type="text" name="carti_cant" size="3" maxlength="3" /></td></tr>
<tr><td>Caiete</td><td align="center"><input type="text" name="caiete_cant" size="3" maxlength="3" /></td></tr>
<tr><td>Penare</td><td align="center"><input type="text" name="penare_cant" size="3" maxlength="3" /></td></tr>
<tr><td colspan="2" align="center"><input type="submit" value="Trimite" /></td></tr>
</table>
</form>
</body>
</html>
```

**Magazin online XXX SRL**

**Realizati comanda**

Produs	Cantitate
Carti	1
Caiete	2
Penare	3

**Trimite**

# HTML 5 – Input validation



- <input type="email">
- <input type="number">
- <input type="search">
- <input type="tel">
- <input type="url">

# HTML 5 – Input validation



```
<label for="email">Email:</label>
<input type="email" id="email" name="email">
<br /><br />
<label for="can">Cantitate (1 - 5):</label>
<input type="number" id="can" name="can" min="1" max="5">
<br /><br />
<label for="gsearch">Cautare Google:</label>
<input type="search" id="gsearch" name="gsearch">
<br /><br />
<label for="phone">Telefon:</label>
<input type="tel" id="phone" name="phone"
placeholder="0123.456.789" pattern="[0-9]{4}.[0-9]{3}.[0-9]{3}"
required>
<br /><br />
<label for="server">Server:</label>
<input type="url" id="server" name="server">
```

Email:

Cantitate (1 - 5):

Cautare Google:

Telefon:

Server:

# HTML 5 – Input validation



Email:

Please include an '@' in the email address. 'ceva' is missing an '@'.

Cantitate (1 - 5):

Cantitate (1 - 5):

Telefon:

S ! Please match the requested format.

Server:



Please enter a URL.

Email:



Please include an '@' in the email address. 'ceva' is missing an '@'.

Telefon:

Server: ! Please fill out this field.

Telefon:

S ! Please match the requested format.

Server:

# HTML 5 – Native browser UI



- <input type="color">
- <input type="date">
- <input type="datetime-local">
- <input type="month">
- <input type="range">
- <input type="time">
- <input type="week">

# HTML 5 – Native browser UI



```
<label for="culoare">Culoare:</label>
<input type="color" id="culoare" name="culoare" value="#ffoooo">
<br /><br />
<label for="nastere">Data nastere:</label>
<input type="date" id="nastere" name="nastere">
<br /><br />
<label for="examen">Examen (data si ora):</label>
<input type="datetime-local" id="examen" name="examen">
<br /><br />
<label for="fin">Finalizare (luna si an):</label>
<input type="month" id="fin" name="fin">
<br /><br />
<label for="vol">Volum (0 - 50):</label>
<input type="range" id="vol" name="vol" min="0" max="50">
<br /><br />
<label for="ora">Ora intalnire:</label>
<input type="time" id="ora" name="ora">
<br /><br />
<label for="sap">Saptamana:</label>
<input type="week" id="sap" name="sap">
```

Culoare:

Data nastere:  □

Examen (data si ora):  □

Finalizare (luna si an):  □

Volum (0 - 50):

Ora intalnire:  ⌚

Saptamana:  □

# HTML 5 – Native browser UI



Culoare:

Data nastere:

Examen (data):

Finalizare (luna):

Volum (0 - 50):

Ora intalnire:

Saptamana:

R  G  B

135 59 59

84

Culoare:

Data nastere:

Examen (data):

Finalizare (luna):

Volum (0 - 50):

Ora intalnire:

March 2023 ▾ ↑ ↓

Su	Mo	Tu	We	Th	Fr	Sa
26	27	28	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18

# HTML 5 – Native browser UI



Examen (data si ora):

Finalizare (luna si an)

Volum (0 - 50):

Ora intalnire:

Saptamana:

March 2023 ▾ ↑ ↓

Su	Mo	Tu	We	Th	Fr	Sa
26	27	28	1	2	3	4
5	6	7	8	9	10	11
12	<b>13</b>	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

Finalizare (luna si an):

Volum (0 - 50):

Ora intalnire:

Saptamana:

2023

Jan	Feb	<b>Mar</b>	Apr
May	<b>Jun</b>	Jul	Aug
Sep	Oct	<b>Nov</b>	Dec

# HTML 5 – Native browser UI



Volum (0 - 50):

Ora intalnire:

Saptamana:

02	25	PM
03	26	AM
04	27	
05	28	
06	29	
07	30	
08	31	

Saptamana: Week 13, 2023

Trimite

March 2023 ▾ ↑ ↓

Week	Su	Mo	Tu	We	Th	Fr	Sa
9	26	27	28	1	2	3	4
10	5	6	7	8	9	10	11
11	12	13	14	15	16	17	18
12	19	20	21	22	23	24	25
13	26	27	28	29	30	31	1
14	2	3	4	5	6	7	8

# Media



- HTML 5 imbunatatestă semnificativ (cu suport din partea browser-elor) capacitatea de a afisa date multimedia fara aplicatii externe
  - <audio>...</audio>
    - MP3, Wav, Ogg
  - <video>...</video>
    - MP4, WebM, Ogg

```
<video width="320" height="240" controls="true" autoplay="autoplay" loop="loop">
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

# Contact

- Laboratorul de microunde si optoelectronica
- <http://rf-opto.etti.tuiasi.ro>
- [rdamian@etti.tuiasi.ro](mailto:rdamian@etti.tuiasi.ro)