Lecture 8 (w9)

2025/2026

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)
 - Test + Project Presentation: last week (Weekend)

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 (individual) for supplemental embedded systems access!
 - admin/user web user interface
 - data supplier embedded system (even partial)

Project

- self selected homework: available until 19.12
 (2 weeks from lecture 9)
- only selection from a list after 19.12



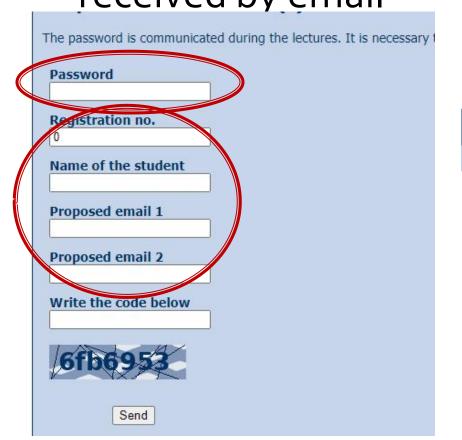
Info

https://rf-opto.etti.tuiasi.ro/master_it.php



Online – Registration no.

access to online exams requires the password received by email

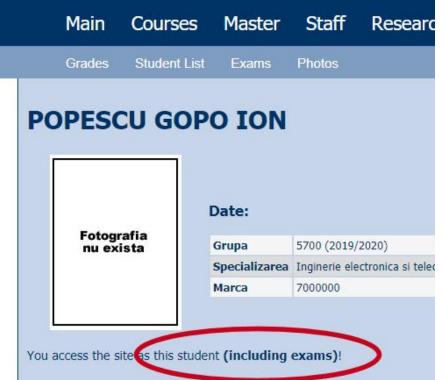




Online

access email/password

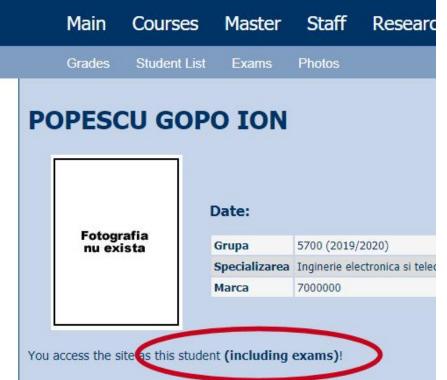




Online

access email/password





Password

received by email



In atentia: POPESCU GOPO ION

Parola pentru a accesa examenele pe server-ul rf-opto este
Parola:

Identificati-va pe server, cu parola, cat mai rapid, pentru confirmare.

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

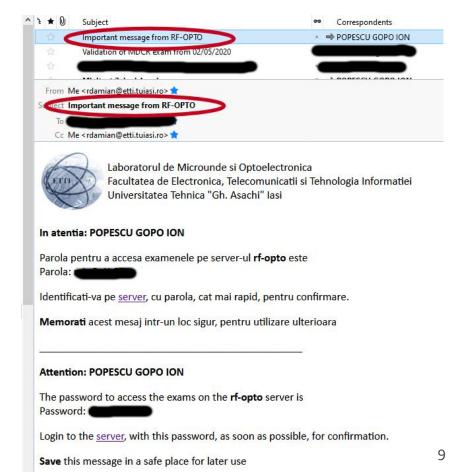
Attention: POPESCU GOPO ION

The password to access the exams on the rf-opto server is Password:

Login to the <u>server</u>, 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

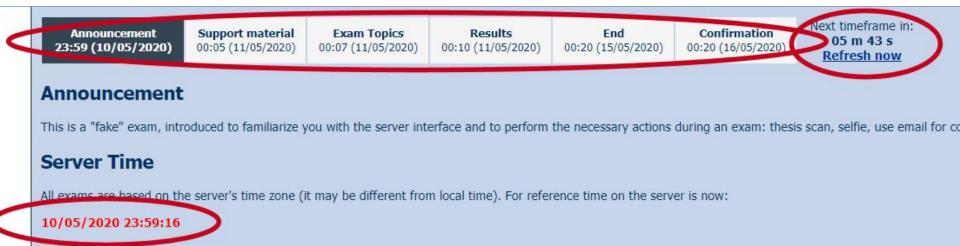
Other data

Manual examen on-line (pdf, 2.65 MB, ro, ■)
Simulare Examen (video) (mp4, 65 12 MB, ro, ■)

Microwave Devices and Circuits (Englis

Examen online

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



2025/2026 Project

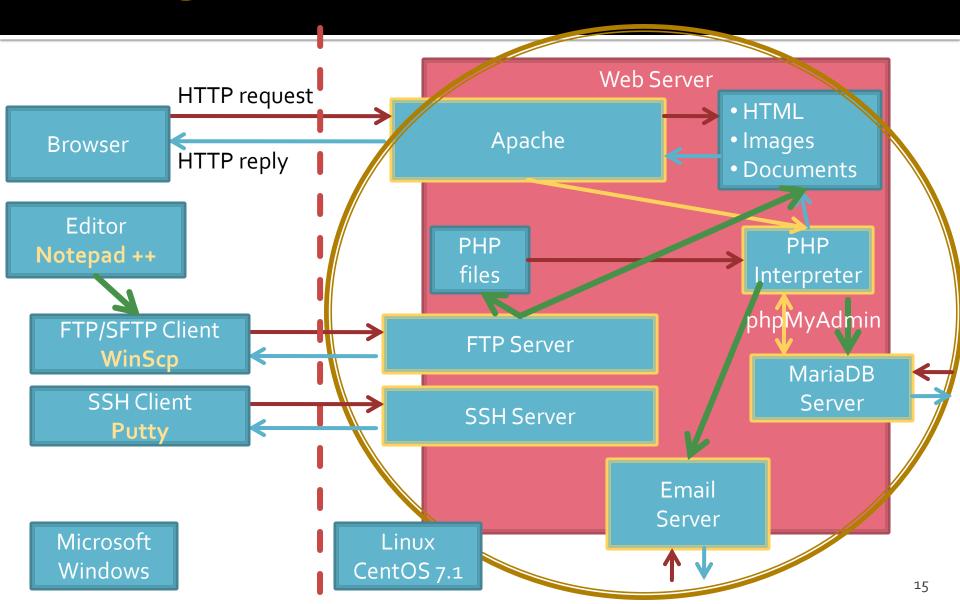
Project

- 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: Debian, php 8 or 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 (eg. MySQL Workbench)

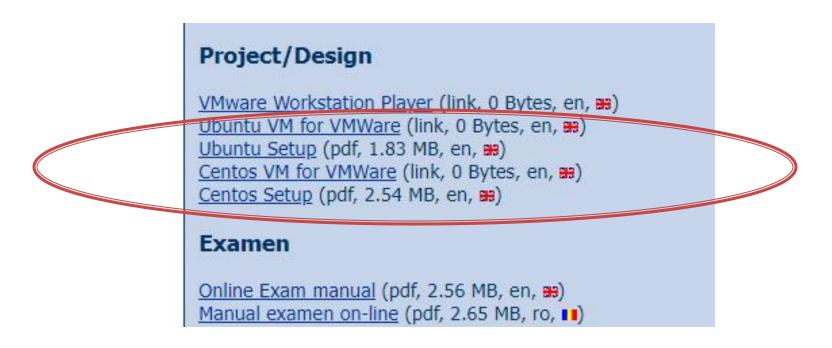
Using LAMP – Advantages

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
 - Debian/12.5, Apache/ 2.4.57, PHP/ 8.2.7, MariaDB/ 10.11.6, PhpMyAdmin/5.2.1
- Available applications very similar with real life hosting solutions
 - SSH
 - FTP
 - Email
 - for full functionality the network interface for the VM must be changed Host-only -> Bridged

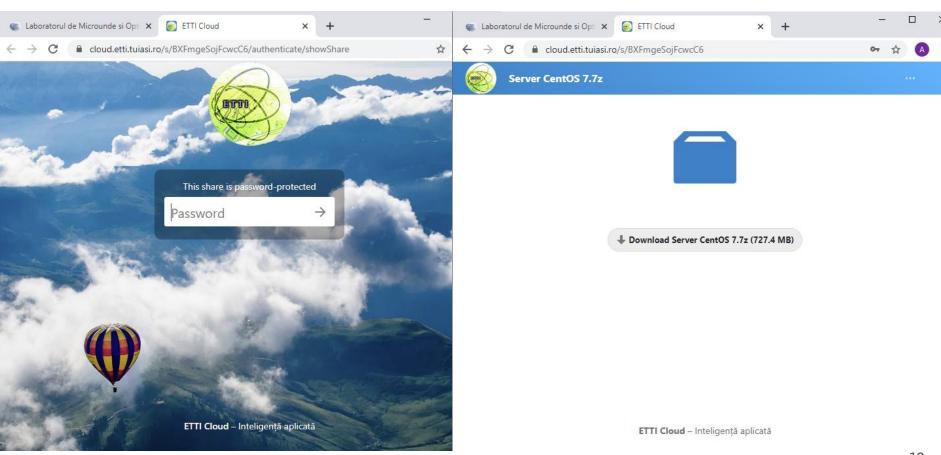
Reference Server

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



Reference Server

Cloud ETTI: RF-opto3#



Server referinta

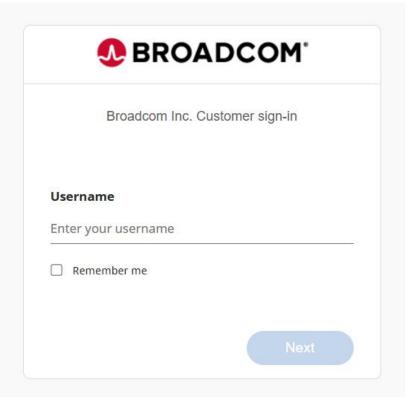
- Masina virtuala
- VMware Workstation Player
 - Gratuit (non-comercial)
 - https://www.vmware.com/products/workstationplayer/workstation-player-evaluation.html
- Inlocuit de VMware Workstation Pro



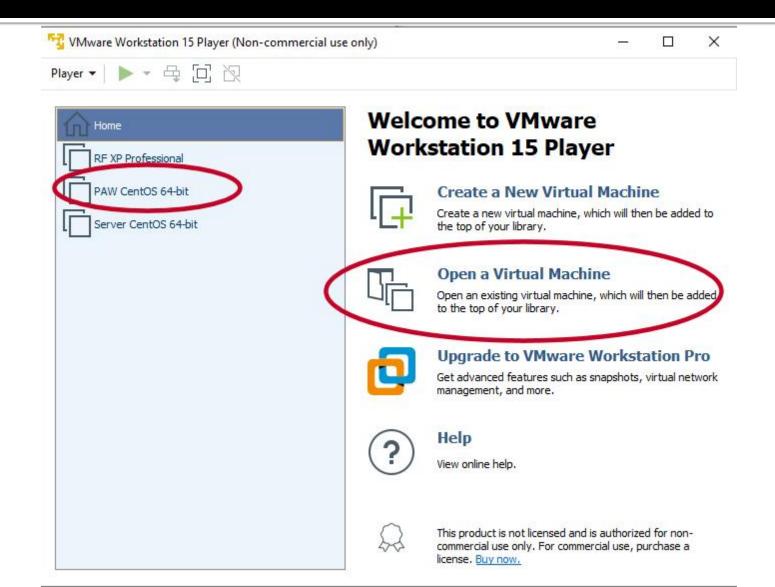
Server referinta

- Masina virtuala
- VMware Workstation Pro (Broadcom)





Reference Server



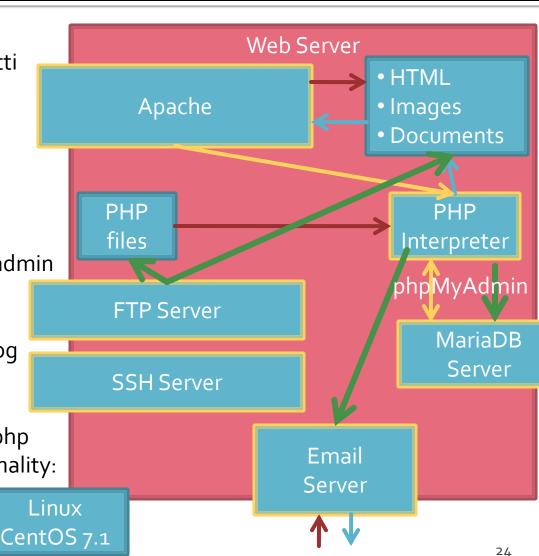
Possible problems

- 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

Using LAMP

```
 login → root:masterrc / paw:masteretti

2. if config \rightarrow 192.168.30.5
3. putty.exe \rightarrow 192.168.30.5 \rightarrow SSH \rightarrow
root:masterrc (remote login)
4. [other linux command line]
5. FTP \rightarrow Winscp \rightarrow SFTP \rightarrow
student:masterrc@192.168.30.5
6. MySql \rightarrow 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
```



- 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

- Linux, three proposed servers
 - CentOS 7.1
 - Ubuntu 20.04
 - Debian 12.5 (recommended)

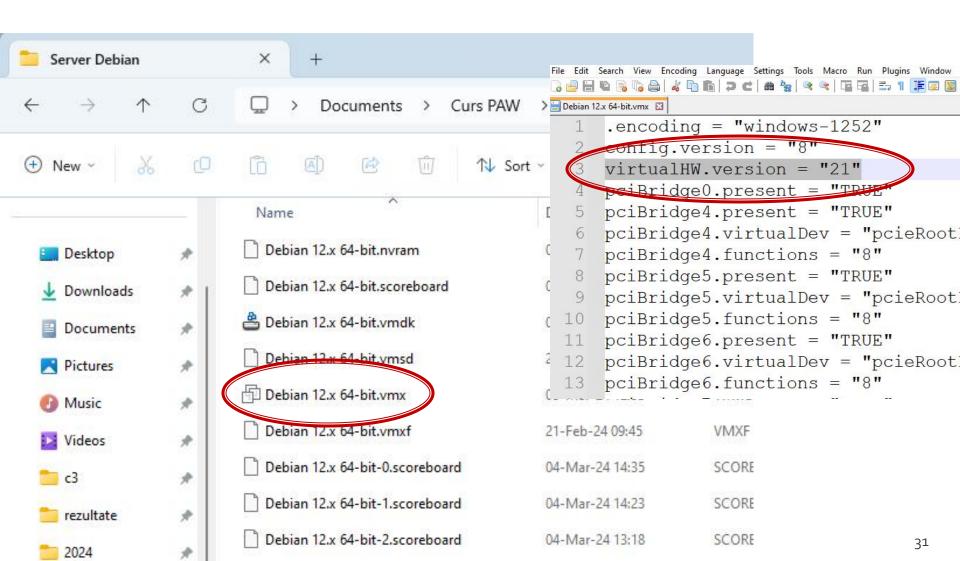
- Centos 7.1
 - PHP 5.4.16
 - MariaDB 5.5.44 / root:masterrc
 - Apache 2.4.6
 - PhpMyAdmin/4.4.15
 - root/student:masterrc
 - Python 2.7.5
 - creat: Workstation Player 12.x (12)

- Ubuntu 20.04
 - PHP 7.4.3
 - MariaDB 10.3.31 / root:masteretti
 - Apache 2.4.41
 - paw/student:masteretti
 - necesar suplimentar pentru acces FTP user paw:
 - sudo usermod -a -G upload paw
 - sudo chmod -R 775 /var/www
 - Python 3.8.10
 - creat: Workstation Player 15.x (16)

- Debian 12.5
 - PHP 8.2.7
 - MariaDB 10.11.6 / root:masteretti
 - Apache 2.4.57
 - PhpMyAdmin/5.2.1 deb
 - root/paw/student:masteretti
 - Python 3.11.2
 - creat: Workstation Player 17.5 (21)

Server referinta

- Pentru rularea unui server pe o versiune VMware Player anterioara:
 - se localizeaza fisierul "*.vmx" a server-ului
 - se modifica virtualHW.version = "21" la o valoare mai mica (anterioara)
 - in 2.13/1.08 -> **18**



Support applications

- WinSCP (client FTP, gratuit)
 - https://winscp.net/eng/download.php
- Notepad ++ (editor, avansat, gratuit)
 - https://notepad-plus-plus.org/downloads/
- Putty (remote access)
 - https://www.putty.org/
- MySQL Workbench (gratuit, cont Oracle)
 - https://www.mysql.com/products/workbench/
- Visual Studio Code (gratuit, Microsoft)
 - https://code.visualstudio.com/download

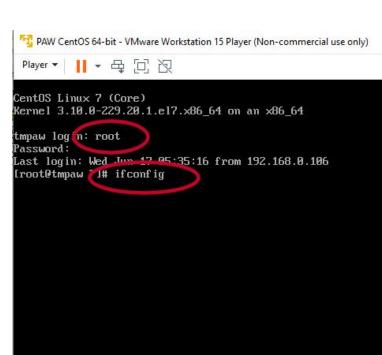
Support applications

Portable applications (for lab, install for home)

```
Laboratory
Laborator 1 (pdf, 1.48 MB, ro, II)
Server Win2000 pentru VMWare Player - lab 1 (cloud) (link, 0 Bytes, en, ::)
Accesorii laborator (x32 - partial) (zip, 28.92 MB, en, ::)
Accesorii laborator (x64 - complet) (zip, 133.58 MB, en, #)
Project/Design
VMware Workstation Player (link, 0 Bytes, en, #)
Server CentOS pentru VMWare Player (cloud) (link, 0 Bytes, en, #)
Instalare Centos (pdf, 2.54 MB, en, s)
Server Ubuntu pentru VMWare Player (cloud) (link, 0 Bytes, en, ::)
```

IP address

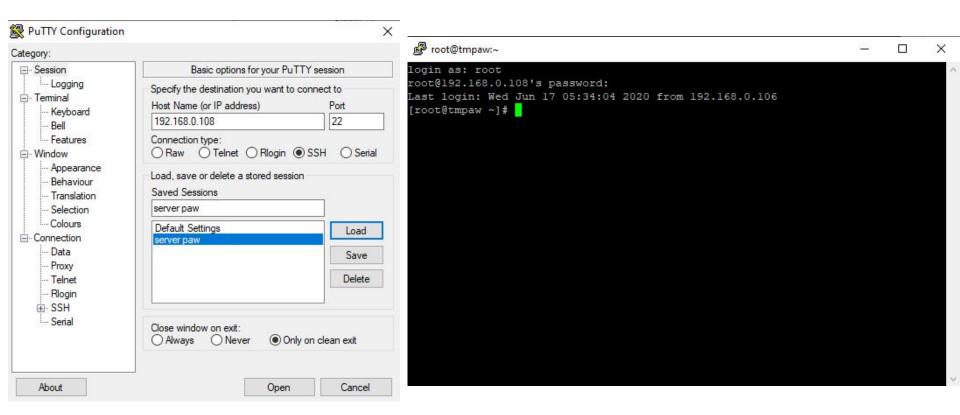
- login, ifconfig
- Ctrl + Alt + mouse



```
PAW CentOS 64-bit - VMware Workstation 15 Player (Non-commercial use only)
 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@tmpau ~ ] ifconfig
eno16777736: flags=4163<UP, b. JADCAST, 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 ชช.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 ~]#
```

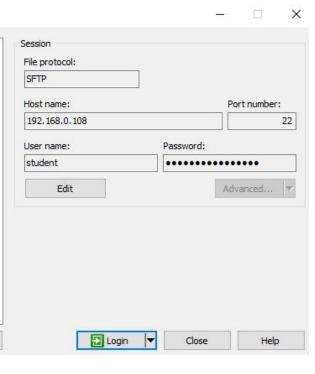
Putty

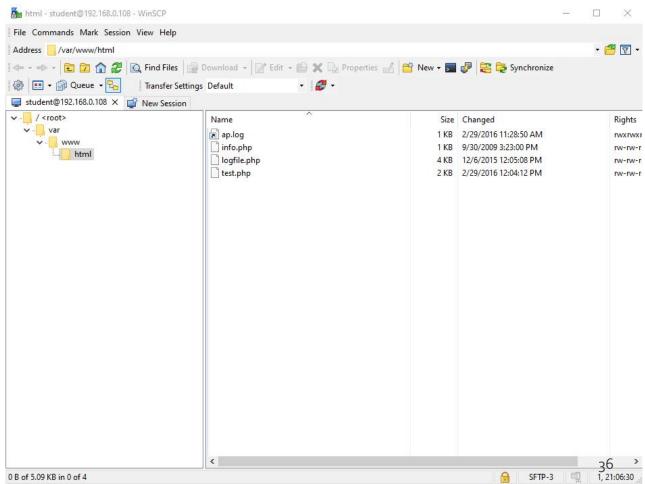
- putty.exe
- avoids mouse capture (CentOS), copy/paste etc.



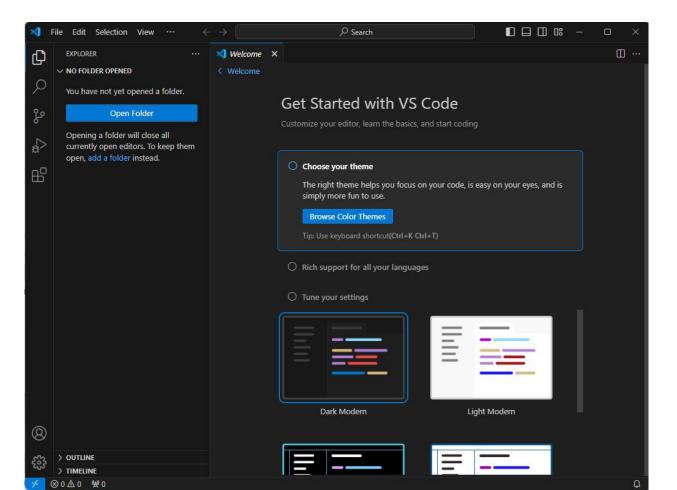
WinSCP

- FTP client
- upload files

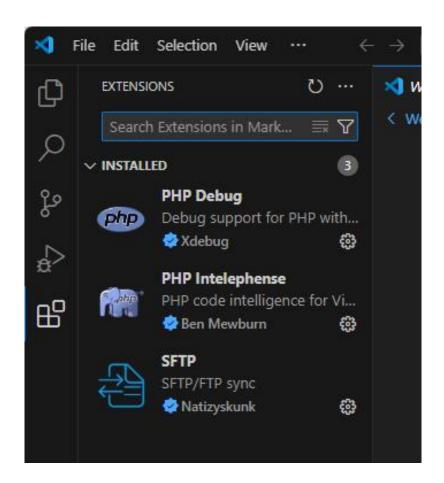


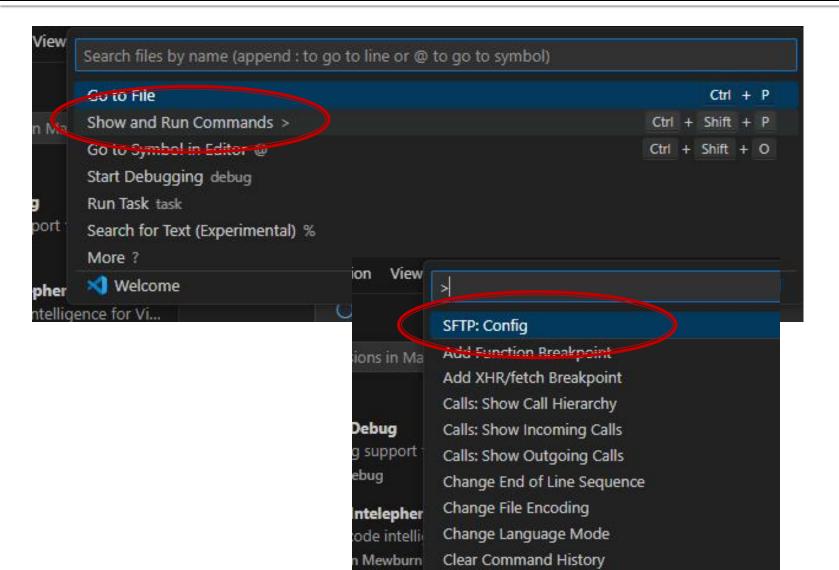


1.87 Portable



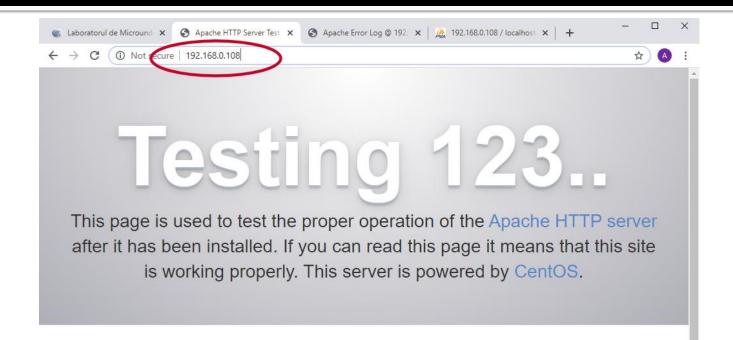
- Installed extensions
 - PHP Intelephense
 - PHP 8 -> Debian
 - PHP Debug (inactive for now)
 - SFTP automatic save on server





```
{} sftp.json
.vscode > {} sftp.json > ...
            "name": "Debian Server",
           "host": "192.168.30.5",
            "protocol": "sfitp",
            "port": 22,
            "username": "student",
            "remotePath": "/var/www/html/",
            "uploadOnSave": true,
            "useTempFile": talse,
            "openSsh": false
 12
```

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, 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.

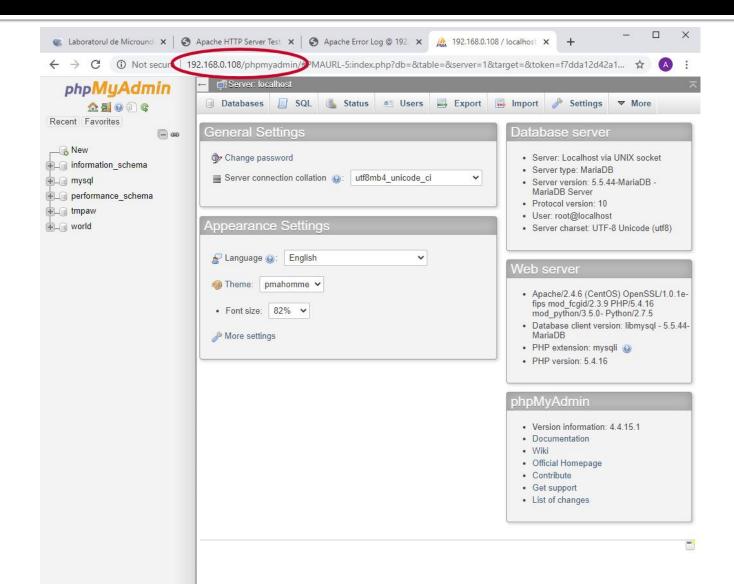
Promoting Apache and CentOS

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



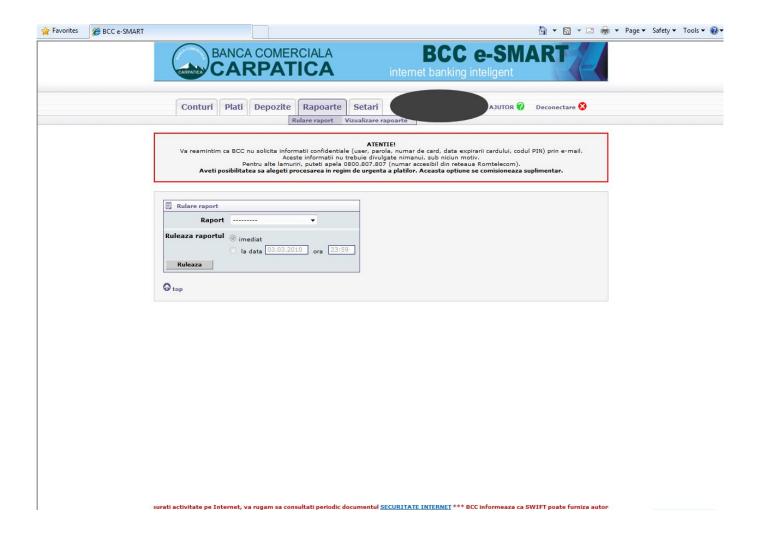


Server MySQL/MariaDB

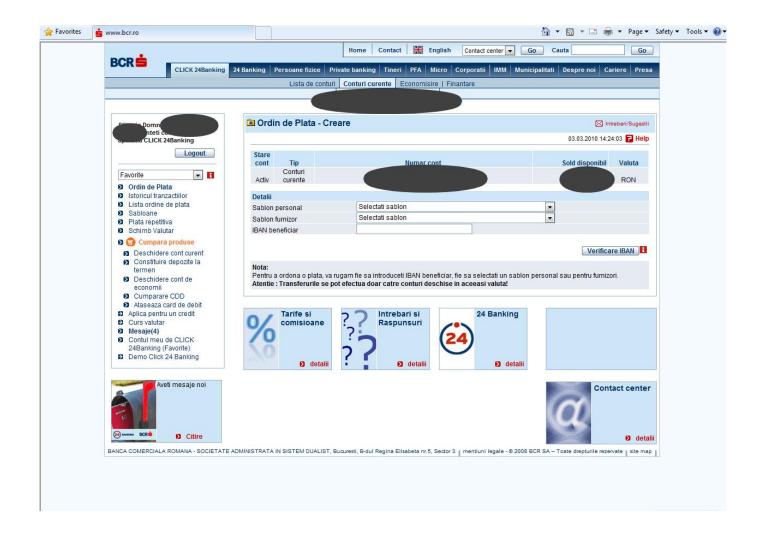


Introduction

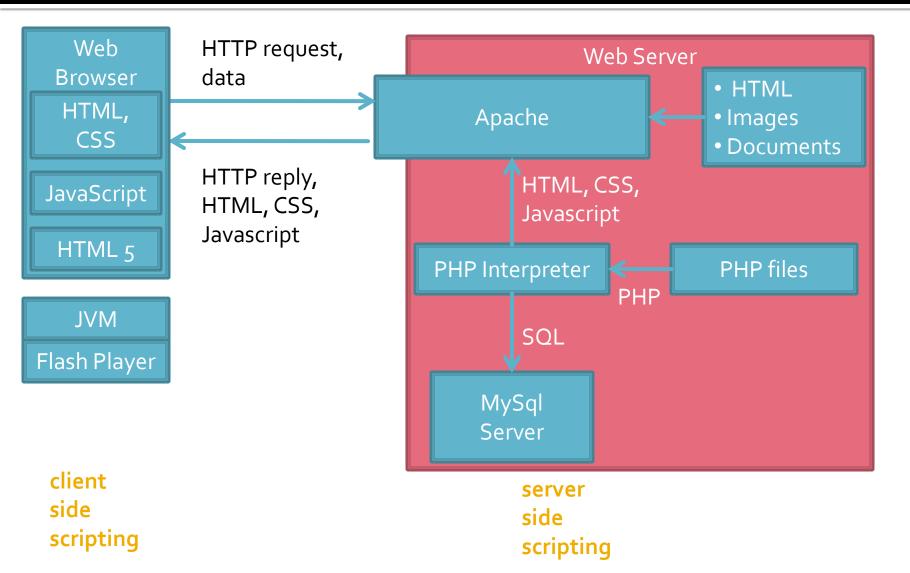
Applications



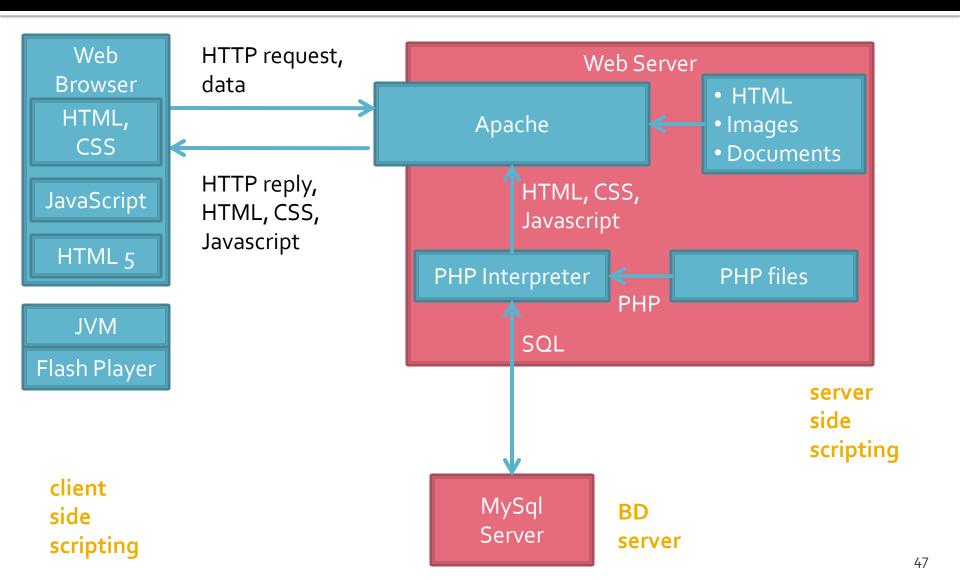
Applications



Client/Server Scripting



Client/Server Scripting



Necessity

```
<?php echo $row['Documente'];?>&nbsp;
      <?php echo $row['user creat'];?>&nbsp;
      <a href="control lot.php?id=-<?php echo &row['ID LOT'];?>">dezactiveaza</a><br/>/a><br/>/a> /><a href=
"control lot.php?id=<?php echc $row['ID LOT'];?>">modifica</a>
   <?php $index++;
   } while ( $row = mysql fetch assoc($result));?>
<?php
else
   echo "Nu exista loturi active";
?>
Loturi inactive
<?php
$query = "SELECT 1.*, c. nume user AS 'user creat'
      FROM 'lot' AS 1
      LEFT JOIN 'users' AS c ON (1. 'User'=c.'id_user')
      WHERE 1. 'Activ' = 0 ORDER BY 1. 'ID LOT' DESC";
$result = mysql query($query);
$total=0:
if ($result && (mysgl num rows($result) > 0))
   $total=mysql num rows($result);
   $row = mysql fetch assoc($result);
if ($total>0)
(?>
48
```

Necessity

```
E:\Documents\Pagini Web\Safir dep\lista_lot.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
] 🔒 🗎 🖺 🥫 😘 🚵 | 🕹 🛍 🖺 | ⊃ C | ## 🐈 | 🤏 🖎 | 🖫 🔼 🗔 🗔 🖺 🗜 🖫 👂 📵 🗩 🗉 🕦 🗩
🔚 logfile php 🖾 📙 lista_lot.php 🔀
     -<?php }?>
- <a href="control_lot.php?id=0">Lot nou</a>
544
    Loturi active
545 P<?php
546
    $query = "SELECT 1.*, c. nume user AS 'user creat'
547
           FROM 'lot' AS 1
           LEFT JOIN 'users' AS c ON (1.'User'=c.'id user')
549
           WHERE 1. 'Activ' <> 0 ORDER BY 1. 'ID LOT' DESC";
    $result = mysql query($query);
     $total=0;
     if ($result && (mysql_num_rows($result) > 0))
554
        $total=mysql num rows($result);
        $row = mysql fetch assoc($result);
556
     if ($total>0)
558
    1?>
559
    = 
    tr class="lista titlu">
560
561
        Nr.
         Numar
          Data
564
         Nr. pui
         Gr. pui
566
         Nr. pui morti
567
          Gr. pui morti
          Ferma
569
          Documente
570
          Creat
          Comenzi
573
       <?php $index=1;
574
575
       ">
576
        <?php echo $index; ?>&nbsp;
           <?php echo $row['Numar']; ?>&nbsp;
578
           <?php echo date("d/m/Y", strtotime($row['Data'])); ?>&nbsp;
579
           <?php echo $row['Pui'];?>&nbsp;
           <?php echo $row['Greutate']; ?>&nbsp;
           <?php echo $row['Pui Morti']; ?>&nbsp;
           <?php echo $row['Greutate Morti']; ?>&nbsp;
           <?php echo $row['Ferma']; ?>&nbsp;
584
           <?php echo $row['Documente']; ?>&nbsp;
```

HTML

<?php echo \$row['Documente']; ?>

<?php echo \$row['Ferma']; ?>

584

```
E:\Documents\Pagini Web\Safir dep\lista_lot.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Win
3 🖆 🗎 🖺 🥦 🧠 🐰 🐧 🖍 🖍 🖺 ⊃ c | m 🛬 | 🔍 🥞 🖼 🚍 🚍 🖺 🛊
🔚 logfile.php 🗵 📙 lista_lot.php 🗵
539
    <?php }?>
540
541
   - div id="maincontent"><!-- InstanceBeginEditable name="Conti
   = <span class="title">Adauga</span><br/>
     <a href="control lot.php?id=0">Lot nou</a>
544
    Loturi active
545
   -<?php
546
    $query = "SELECT 1.*, c. nume user' AS 'user creat'
547
         FROM 'lot' AS 1
548
         LEFT JOIN 'users' AS c ON (1. 'User'=c.'id user')
549
         WHERE 1. 'Activ' <> 0 ORDER BY 1. 'ID LOT' DESC";
    $result = mysql query($query);
    if ($result && (mysql num rows($result) > 0))
                                    554
       $total=mysql num rows($result);
       $row = mysql fetch assoc($result);
                                        556
557
    if ($total>0)
    559
                                             Nr.
     Nr.
        Numar
                                                  Numar
        Data
        Nr. pui
        Gr. pui
                                                  Data
567
        Gr. pui morti
        Ferma
        Documente
                                                  Nr. pui
        Creat
        Comenzi
573
      <?php $index=1;
                                                  Gr. pui
574
575
     <tr class="<?php if ($index%2) echo "lista i
576
       <?php echo $index; ?>&nbsp;
         <?php echo $row['Numar']; ?>&nbsp;
578
         <?php echo date("d/m/Y", strtotime($row['Data'])
579
         <?php echo $row['Pui']; ?>&nbsp;
```

HTML + PHP

<?php echo \$row['Documente']; ?>

<?php echo \$row['Ferma']; ?>

584

```
E:\Documents\Pagini Web\Safir dep\lista_lot.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
3 😑 🗎 🖺 😘 😘 🔏 🔏 😘 🖍 🖍 🖍 😭 ⊃ c | a 🦠 🔍 🤏 🖳 📮 🚍 🚍 🖷 📜 🗷 🗷 🖅 🔘
📙 logfile php 🖂 📙 lista_lot.php 🖾
539
     <?php }?>
540
541
    H<div id="maincontent"><!-- InstanceBeginEditable name="Continut" -->
542
    <span class="title">Adauga</span><br/><br/>
      <a href="control lot.php?id=0">Lot nou</a>
544
     Loturi active
545
    -<?php
546
     $query = "SELECT 1.*, c. nume user AS 'user creat'
547
          FROM 'lot' AS 1
          LEFT JOIN 'users' AS c ON (1. 'User'=c.'id user')
549
          WHERE 1. 'Activ' <> 0 ORDER BY 1. 'ID LOT' DESC";
     $result = mysql query($query);
     if ($result && (mysql num rows($result) > 0))
554
        $total=mysql num rows($result);
       $row = mysql fetch assoc($result);
556
     if ($total>0)
                               1?>
559
    <?php echo $index; ?>&nbsp;
    tr class="lista titlu">
       Nr.
                                        <?php echo $row['Numar'];?>&nbsp;
         Numar
                                        <?php echo date("d/m/Y", strtotime($row['Data'])); ?>&nbsp;<
         Data
564
         Nr. pui
                                        <?php echo $row['Pui'];?>&nbsp;
565
         Gr. pui
566
         Nr. pui morti
                                        <?php echo $row['Greutate']; ?>&nbsp;
567
         Gr. pui morti
         Ferma
569
         Documente
         Creat
         Comenzi
      <?php $index=1;
574
575
        class="<?php if ($index%2) echo "lista impar"; else echo "list
576
        <?php echo $index; ?>&nbsp;
          <?php echo $row['Numar']; ?>&nbsp;
          <?php echo date("d/m/Y", strtotime($row['Data']));?>
579
```

HTML + PHP + SQL

579

584

<?php echo \$row['Ferma']; ?>

<?php echo \$row['Documente']; ?>

```
E:\Documents\Pagini Web\Safir dep\lista_lot.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
3 🖆 🗎 🖺 🧣 😘 🔝 🔏 🔏 😘 🖍 😭 😭 ⊃ C 🕯 🐄 💘 🔍 🔍 🖼 🚍 🚍 🖺 🗜 🐷 💹 🔎 🖅 🕟 🕩 🗈
📙 logfile php 🔀 📙 lista lot.php 🔀
    -<?php }?>
540
541
    --> div id="maincontent"><!-- InstanceBeginEditable name="Continut" -->
542
    = <span class="title">Adauga</span><br/>
543
      <a href="control lot.php?id=0">Lot nou</a>
544
     Loturi active
     Schery = "SELECT 1.*, c. nume user' AS 'user creat
546
547
           FROM 'lot' AS 1
548
           LEFT JOIN 'users' AS c ON (1. 'User'=c.'id user')
                                                        <?php
549
           WHERE 1. 'Activ' <> 0 ORDER BY 1. 'ID LOT' DESC'
     $result = mysql query($query);
                                                         $query = "SELECT 1.*, c.`nume user` AS `user creat`
     if ($result && (mysql num rows($result) > 0))
                                                                    FROM 'lot' AS 1
                                                                    LEFT JOIN 'users' AS c ON (1. 'User'=c.'id user')
554
        $total=mysql num rows($result);
        $row = mysql fetch assoc($result);
                                                                    WHERE 1. `Activ` <> 0 ORDER BY 1. `ID LOT` DESC";
556
557
     if ($total>0)
                                                         $result = mysql query($query);
558
     1?>
    = 
559
                                                         $total=0;
560
    dtr class="lista titlu">
                                                         if ($result && (mysql num rows($result) > 0))
561
        Nr.
         Numar
         Data
564
         Nr. pui
                                                               $total=mysql num rows($result);
565
         Gr. pui
                                                               $row = mysql fetch assoc($result);
566
         Nr. pui morti
567
         Gr. pui morti
568
         Ferma
         Documente
570
         Creat
571
         Comenzi
572
573
       <?php $index=1;
574
575
      ">
576
        <?php echo $index; ?>&nbsp;
577
           <?php echo $row['Numar']; ?>&nbsp;
578
           <?php echo date("d/m/Y", strtotime($row['Data'])); ?>&nbsp;
```

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)
- rf-opto Previous years Curs 1 PAW 2021-2022 Recapitulare HTML (RO + video)
- Course: Web Technologies (2012-2013) (EN)
 - https://rf-opto.etti.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.

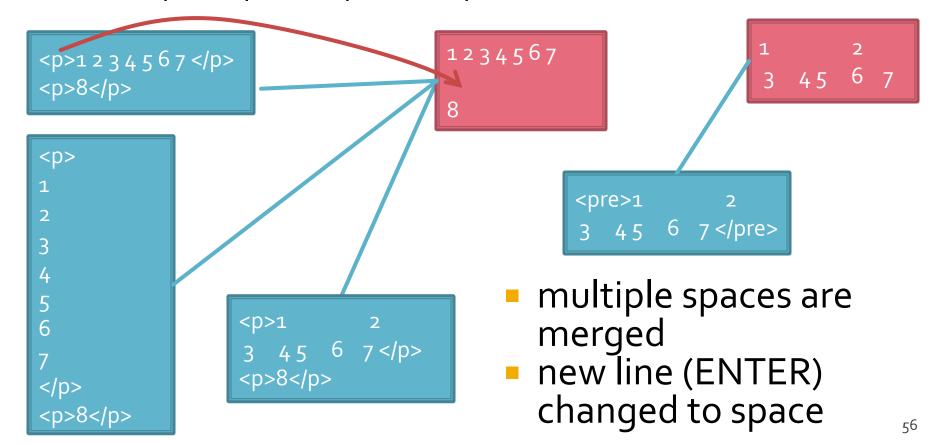


HTML Concepts 1

- 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:
 (
 HTML)
 - container: <X> Any_Content</X>
 - ex: One paragraph
 - 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:



Attributes

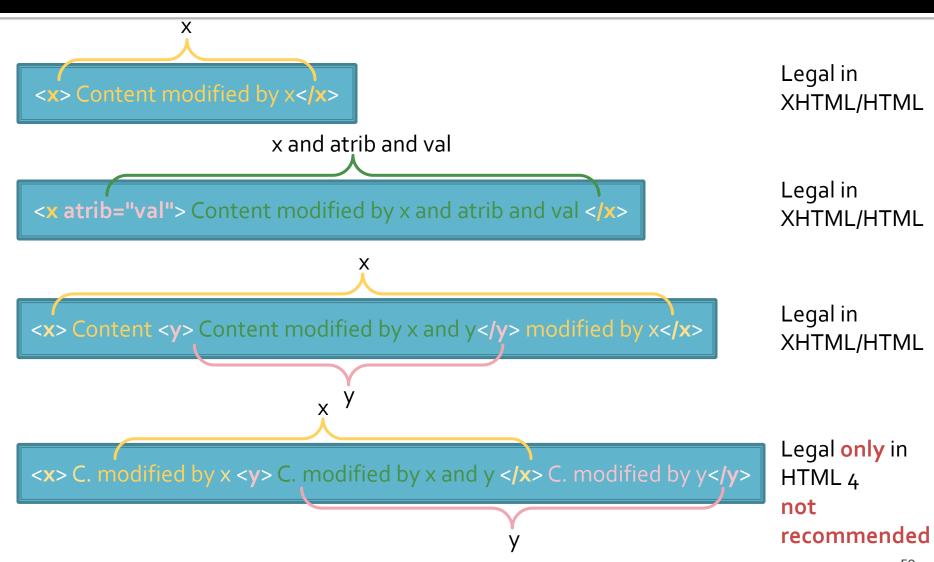
- Options (properties) of the tag, used to detail the effect of that particular tag
- In container tags, introduced only in the starting tag
 - ceva
- Attributes are keywords and their name must be correctly spelled. (XML allows user defined attributes, but not HTML and XHTML)
- Attribute value, both:
 - keywords
 - user defined

Major differences XHTML vs. HTML

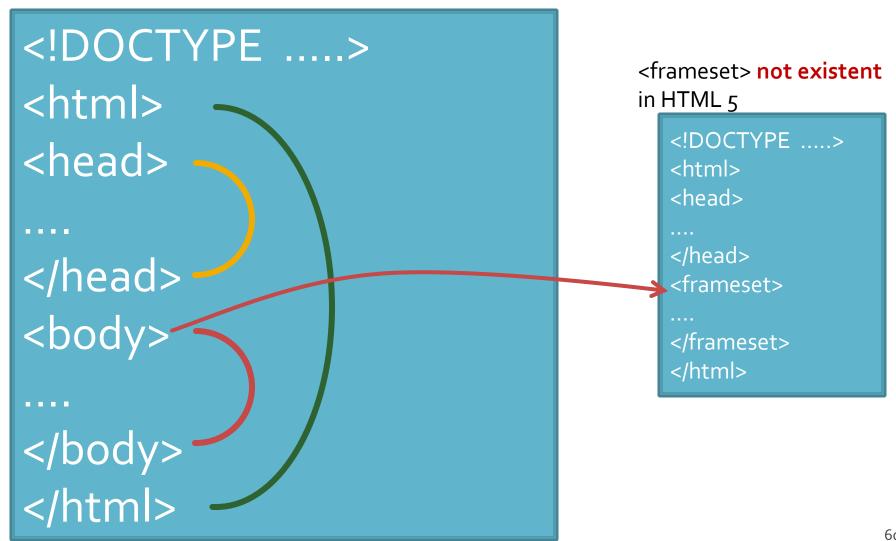
- Tag inclusion, mandatory
 - <X>....</Y>.....</X>
 - <X>....</X>....</Y>
- Tags must be always closed
 -,
, <meta />
 -,
, <meta >
- Tags must be written in lower case
 - ,
, <frameset>

 - <P>,
, <FrAmesET>
- Attributes must be lowercase and their values written between quotation marks
 - , ,
- All information must be enclosed inside <html>... </html> container tag

HTML Concepts 3

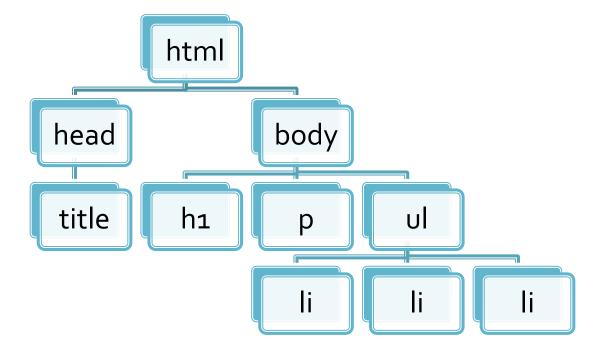


Minimal HTML Document



DOM

 DOM – Document Object Model: logical tree type structure



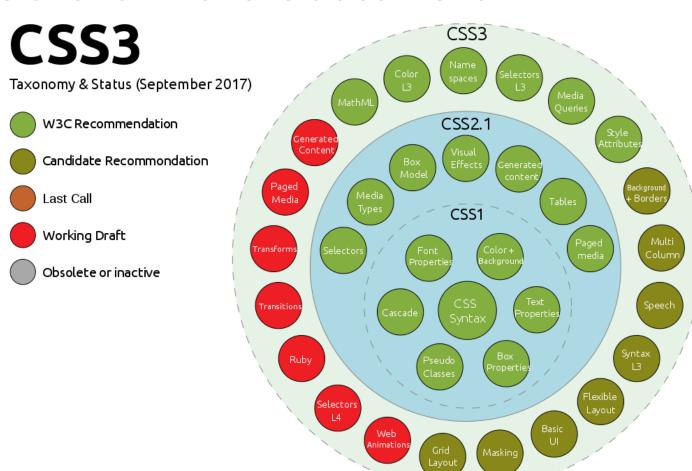
```
<html>
<head>
 <title>pagina mea</title>
</head>
<body>
 <h1>Compozitori:</h1>
 >
 <l
  elvis costello
  johannes brahms
  georges brassens
 </body>
</html>
```

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



CSS vs. HTML

- HTML
 - logical structure of the document
- CSS
 - effective form/shape of the document
- HTML 5
 - HTML tags regarding the form (, 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>
  Voluptatem accusantium
   totam rem aperiam.
 </body>
</html>
```

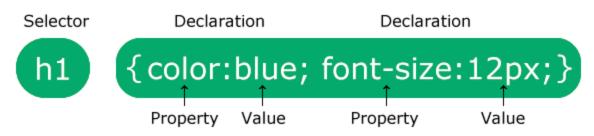
```
h1 { color: white;
  background: orange;
  border: 1px solid bla
  padding: 0 0 0 0;
  font-weight: bold;
}
/* begin: seaside-theme */
body {
  background-color:white;
  color:black;
  font-family: Arial, sans-serif;
  margin: 0 4px 0 0;
  border: 12px solid;
```

CSS 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 "*/"

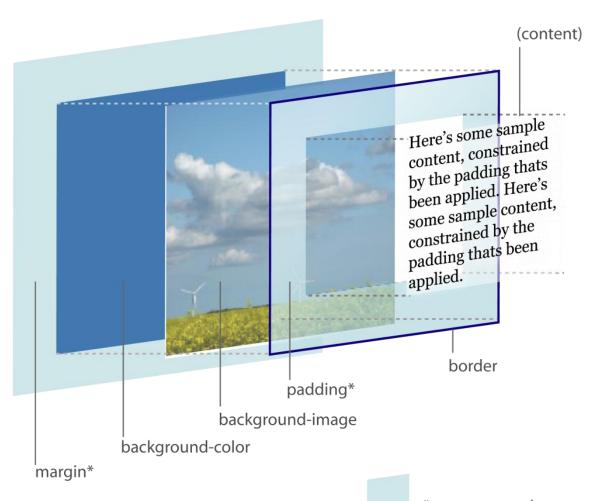


CSS Selectors

- 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

- https://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, a one will load the style sheet into this very page. The code remains the same, the only thing that has changed is the

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 hacl



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



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 cs Zen Garden Invites you to relax and meditate on the important tessons 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.



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:

- IFI Under the Sea! by Eric Stotz
- Make 'em Proud by Michael McAghon and Scotty Reif snyder
- Orchid Beauty by Kevin Addison
- ⊞ Oceanscape
 by Justin Grav
- CSS Co., Ltd. by Benjamin Klemm
- Sakura by Tatsuya Uchida
- FI Kyoto Forest by John Politowski
- A Walk in the Garden by SmonVan Hauvemeien

ARCHIVES:

next designs »

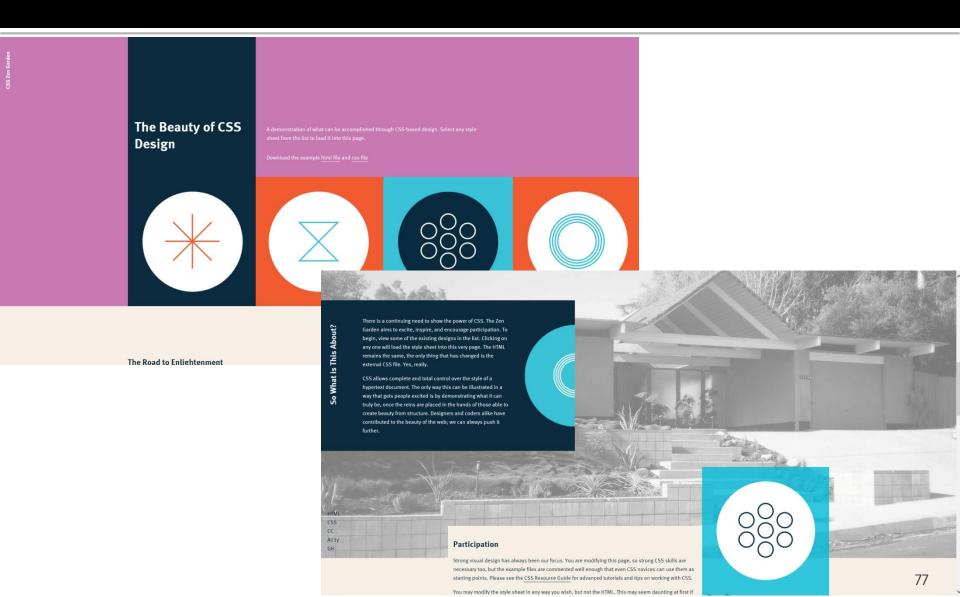
View All Designs

RESOURCES:











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

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- rdamian@etti.tuiasi.ro