

Curs 4

2023/2024

Programarea aplicațiilor web

- Programarea aplicațiilor web
 - An V RC
 - 1.5C/1L/1P

Program

- An V
 - Saptamana 1
 - Luni 17-20 Curs (Intro/HTML/CSS)
 - Saptamanile 2-8
 - Luni 16:30-18 Curs
 - Luni 18-20 Laborator
 - Saptamanile 9-14
 - Luni 16:30-18 Curs
 - Luni 18-20 Proiect

Orar

- <https://orar.etti.tuiasi.ro/> : C->16:30-18, L/P -> 18

Group: Professor: Classroom:



FACULTATEA DE ELECTRONICA, TELECOMUNICATII SI TEHNOLOGIA INFORMATIEI

55RC
ETTL

	1 8:00 - 8:50	2 9:00 - 9:50	3 10:00 - 10:50	4 11:00 - 11:50	5 12:00 - 12:50	6 13:00 - 13:50	7 14:00 - 14:50	8 15:00 - 15:50	9 16:00 - 16:50	10 17:00 - 17:50	11 18:00 - 18:50	12 19:00 - 19:50
L										PAW (C) Damian R. 2.13 TC (R)	PAW (P) Damian R. 2.13 TC (R)	
Ma								RCALESC (C) Scripcariu L. 2.13 TC (R)			RCALESC (L) Scripcariu L. 2.13 TC (R)	
Mi								POO (C) Sirbu A. P6 (Amf.)			TEFO (L) Trifina L. 3.25 TTI (L)	
J							Casian-Bo tez I. Etic (C) Online	Casian-Bo tez I. Etic (S) Online				
V								TEFO (C) Trifina L. P6 (Amf.)				
Sa												

Nota

- An V
 - 33% E
 - 66% Aplicatii
 - 33% L
 - 33% P

Site



Microwave and Optoelectronics Laboratory



We are enlisted in the Telecommunications Department of the Electronics, Telecommunication and Information Technology Faculty (ETTI) from the "Gh. Asachi" Technical University (TUIASI) in Iasi, Romania

We currently cover inside ETTI the fields related to:

- Microwave Circuits and Devices
- Optoelectronics
- Information Technology

Courses


Nr.	Course	Shortcut	Code	Type	Semester	Credits	Weekly	Examination	Link
1	Microwave Devices and Circuits for Radiocommunications	DCMR	DOS412T	DOS	7	4	0P,1L,0S,2C	Exam	
2	Monolithic Microwave Integrated Circuits	CIMM	RD.IA.207	DOMS	11	6	1.5L,0S,2C,0P	Exam	
3	Advanced Techniques in the Design of the Radio-communications Systems	TAPSR	RD.IA.103	DIMS	9	6	1.5P,0L,0S,2C	Exam	
4	Optical Communications	CO	DOS409T	DOS	7	5	0P,1L,0S,3C	Colloquiu	
5	Optical Communications	OC	EDOS409T	DOS	7	5	0P,1L,0S,3C	Exam	
6	Satellite Communications	CS	RC.IA.104	DIMS	9	6	0L,0S,2C,1.5P	Exam	
7	Applied Informatics 1	IA1	DOF135	DOF	1	4	0P,1L,0S,2C	Verificati	
8	Applied Informatics 1	AI1	EDOF135	DOF	1	4	0P,1L,0S,2C	Verificati	
9	Databases, Web Programming and Interfacing	DWPI	ITT.IA.601	DIS	11	5	1P,1L,0.25S,1C	Verificati	
10	Web Applications Design	PAW	RC.IA.108	DIMS	10	5	1L,0S,1.5C,1P	Exam	
11	Optoelectronics	OPTO	DID405M	DID	8	4	0P,1L,0S,2C	Colloquiu	
12	Microwave Devices and Circuits for Radiocommunications (English)	MDCR	EDOS412T	DOS	8	4	0P,1L,0S,2C	Exam	



Curs

- Curs strict orientat spre laborator/proiect
 - se predă ceea ce se folosește în aceeași zi la laborator/proiect
 - curs exact înainte de laborator/proiect
- Orientat spre practică
 - 90% practică
 - 10% teorie
- Memorarea lui inutilă la examen
- Prezența
 - 3pz = 0.5p Examen (maxim 2p)

Documentatie

- RF-OPTO
 - <http://rf-opto.etti.tuiasi.ro>
- Fotografie
 - ~~de trimis prin email:~~ [examen online](#)
 - necesara la laborator/curs
 - +1p ex. (S4), +0.5p ex (S6) 
- Adresa de email
 - necesara pentru accesul la zonele sensibile de pe server
 - **obligatorie** pentru activitatea **online**
- Exemplu de teme si specificatii detaliate pentru proiect

Server referinta LAMP 2024

- 3 variante acceptate
 - CentOS 7.1
 - Ubuntu 20.04
 - Debian 12.5

Tema bonus

- logfile.php
 - Afiseaza log Apache (erori php majore)
- **2p suplimentar** la laborator/examen
- Modificare logfile.php pentru a afisa **toate** erorile PHP
 - php.ini – activare erori
 - php.ini – locatie erori
 - logfile.php – afisare log PHP

Laborator 2

HTML

- se creaza o pagina care sa arate ca in schita alaturata
- forma paginilor:
 - tabel
- Se experimenteaza diversele elemente de **interactiune cu utilizatorul** (**<form>**)

culoare	IMAGINE	culoare
	Continut (cu alta culoare fundal)	

Suplimentar

- forma din schita alaturata
- forma paginilor:
 - tabel controlat prin CSS

culoare	IMAGINE	culoare
	Continut (cu alta culoare fundal)	
	Copyright (cu alta culoare fundal)	

Analiza critica

- design?
 - in aplicatiile web forma **este importanta**
 - nu trebuie sa fie inovativa ci familiara
 - “Don’t make me think!”

Design 1

```
<html>
<head>
<title>Magazin online Firma X SRL</title>
</head>
<body>
<table width="100%" border="0"
bgcolor="#CCFFFF">
<tr><td rowspan="2" width="*"></td>
<td width="600"></td>
<td rowspan="2" width="*"></td></tr>
<tr><td height="600" valign="top"
bgcolor="#FFFFCC">
Continut
</td></tr>
</table>
</body>
</html>
```

culoare	IMAGINE	culoare
	Continut (cu alta culoare funda)	



tabel

Design 1



Design 2

```
<html>
<head>
<title>Magazin online Firma X SRL</title>
</head>
<body bgcolor="#CCFFFF">
<table width="600" border="0" align="center">
<tr><td></td></tr>
<tr><td height="600" valign="top"
bgcolor="#FFFFCC">
Continut
</td></tr>
</table>
</body>
</html>
```

culoare	IMAGINE	culoare
	Continut (cu alta culoare fundal)	



tabel

Design 2



Design 3

index.html

```
<html>
<head>
<title>Magazin online Firma X SRL</title>
<link rel="stylesheet" href="stil.css"
type="text/css" />
</head>
<body>
<div class="antet"></div>
<div class="continut">
Continut
</div>
</body>
</html>
```

stil.css

```
body { background-color: #CCFFFF;}
.antet { background-image:url(images/antet.gif);
        background-repeat:no-repeat;
        height: 100px;
        width: 600px;
        margin-top: 0px;
        margin-right: auto;
        margin-left: auto;}
.continut{ background-color:#FFFFCC;
        height: 600px;
        width: 600px;
        margin-top: 5px;
        margin-right: auto;
        margin-left: auto;}
```

Design 3



Continuare

- capacitatea de extindere?
 - va apare un meniu?
 - unde?
- design 1
 - tabel cu 3 coloane, numai cea centrala e folosita
 - avantaj: se creaza doua zone care ar putea primi date **daca** e nevoie
 - dezavantaj: forma (culori, dimensiuni) intercalata in continut (**HTML 5?**)

Continuare

- design 3
 - avantaj: forma (culori, dimensiuni) separata de continut
 - avantaj: adaugarea altor cutii (div) care sa primeasca date **daca** e nevoie si controlul formei lor se poate realiza
 - dezavantaj: alaturarea a 2 box/div mai complexa, generatoare de probleme la incepatori
 - Bibliografie: “am mai facut ceva asemanator” – dezavantajul dispare

Laborator 3

Laborator – L3 - rezultat

Magazin online Firma X SRL

Lista Produse

Nr.	Produs	Pret
1	Carti	100
2	Caiete	50
3	Penare	150
4	Stilouri	125
5	Creioane	25
Comanda		

Magazin online Firma X SRL

Realizati comanda

Nr.	Produs	Pret	Cantitate
1	Carti	100	<input type="text" value="1"/>
2	Caiete	50	<input type="text" value="2"/>
3	Penare	150	<input type="text" value="1"/>
4	Stilouri	125	<input type="text" value="0"/>
5	Creioane	25	<input type="text" value="0"/>

Magazin online Firma X SRL

Rezultate comanda

Pret total (fara TVA): 350

Pret total (cu TVA): 416.5

Comanda receptionata la data: 17/03/2010 ora 08:24

CURS

I.	HTML si XHTML (recapitulare)	1 oră
II	CSS	2 ore
III	Baze de date, punct de vedere practic	1 oră
IV	Limbajul de interogare SQL	4 ore
V	PHP - HyperText Preprocessor	8 ore
VI	XML - Extended Mark-up Language si aplicatii	4 ore
VII	Conlucrare intre PHP/MySql, PHP/XML, Javascript/HTML	2 ore
VIII	Exemple de aplicatii	6 ore
	Total	28 ore

LABORATOR

I.	Implementarea unui sistem de dezvoltare a aplicatiilor Web, instalare PHP, MySql, Apache si legaturile dintre ele	2 ore
II	Design web avansat folosind CSS	2 ore
III	Interogarea unei baze de date. Exercitii SQL	2 ore
IV	Utilizare PHP I	2 ore
V	Utilizare PHP II	2 ore
VI	Utilizare PHP pentru accesul la o baza de date	2 ore
VII	Aplicatie distribuita complexa	2 ore
	Total	14 ore

HTML

Forme

Aplicatie Web

- presupune prelucrarea unor date si oferirea unui document personalizat (rezultat al datelor respective)
- datele pot fi obtinute:
 - de la utilizator
 - o sursa externa (baze de date)
 - **combinatie** utilizator/baze de date

Forme in HTML

- necesare pentru ca utilizatorul sa poate trimite date server-ului
- **<form>...</form>**
- Attribute specifice:
 - action: adresa documentului care preia datele
 - `<form action="<?php echo $_SERVER['PHP_SELF'];?>">`
 - `<form action="actiuni/fisier2.html">`
 - method: modalitatea de transmitere a datelor: post sau get
 - `<form method="post" action= ... >`

Metode de transmitere

- **post** datele sunt transmise in bloc
- **get** datele sunt atasate adresei documentului de procesare : results.php?prob=81&an=2009
- **get** trebuie folosit numai cand datele sunt “idempotente”,
 - nu cauzeaza efecte colaterale
 - nu modifica starea server-ului (baze date, etc)
- se poate simula realizarea unei forme (**get**) prin scrierea corespunzatoare a link-urilor

Elemente de interactiune cu utilizatorul – <form>

- in interiorul etichetei <form>...</form>
 - input
 - select/option
 - textarea
 - button
- **toate** elementele vor avea un nume
 - atribut: name=""
 - numele va fi intalnit in uri-ul generat prin get, sau in numele variabilei trimisa prin post
- trimiterea datelor se face prin intermediul unui buton cu tipul type="submit"

INPUT

- `<input .../>`
- Attribute:
 - type: text | password | checkbox | radio | submit | reset | file | hidden | image | button
 - name: numele variabilei
 - value: valoarea trimisa server-ului la selectie (valoarea initiala in anumite cazuri)
 - checked/src/size/maxlength in functie de tip

Example

```
<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" />
```

ceva

Trimite



check1



but1



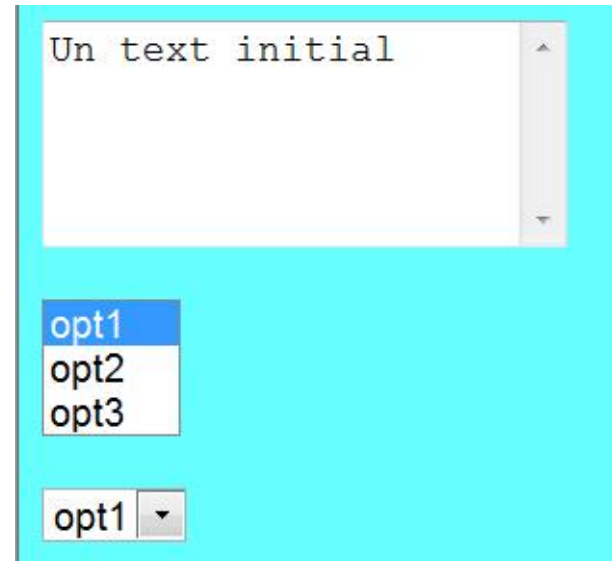
but2

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>
```



Un text initial

opt1
opt2
opt3

opt1 ▼

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>
```

- introdus pentru a oferi posibilitatea introducerii de continut mai complex (text formatat, imagini) in interiorul butoanelor de pe forma

Click Here

Request Info 

 Clear

Request
Info



Request

Info



HTML 5 – Validare input

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

HTML 5 – Validare input

```
<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 – Validare input

Email:

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

ceva@server

Cantitate (1 - 5):

Telefon:



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 – Interfata nativa browser

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

HTML 5 – Interfata nativa browser

```
<label for="culoare">Culoare:</label>
<input type="color" id="culoare" name="culoare" value="#ff0000">
<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 – Interfata nativa browser

Culoare:

Data nastere:

Examen (data):

Finalizare (data):

Volum (0 - 50):

Ora intalnire:

Saptamana:

R G B ↕

Culoare:

Data nastere:

Examen (data):

Finalizare (data):

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 – Interfata nativa browser

Examen (data si ora):

Finalizare (luna si an): **March 2023** ↑ ↓

Volum (0 - 50):

Ora intalnire:

Saptamana:

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
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

[Clear](#) [Today](#)

02	21	PM
03	22	AM
04	23	
05	24	
06	25	
07	26	
08		

Finalizare (luna si an): **June 2023**

Volum (0 - 50):

Ora intalnire:

Saptamana:

2023

Jan	Feb	Mar	Apr
May	Jun	Jul	Aug
Sep	Oct	Nov	Dec

[Clear](#) [This month](#)

HTML 5 – Interfata nativa browser

Volum (0 - 50):



Ora intalnire: 05:30 PM

Saptamana: W

Trimite

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

Clear

This week

Hypertext PreProcessor

PHP

PHP - Concepte

- limbaj **interpretat** – compilat “on the fly” de interpretorul PHP de pe server
- script-urile PHP contin sursele
 - exista posibilitatea pre-compilarii surselor pentru spor de viteza
 - Hip-Hop for PHP / Facebook
 - HipHop Virtual Machine / Facebook
- orientat spre aplicatii web dinamice (biblioteci)
- poate fi integrat in HTML – utilizarea tipica

Integrare

```
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><?php echo $row['Numar'];></td>
563 <td><?php echo $row['Data'];></td>
564 <td><?php echo date("d/m/Y", strtotime($row['Data']));></td>
565 <td><?php echo $row['Pui'];></td>
566 <td><?php echo $row['Pui Morti'];></td>
567 <td><?php echo $row['Greutate Morti'];></td>
568 <td><?php echo $row['Ferma'];></td>
569 <td><?php echo $row['Documente'];></td>
570 <td><?php echo $row['Creat'];></td>
571 <td><?php echo $row['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; ?></td>
577 <td><?php echo $row['Numar'];></td>
578 <td><?php echo date("d/m/Y", strtotime($row['Data']));></td>
579 <td><?php echo $row['Pui'];></td>
580 <td><?php echo $row['Greutate'];></td>
581 <td><?php echo $row['Pui Morti'];></td>
582 <td><?php echo $row['Greutate Morti'];></td>
583 <td><?php echo $row['Ferma'];></td>
584 <td><?php echo $row['Documente'];></td>
```

Separare cod PHP

- `<?php ... ?>`
 - stil XML – implicit, disponibil intotdeauna, recomandat
- `<? ... ?>`
 - scurt, este de obicei dezactivat
 - lipsa in PHP 7,8
- `<script language="php"> ... </script>`
 - stil script, disponibil (?)
- `<% ... %>`
 - stil ASP, de obicei dezactivat
 - lipsa in PHP 7,8

Variante de integrare

- **echo** afiseaza un text la "iesire" (echivalent cu puts() din C)
- poate realiza procesarea datelor
- in exemplu se trimite spre iesire un sir static (echivalent cu puts() din C)
- "iesire" in marea majoritate a cazurilor reprezinta datele trimise clientului de server-ul web
- "iesire" poate fi considerata de obicei:
 - documentul curent
 - pozitia curenta (a scriptului in fisierul HTML curent)

Variante de integrare

- Toate variantele ofera aceeasi sursa HTML pentru browser
- E **recomandata** cea care lasa structura HTML nemodificata si doar datele dinamice sunt rezultatul procesarii
- Codul HTML + PHP e interpretat mult mai elegant in editoarele WYSIWYG

```
<h2>Rezultate comanda</h2>  
<?php echo '<p>Comanda receptionata</p>';?>
```

```
<h2>Rezultate comanda</h2>  
<p><?php echo 'Comanda receptionata';?></p>
```

```
<?php echo '<h1>Magazin online XXX SRL</h1>';?>  
<?php echo '<h2>Rezultate comanda</h2>';?>  
<?php echo '<p>Comanda receptionata</p>';?>
```

```
<?php  
echo '<h1>Magazin online XXX SRL</h1>';  
echo '<h2>Rezultate comanda</h2>';  
echo '<p>Comanda receptionata</p>';  
?>
```

Variante de integrare

```
test.php x
1 <h2>Rezultate comanda</h2>
2 <p><?php echo 'Comanda receptionata';?></p>
3
4 <?php
5 echo '<h1>Magazin online XXX SRL</h1>';
6 echo '<h2>Rezultate comanda</h2>';
7 echo '<p>Comanda receptionata</p>';
8 ?>
9
```

PHP – constante

- Ca orice limbaj de programare PHP se bazeaza pe utilizarea
 - constante
 - variabile
 - functii
- Definirea constantelor:
 - `define('PRETCARTE', 100);`
 - "case sensitive"
 - prin conventie, numai cu litere mari
 - `echo PRETCARTE; // 100`

PHP – variabile

- variabila – semnul **\$** urmat de un nume
- numele e “case sensitive”
- o greseala frecventa e uitarea semnului \$
 - PHP Notice: Use of undefined constant an – assumed \$an (**sau 'an'**) in D:\\Server\\
- Tipuri de date
 - scalar
 - compus
 - special

PHP – tipuri de date

```
$var = expresie
```

- Controlul variabilelor se face automat, “on the fly”
 - Daca \$var nu era definita anterior, in urma atribuirii se defineste de tipul dat de rezultatul expresiei
 - Daca \$var era definita, de un anumit tip (oarecare), in urma atribuirii devine de tipul dat de rezultatul expresiei
 - La finalizarea executiei script-ului se elimina variabila din memorie (automat)
 - Numele de variabile sunt "case-sensitive" (\$age si \$AGE sunt doua variabile diferite)

PHP – tipuri de date

- tipul de date este in totalitate dependent de ceea ce se stocheaza
- PHP reactualizeaza tipul pentru a putea primi ceea ce se stocheaza

```
<?php
echo $variabila ; // tip Null, neinitializat – valoare NULL (doar)
$variabila = "0"; // $variabila tip string (ASCII 48)
$variabila += 2; // $variabila tip integer (2)
$variabila = $variabila + 1.3; // $variabila tip float (3.3)
$variabila = 5 + "10 obiecte"; // $variabila tip integer (15)
$var2=5; // $var2 tip integer (5)
$variabila=$var2."10 obiecte"; // $variabila tip string "510 obiecte"
?>
```

PHP – operatori

- In general similari celor din C/C++
- Operatori
 - Aritmetici
 - Atribuire
 - Bit
 - Comparare
 - Incrementare/Decrementare
 - Logici
 - **Sir**

PHP – operatori

- Aritmetici
 - $-$a$ – Negare
 - $$a + b – Adunare
 - $$a - b – Scadere
 - $$a * b – Inmultire
 - $$a / b Impartire
 - $$a \% b Modulo (rest)
- Sir
 - **$$a.b – Concatenare sir a si sir b**

Continuare

Exemplu de separare cod php

Raspuns dinamic

- `<form action="rezultat.php" method="post">`

```
<html>
<head>
<title>Magazin online XXX SRL</title>
</head>
<body>
<h1>Magazin online XXX SRL</h1>
<h2>Rezultate comanda</h2>
<p><?php echo 'Comanda receptionata';?></p>
</body>
</html>
```

Magazin online XXX SRL

Rezultate comanda

Comanda receptionata

```
<
<
<
<
</head>
<body>
<h1>Magazin online XXX SRL</h1>
<h2>Rezultate comanda</h2>
<p>Comanda receptionata</p>
</body>
</html>
```

PHP – Functii

- conceptual similare celor din C/C++
- functiile nu trebuie declarate inainte de a fi folosite
- numele functiilor este “case-insensitive”
- un mare numar de functii cu utilitate directa in aplicatiile web exista in bibliotecile PHP
- unele biblioteci trebuie activate in momentul configurarii PHP
 - `extension=php_gd2.dll` (linia 639) // pentru functii de procesare grafica de exemplu
 - `extension=php_mysql.dll` (linia 651) // pentru functii de acces la baze de date MySql
 - `extension=php_mysqli.dll` (linia 652) // pentru functii de acces la baze de date MySql (**obligatoriu** de la PHP 5.6)

Utilizarea functiilor PHP

- `<form action="rezultat.php" method="post">`

```
<p>Comanda receptionata la data:  
<?php echo date('d/m/Y')." ora ".date('H:i');?></p>
```

Magazin online XXX SRL

Rezultate comanda

Comanda receptionata la data: 10/03/2010 ora 13:36

```
<body>  
<h1>Magazin online XXX SRL</h1>  
<h2>Rezultate comanda</h2>  
<p>Comanda receptionata la data:  
10/03/2010 ora 13:36</p>  
</body>
```

Elemente de control

- majoritatea notiunilor si sintaxei sunt similare celor din C/C++
- instructiune compusa: separata de acolade {...}
- if / else / elseif – executie conditionata

```
<?php
if ($a > $b) {
    echo "a mai mare ca b";
} elseif ($a == $b) {
    echo "a egal cu b";
} else {
    echo "a mai mic ca b";
}
?>
```

Elemente de control

- while
- do-while
- for
- switch
- return
- break
- goto
- Similare cu echivalentele C/C++

```
$i = 1;  
while ($i <= 10) {  
    echo $i++;  
}
```

```
$i = 10;  
do {  
    echo $i--;  
} while ($i > 0);
```

```
for ($i = 1; $i <= 10; $i++) {  
    echo $i;  
}
```

```
switch ($i) {  
    case 0:  
        echo "i este 0";  
        break;  
    case 1:  
        echo "i este 1";  
        break;  
    default:  
        echo "i nici 1 nici 0";  
        break;  
}
```

Elemente de control

- `include()`
- `require()`
- `include_once()`
- `require_once()`
- pentru inserarea **SI** evaluarea fisierului folosit ca parametru
- folosite pentru a nu multiplica sectiunile de cod comune
- `require` opreste executia script-ului curent daca fisierul parametru nu este gasit
- `..._once()` verifica daca respectivul fisier a mai fost introdus si **nu** il mai introduce inca o data

Variabile globale

Variabile globale

- Variabilele globale (predefinite)
 - accesibile script-urilor PHP prin conlucrarea cu server-ul
 - Exemple:
 - `$_SERVER` — Server and execution environment information
 - `$_GET` — HTTP GET variables
 - `$_POST` — HTTP POST variables
 - `$_FILES` — HTTP File Upload variables
 - `$_REQUEST` — HTTP Request variables
 - `$_SESSION` — Session variables
 - `$_ENV` — Environment variables
 - `$_COOKIE` — HTTP Cookies

Interactiunea cu utilizatorul

- Datele introduse de utilizator in forme se regasesc (in functie de metoda aleasa pentru forma) in una din variabilele:
 - `$_POST` – method="post"
 - `$_GET` – method="get"
 - `$_REQUEST` – ambele metode
- variabilele sunt **tablouri** cu **cheia** data de atributul **name** din forma HTML
 - `<input type="text" name="carti_cant" size="3" maxlength="3" />`
 - `$_POST['carti_cant']` contine valoarea introdusa de utilizator

Variable tip string

PHP – tipuri de date

- scalar
 - boolean
 - integer
 - float (double)
 - **string**
- compus
 - array
 - object
- special
 - resource
 - NULL

Variabile tip string

- Scopul final al PHP e popularea cu date (sub forma de text) a campurilor existente intr-un schelet HTML
- Ca urmare datele de tip sir de caractere (string) sunt tratate mai complex decat echivalentul C/C++
 - mai multe modalitati de definire
 - mai multe modalitati de interpretare
 - **mult** mai multe functii

Variabile tip string

- definire variabila de tip string
 - utilizare apostrof ` `
 - utilizare ghilimele " "
 - definiri tip bloc

Variabile tip string ` `

- apostroful ` ` e utilizat pentru definirea sirurilor primare de caractere
 - se defineste o suita de caractere
 - prelucrarile in interiorul sirului sunt reduse
 - \' reprezinta caracterul apostrof
 - \\ si \ reprezinta caracterul backslash
 - doar atat!!!

Variabile tip string " "

- ghilimelele " " sunt utilizate pentru definirea sirurilor de caractere complexe
 - prelucrarile in interiorul sirului sunt mai complexe decat echivalentul C/C++
 - caracterele ASCII speciale, identic cu C++: \n, \r, \t, \\\, \v, \e, \f, \x, \u
 - \" caracterul ghilimele
 - \\$ caracterul \$
 - se interpreteaza **variabile** in interiorul sirului !!!

Variabile tip string `` ``

- caracterul \$ indica faptul ca urmeaza un nume de variabila
 - interpretorul foloseste toate caracterele care pot genera nume de variabile valide (\$x, \$x->y, \$x[y])
 - daca e nevoie de exprimare mai complexa a variabilelor (de exemplu matrici cu 2 indici x[y][z] sau cu indici neintregi) se foloseste sintaxa complexa: **{ }**

Variabile tip string `` ``

- sintaxa **simpla** pentru interpretarea variabilelor in interiorul sirurilor

```
<?php
$juice = "apple";

echo "He drank some $juice juice.";
// He drank some apple juice.
echo "He drank some juice made of $juices.";
// He drank some juice made of . //s character valid pentru variabile

?>
```

Variabile tip string ``

- sintaxa **simpla** pentru interpretarea variabilelor in interiorul sirurilor

```
<?php
$juices = array("apple", "orange", "koolaid1" => "purple");
class people {
    public $john = "John Smith";
}

$people = new people();
echo "$people->john drank some $juices[o] juice.";
// John Smith drank some apple juice.
?>
```

Variabile tip string `` ``

- sintaxa **complexa** pentru interpretarea variabilelor in interiorul sirurilor **{ }**

```
<?php
$juice = "apple";

echo "He drank some juice made of $juices.";
// He drank some juice made of . //s character valid pentru variabile
echo "He drank some juice made of ${juice}s."
// He drank some juice made of apples. // {} arata unde se incheie
numele variabilei
?>
```

Variabile tip string `` ``

- sintaxa **complexa** pentru interpretarea variabilelor in interiorul sirurilor **{ }**

```
<?php
$juices = array(array("apple", "orange"), "koolaid1" => "purple");
class people {
    public $name = "John Smith";
}

$obj->values[3] = new people();
echo "$obj->values[3]->name drank some $juices[0][1] juice.";
// drank some juice.
echo "{$obj->values[3]->name} drank some {$juices[0][1]} juice.";
// John Smith drank some apple juice.
?>
```

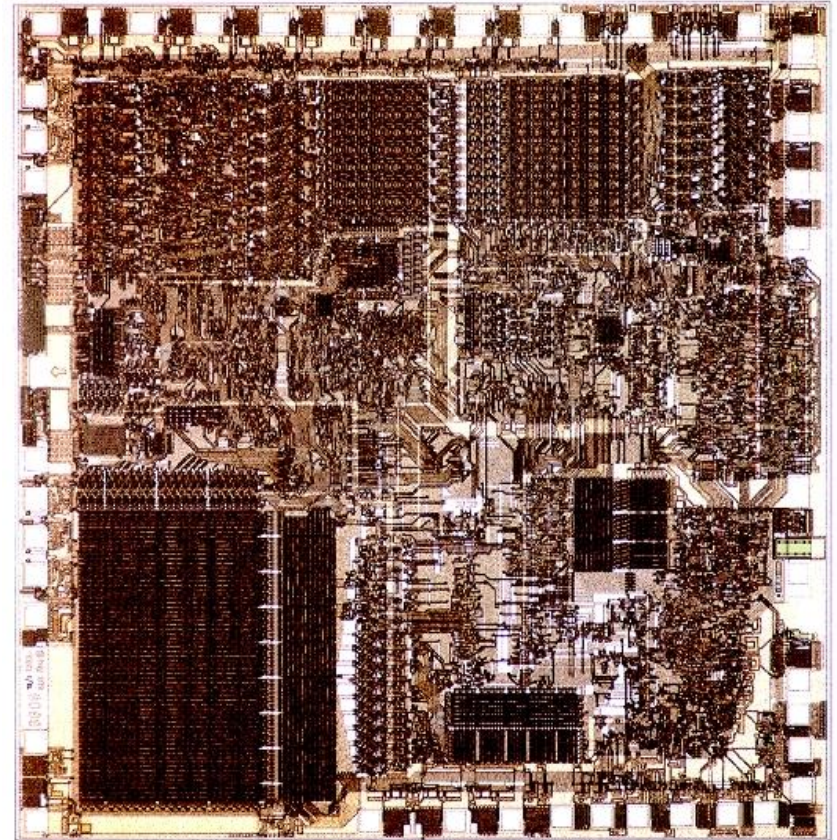
Variabile tip string

- definire variabila de tip string
 - utilizare apostrof ` `
 - utilizare ghilimele " "
 - definiri tip bloc
 - heredoc <<< "X"
 - echo <<<END
a
b
c
END;
 - nowdoc <<<'X' (PHP>5.3.0)

Structuri repetitive – tablouri

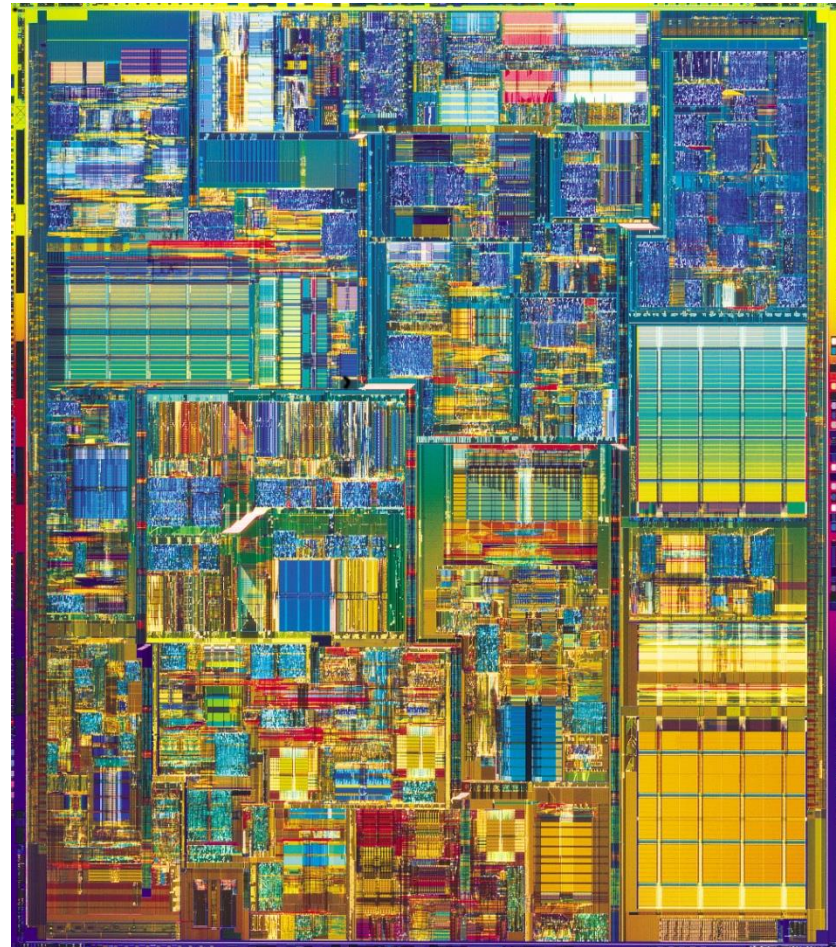
Impresionant?

- Intel® 8086
- 29.000 tranzistoare pe CPU
- 1978
- 1 MB date
- 4.7 MHz



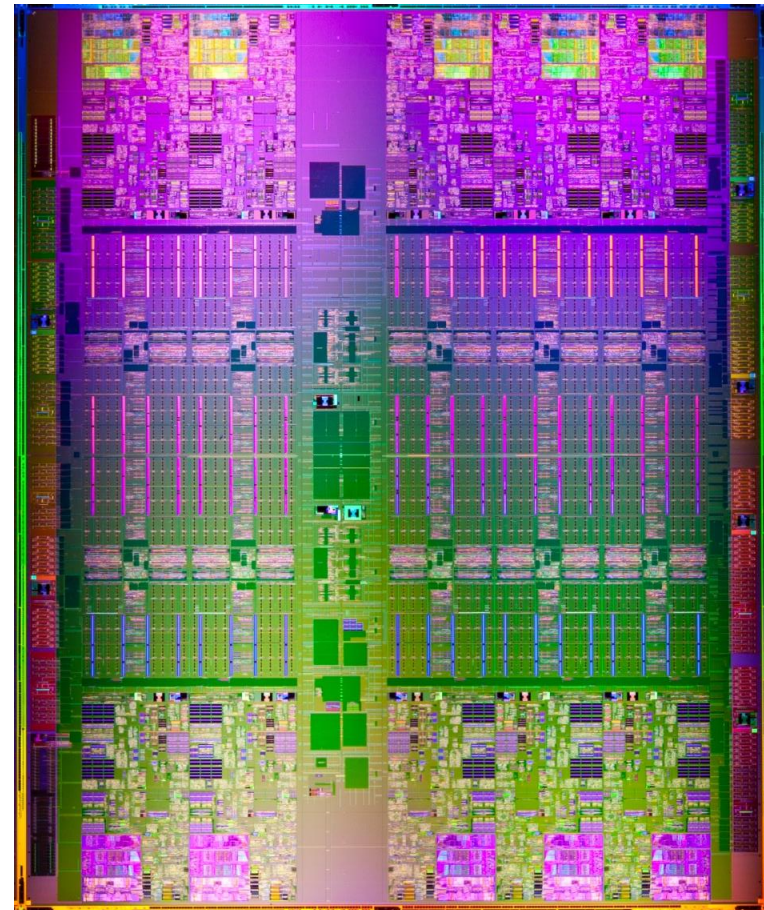
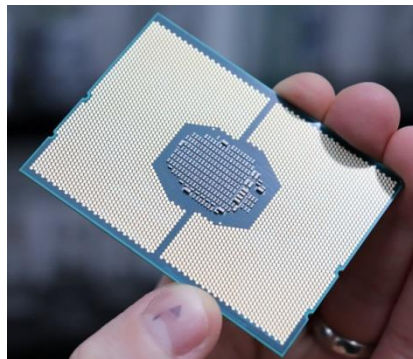
Impresionant?

- Intel® Itanium® processors (Tukwila)
- 2009
- 2 miliarde tranzistoare pe CPU
- 16 EB date (16 G GB)
- > 3 GHz



Impresionant?

- Intel® Xeon® Platinum 8380 Processor
- 2021
- ~8 miliarde tranzistoare pe CPU
- 40 nuclee (80 fire de executie)
- Sisteme cu 8 microprocesoare (224/448)
- 2.3-3.4 GHz



Concepte

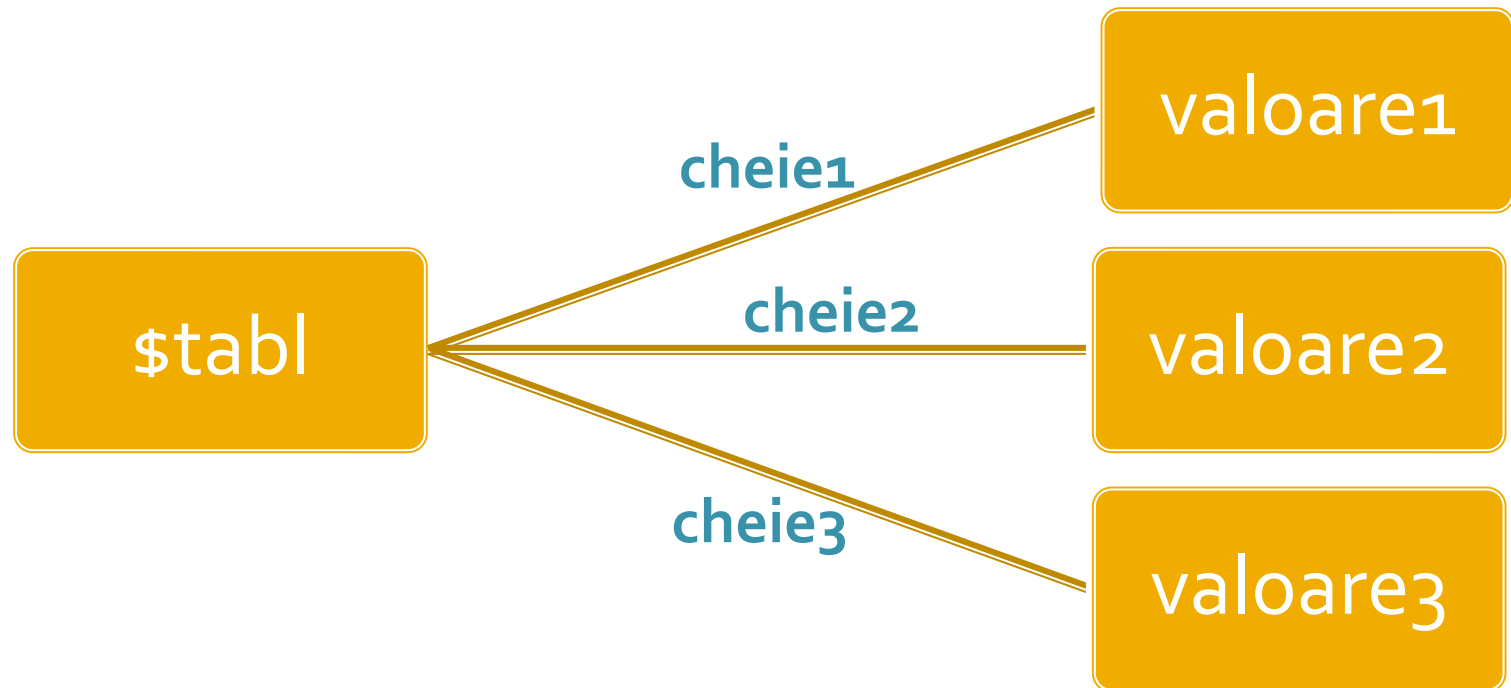
- Efectuare foarte rapida a unui numar **mic** de instructiuni, de **complexitate redusa**, repetate de un numar foarte mare de ori
- Programare: coborarea rationamentului la nivelul de **complexitate redusa**, cu obtinerea performantei prin structuri repetitive simple efectuate rapid.
- Operatii repetitive / date repetitive

Tablouri in PHP

- tabloul este tipul de variabila care asociaza **valori** unor **chei**
- spre deosebire de C, Basic, **cheile nu sunt** obligatoriu numere **intregi**, pot fi si **siruri**
- implicit cheile sunt intregi succesivi (pentru fiecare element adaugat) si primul element este 0.
- definirea unei perechi cheie / valoare
 - cheie => valoare
- definirea unui tablou
 - `$matr = array("definirea perechilor chei/valori")`
 - pereche: cheie => valoare, ...

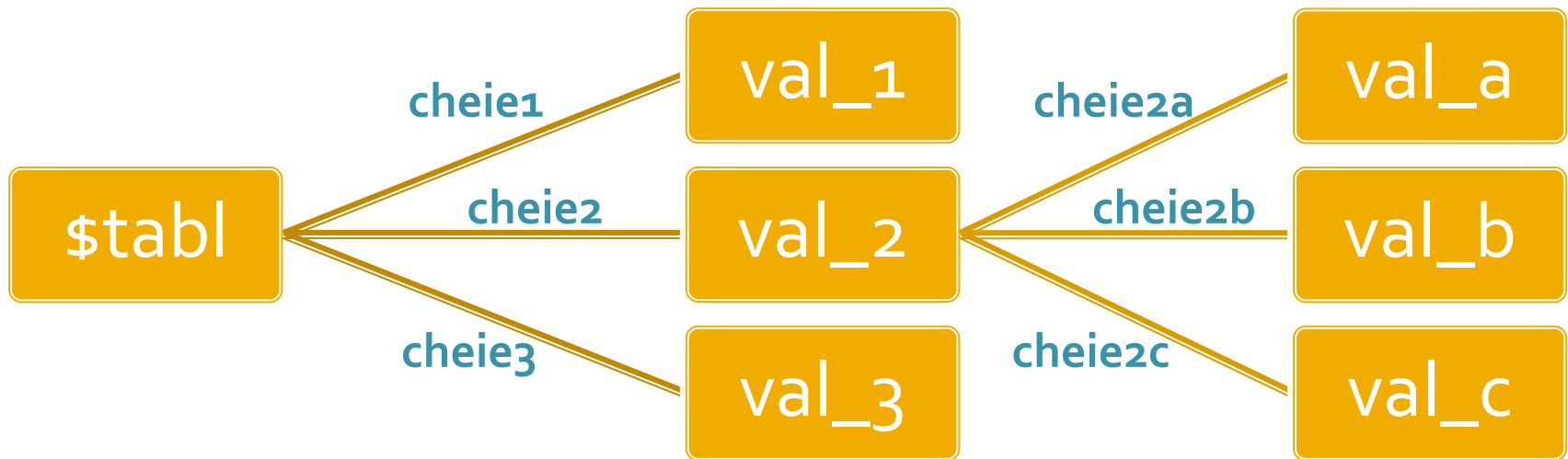
Tablou = Arbore

- `$tabl = array(cheie1 => valoarea1, cheie2 => valoarea2, cheie3 => valoarea3)`



Tablou = Arbore

- In particular, una sau mai multe dintre din valori poate fi la randul ei tablou, ducand la **ramificarea** arborelui
- `$tabl = array(cheie1 => val_1, cheie2 => array(cheie2a => val_a, cheie2b => val_b, cheie2c => val_c), cheie3 => val_3)`



Tablouri in PHP

```
$matr = array(1, 2, 3, 4, 5);
```

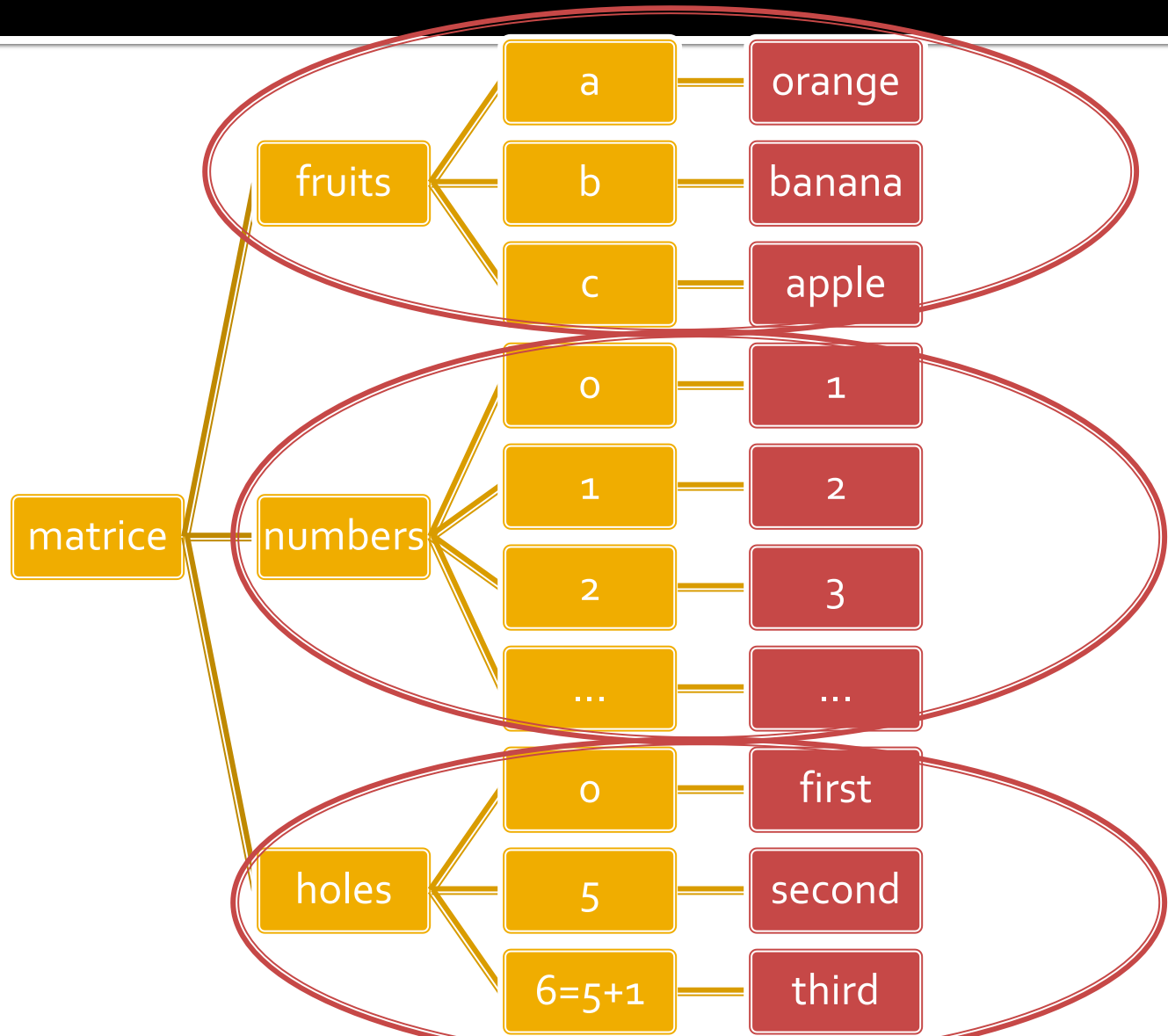
```
$matr[0]=1  
$matr[1]=2  
$matr[2]=3  
$matr[3]=4  
$matr[4]=5
```

```
$matr = array('a' => 1, 'b' => 2, 3, 4, 5);
```

```
$matr['a']=1  
$matr['b']=2  
$matr[0]=3  
$matr[1]=4  
$matr[2]=5
```

```
$matrice= array (  
    "fruits" => array("a" => "orange", "b" => "banana", "c" => "apple"),  
    "numbers" => array(1, 2, 3, 4, 5, 6),  
    "holes"  => array("first", 5 => "second", "third")  
);
```

Tablou = arbore



Afisarea tablourilor

```
echo "<pre>";  
print_r ($matr);  
echo "</pre>";
```

```
$matr= array (  
"fruits" =>  
array("a" => "orange", "b" => "banana", "c" => "apple",  
"ultim"),  
"numbers" =>  
array(1, 2, 3, 4, 5, 6),  
"holes" =>  
array("first", 5 => "second", "third")  
);  
echo $matr;  
echo "<pre>";  
print_r ($matr);  
echo "</pre>";
```

```
Array  
  
Array  
(  
    [fruits] => Array  
        (  
            [a] => orange  
            [b] => banana  
            [c] => apple  
            [0] => ultim  
        )  
    [numbers] => Array  
        (  
            [0] => 1  
            [1] => 2  
            [2] => 3  
            [3] => 4  
            [4] => 5  
            [5] => 6  
        )  
    [holes] => Array  
        (  
            [0] => first  
            [5] => second  
            [6] => third  
        )  
)
```

Chei

- Chei numerice
 - implicite
 - similare celorlalte limbaje de programare
 - dificil de utilizat (trebuie retinuta valoarea logica a unei anumite chei numerice)
- Chei sir
 - claritate mai mare
 - eficienta numerica mai mica
 - tablourile au un index numeric intern, implicit ascuns, accesibil prin functii :
index => cheie => valoare

Elemente de control

- **for** – util daca la definirea tablourilor sunt folosite cheile numerice implicite (numere intregi)
- **do ... while** si **while** se pot folosi impreuna cu functii specifice caracteristice tablourilor `next()`, `prev()`, `end()`, `reset()`, `current()`, `each()`
- **foreach** - elementul de control al iteratiilor cel mai potrivit pentru chei alfanumerice

Elemente de control – foreach

- `foreach (array_expression as $key => $value) statement`
- `foreach (array_expression as $value) statement`
- iterarea prin **fiecare** element al tabloului
- la fiecare element variabila declarata in instructiune variabila locala **\$key** ofera acces la cheia curenta iar variabila locala **\$value** ofera acces la valoarea asociata
- `foreach()` lucreaza cu o **copie** a tabloului deci tabloul original nu va fi modificat prin schimbarea continutului variabilelor `$key` si `$value`

Elemente de control – foreach

```
$matr = array (  
    "fruits" => array("a" => "orange", "b" => "banana", "c" => "apple", "ultim"),  
    "numbers" => "in loc de numere",  
    "holes"  => "in loc de ce era"  
);  
foreach ($matr as $scheie => $continut)  
    echo "matr[".$scheie."]=".$continut."<br />";
```

```
matr[fruits]=Array  
matr[numbers]=in loc de numere  
matr[holes]=in loc de ce era
```

Tablouri – functii utile, index

- `current ($matr)` – returneaza elementul indicat de indicele intern al tabloului (`~v[i]`)
- `next ($matr)` – incrementeaza indicele intern si returneaza valoarea stocata acolo (`~v[++i]`)
- `prev ($matr)` – decrementeaza indicele intern si returneaza valoarea stocata acolo (`~v[--i]`)
- `end($matr)` – muta indicele intern la ultimul element si returneaza valoarea stocata acolo (`~i=N-1;v[i]`)
- `reset($matr)` – muta indicele intern la primul element si returneaza valoarea stocata acolo (`~i=0;v[i]`)

Tablouri – functii utile

- `sort($matr)` – ordoneaza in ordine crescatoare a **valorilor** un tablou, cheile sunt sterse si recreate
 - `$fruits = array("lemon", "orange", "banana", "apple");`
`sort($fruits);`
 - `fruits[0] = apple, fruits[1] = banana, fruits[2] = lemon, fruits[3] = orange`
- `rsort($matr)` – similar, descrescator

Tablouri – functii utile

- `asort($matr)` ordoneaza in ordine crescatoare a **valorilor** un tablou, cheile sunt pastrate, inclusiv asocierea cheie => valoare
 - `$fruits = array("d" => "lemon", "a" => "orange", "b" => "banana", "c" => "apple");`
`asort($fruits);`
 - `c = apple, b = banana, d = lemon, a = orange`
- `arsort($matr)` – similar, descrescator

Tablouri – functii utile

- `ksort($matr)` ordoneaza in ordine crescatoare a **cheilor** un tablou, cheile sunt pastrate, inclusiv asocierea cheie => valoare
 - `$fruits = array("d" => "lemon", "a" => "orange", "b" => "banana", "c" => "apple");`
`ksort($fruits);`
 - a = orange, b = banana, c = apple , d = lemon
- `krsort($matr)` – similar, descrescator

Laborator 3

Laborator L3

- Sa se creeze un magazin simplu virtual care:
 - sa prezinte utilizatorului o lista de produse si preturi (constanta – maxim 5 produse)
 - sa preia de la acesta numarul de produse dorit
 - sa calculeze suma totala
 - sa adauge TVA 19%
 - sa prezinte un raport care sa contina:
 - total de plata
 - ora comenzii

Laborator L3 - continuare

- se creaza macar 3 pagini:
 - lista produse
 - formular comanda
 - rezultat
- forma paginilor:
 - tabel/CSS
- metoda
 - post
 - get

culoare	IMAGINE	culoare
	Continut (cu alta culoare fundal)	

Laborator – L3 - rezultat

Magazin online Firma X SRL

Lista Produse

Nr.	Produs	Pret
1	Carti	100
2	Caiete	50
3	Penare	150
4	Stilouri	125
5	Creioane	25
Comanda		

Magazin online Firma X SRL

Realizati comanda

Nr.	Produs	Pret	Cantitate
1	Carti	100	<input type="text" value="1"/>
2	Caiete	50	<input type="text" value="2"/>
3	Penare	150	<input type="text" value="1"/>
4	Stilouri	125	<input type="text" value="0"/>
5	Creioane	25	<input type="text" value="0"/>

Magazin online Firma X SRL

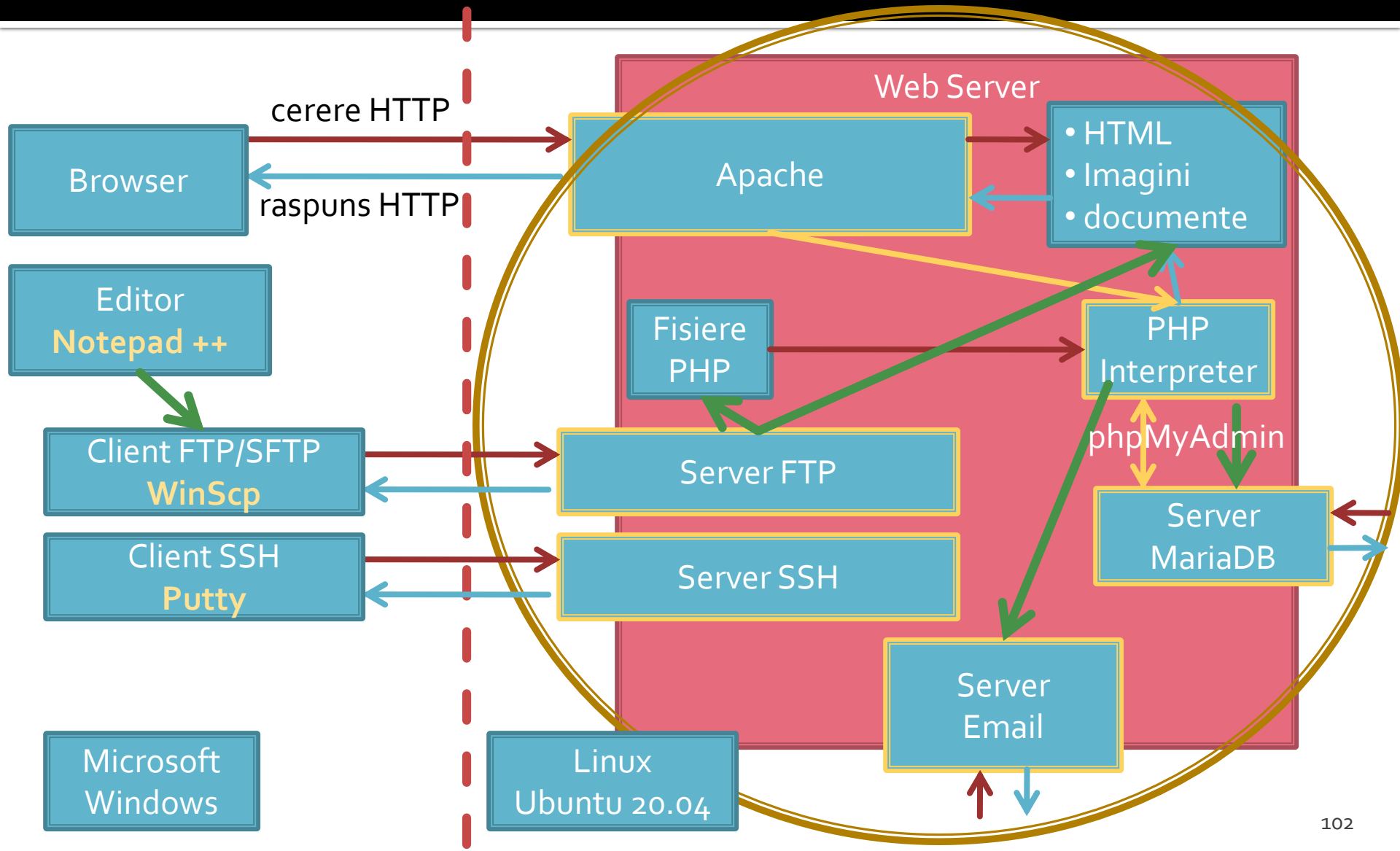
Rezultate comanda

Pret total (fara TVA): 350

Pret total (cu TVA): 416.5

Comanda receptionata la data: 17/03/2010 ora 08:24

Utilizare LAMP



Utilizare LAMP

Magazin online Firma X SRL

Lista Produse

Nr.	Produs	Pret
1	Carti	100
2	Caiete	50
3	Penare	150
4	Stilouri	125
5	Creioane	25

Magazin online Firma X SRL

Realizati comanda

Nr.	Produs	Pret	Cantitate
1	Carti	100	<input type="text" value="1"/>
2	Caiete	50	<input type="text" value="2"/>
3	Penare	150	<input type="text" value="1"/>
4	Stilouri	125	<input type="text" value="0"/>
5	Creioane	25	<input type="text" value="0"/>

Magazin online Firma X SRL

Rezultate comanda

Pret total (fara TVA): 350

Pret total (cu TVA): 416.5

Comanda receptionata la data: 17/03/2010 ora 08:24

<input name="x" ..

\$_POST['x']

\$_GET['x']

Web Server

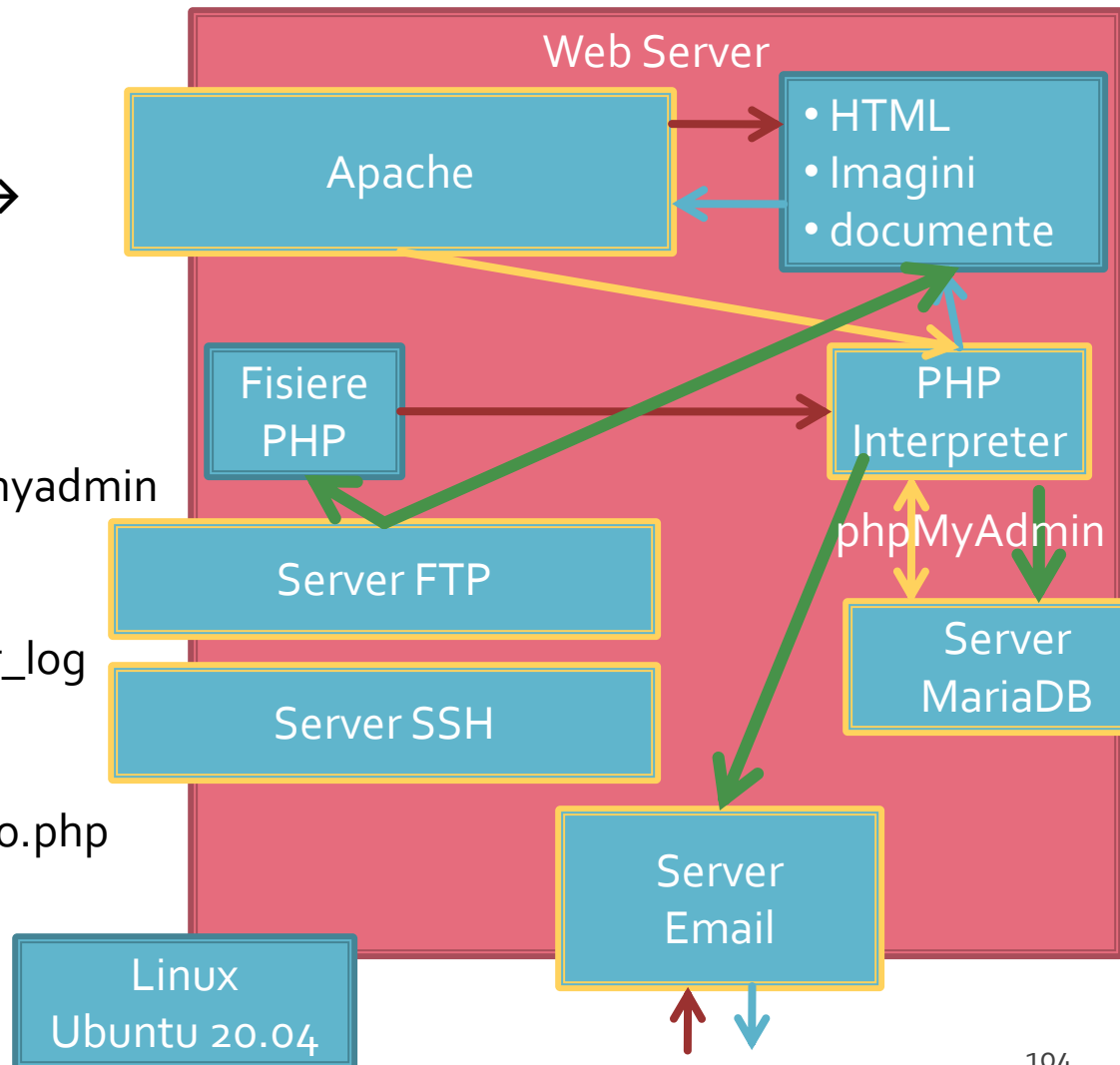
Apache

Server FTP

Server SSH

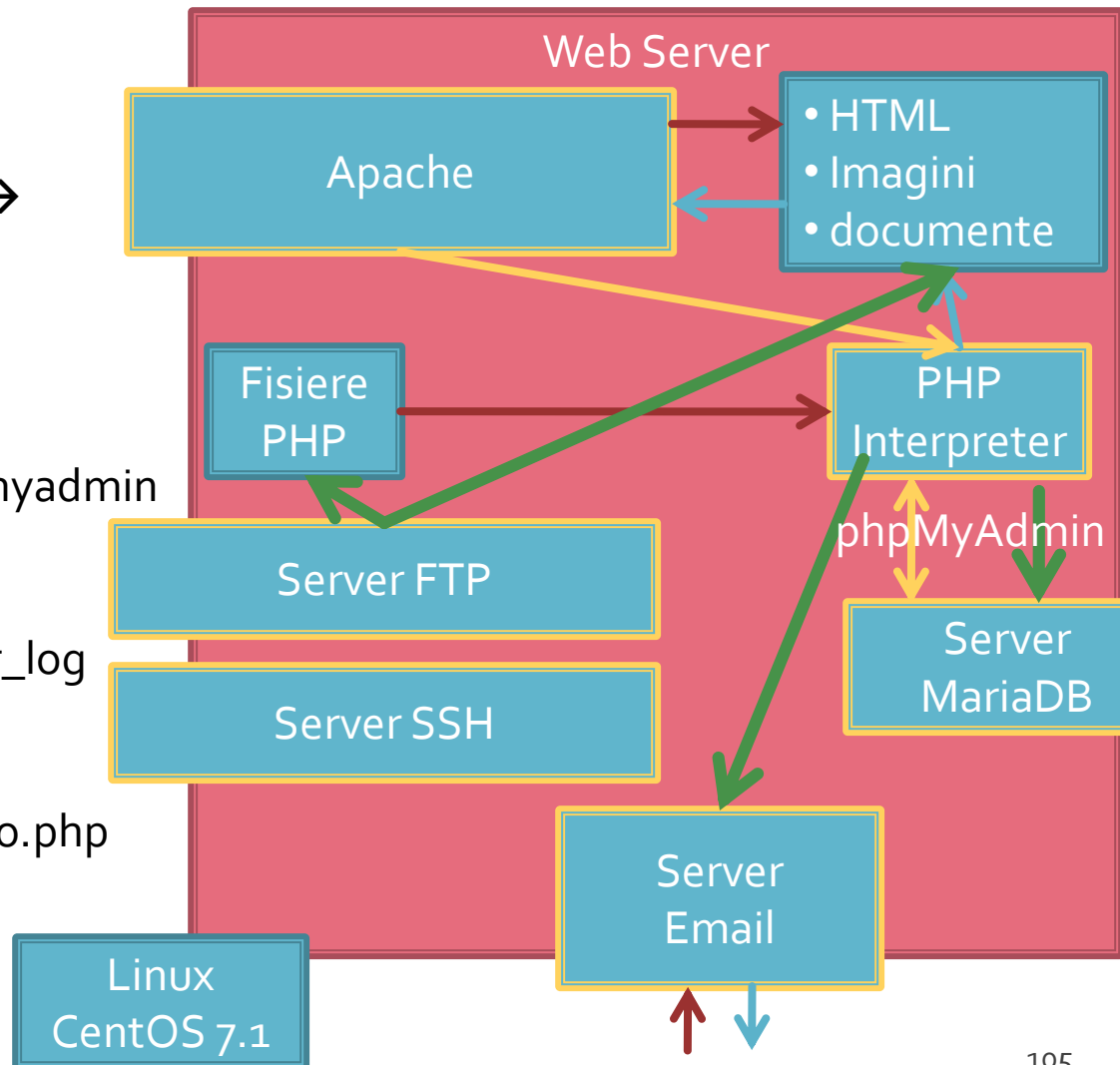
Utilizzare LAMP

1. login → root:masteretti
2. ifconfig → 192.168.30.5
3. putty.exe → 192.168.30.5 → SSH → root:masteretti (remote login)
4. [alte comenzi linux dorite]
5. FTP → Winscp → SFTP → student:masterrc@192.168.30.5
6. MySql → http://192.168.30.5/phpmyadmin → 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

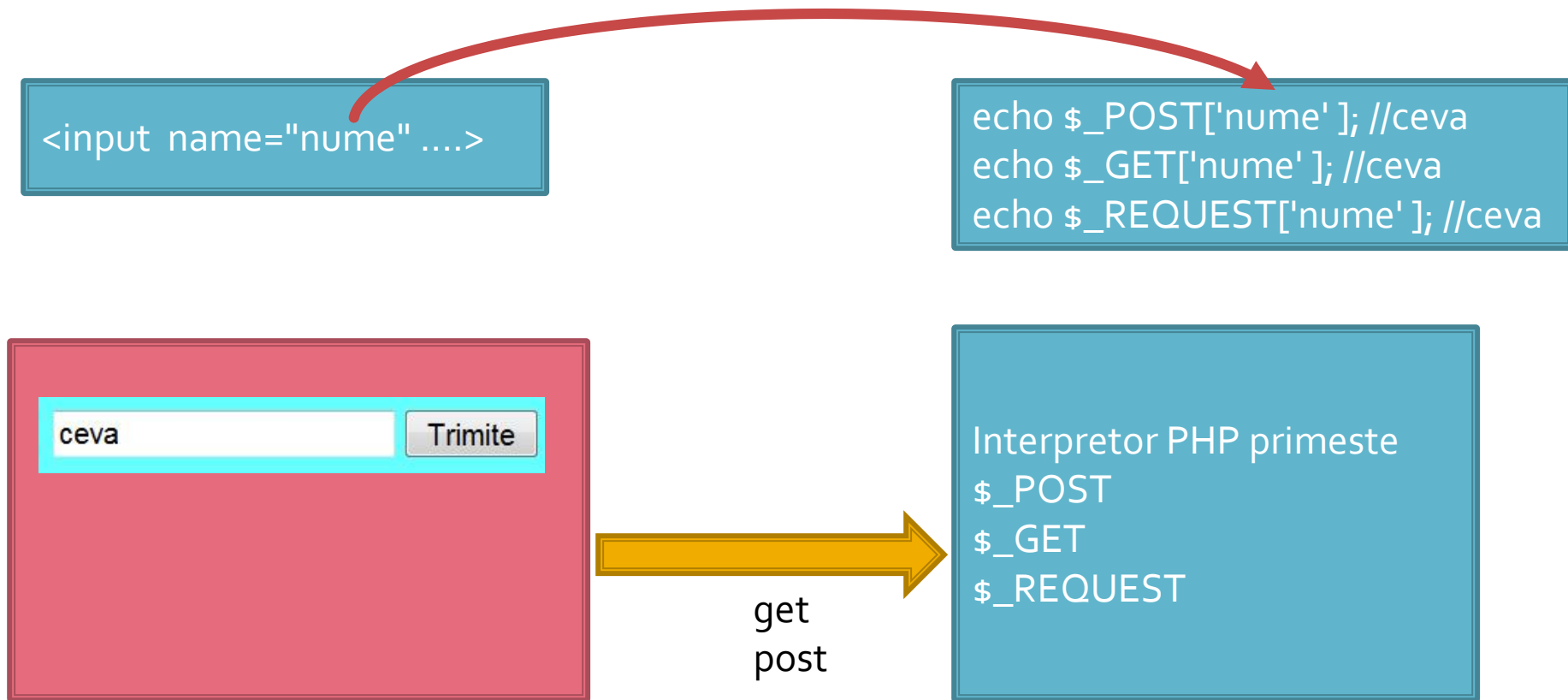


Utilizare LAMP

1. login → root:masterrc
2. ifconfig → 192.168.30.5
3. putty.exe → 192.168.30.5 → SSH → root:masterrc (remote login)
4. [alte comenzi linux dorite]
5. FTP → Winscp → SFTP → student:masterrc@192.168.30.5
6. MySql → http://192.168.30.5/phpmyadmin → root:masterrc
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



Client / Server

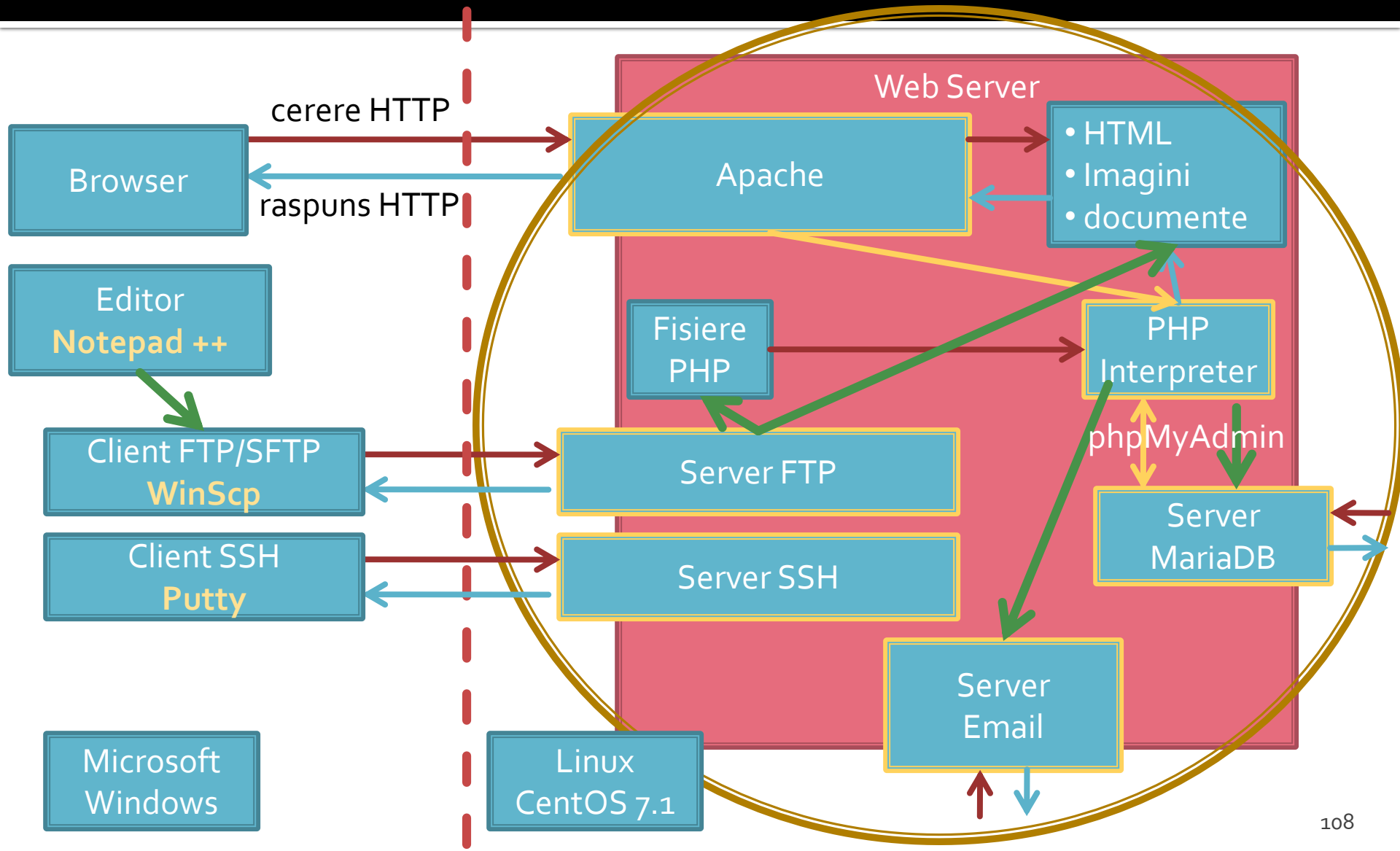


Depanare

```
echo "<pre>";  
print_r($_POST);  
echo "</pre>";
```

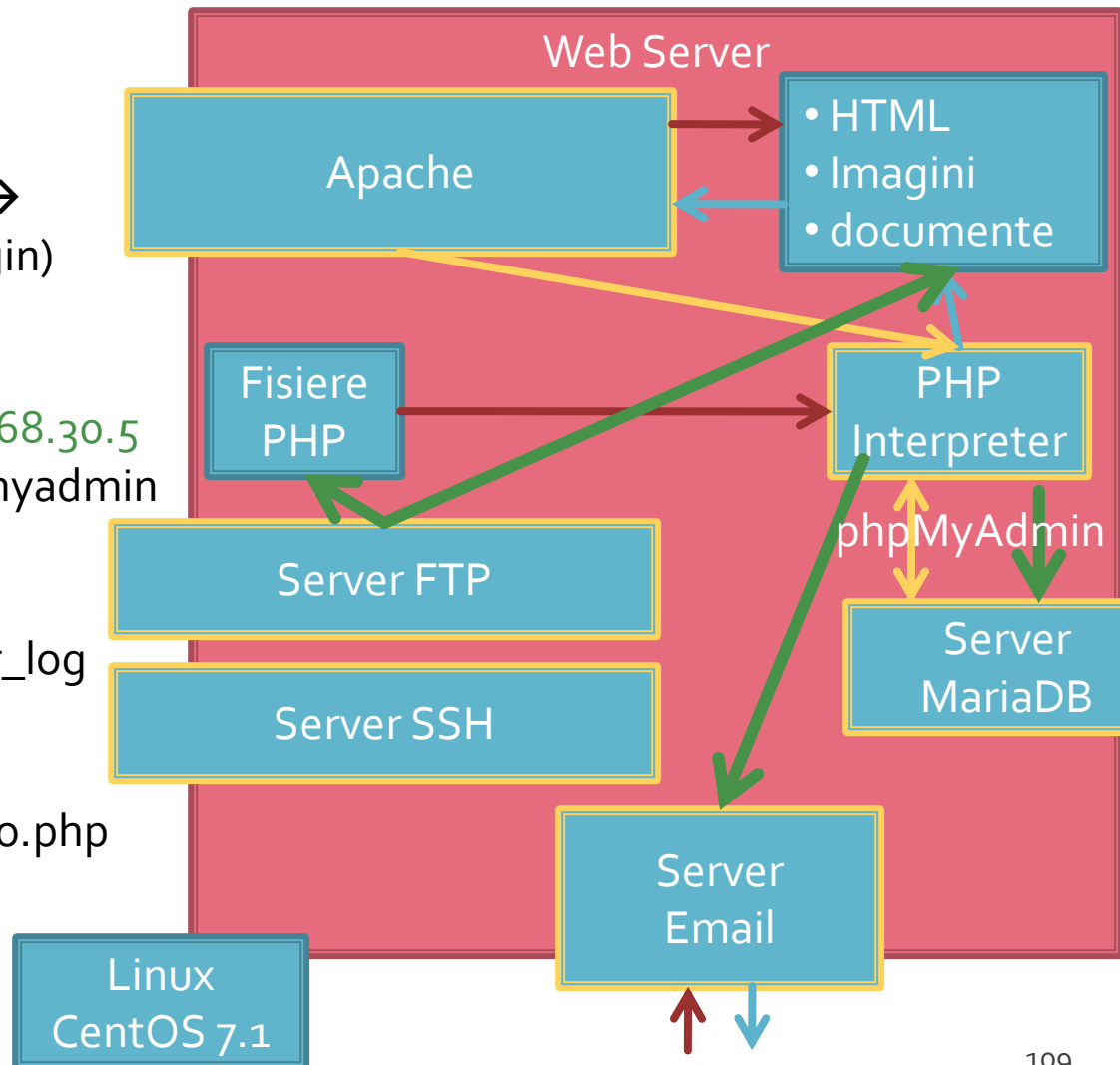
```
<p>temp <?php echo  
"a=";echo $a; ?> </p>
```

Utilizare LAMP



Utilizzare LAMP

1. login → root:masterrc/masteretti
2. ifconfig → 192.168.30.5
3. putty.exe → 192.168.30.5 → SSH → root:masterrc/masteretti (remote login)
4. [alte comenzi linux dorite]
5. FTP → Winscp → SFTP → student:masterrc/masteretti @192.168.30.5
6. MySql → http://192.168.30.5/phpmyadmin → root:masterrc/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



Server referinta LAMP 2024

- 3 variante acceptate
 - CentOS 7.1
 - Ubuntu 20.04
 - Debian 12.5

Server referinta LAMP

- 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**)

Server referinta LAMP

- 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**)

Server referinta LAMP

- 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

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

Project/Design

~~[Teme proiect 2020 \(pdf, 874.95 KB, ro, 🇷🇴\)](#)~~

[Sevrer CentOS pentru VMWare Player \(cloud\)](#) (link, 0 Bytes, ro, 🇷🇴)

~~[Realizare Server CentOS \(pdf, 1.4 MB, en, 🇸🇪\)](#)~~

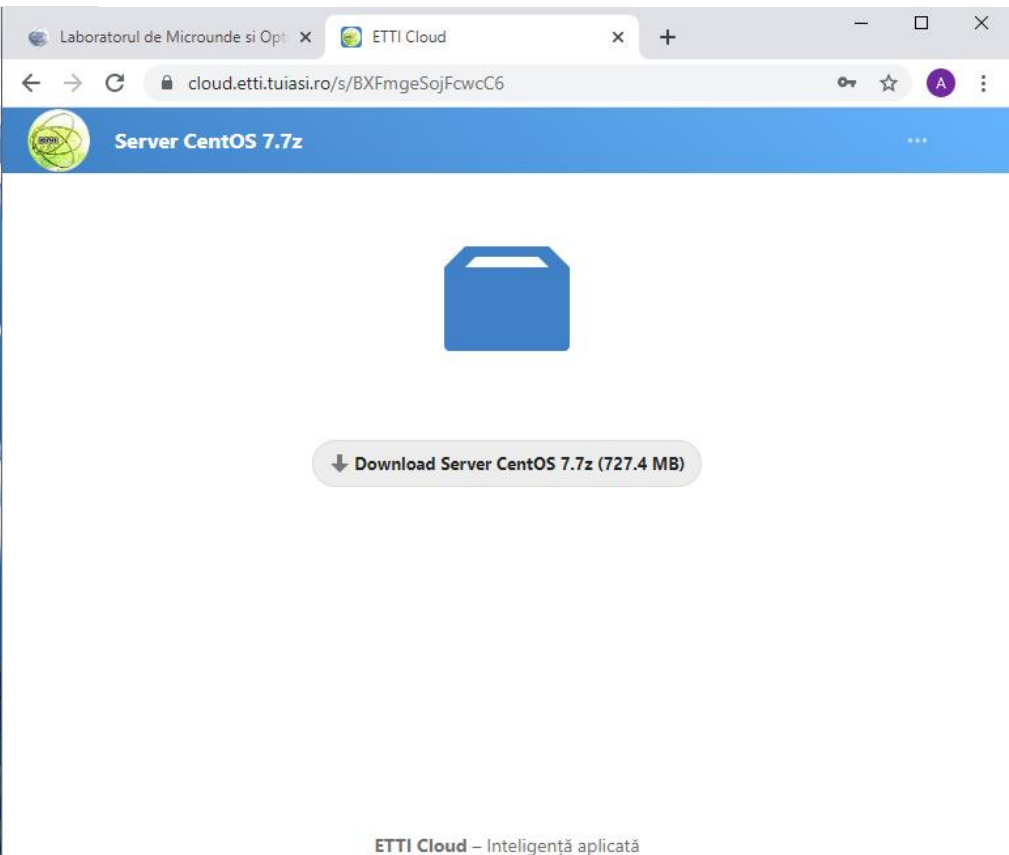
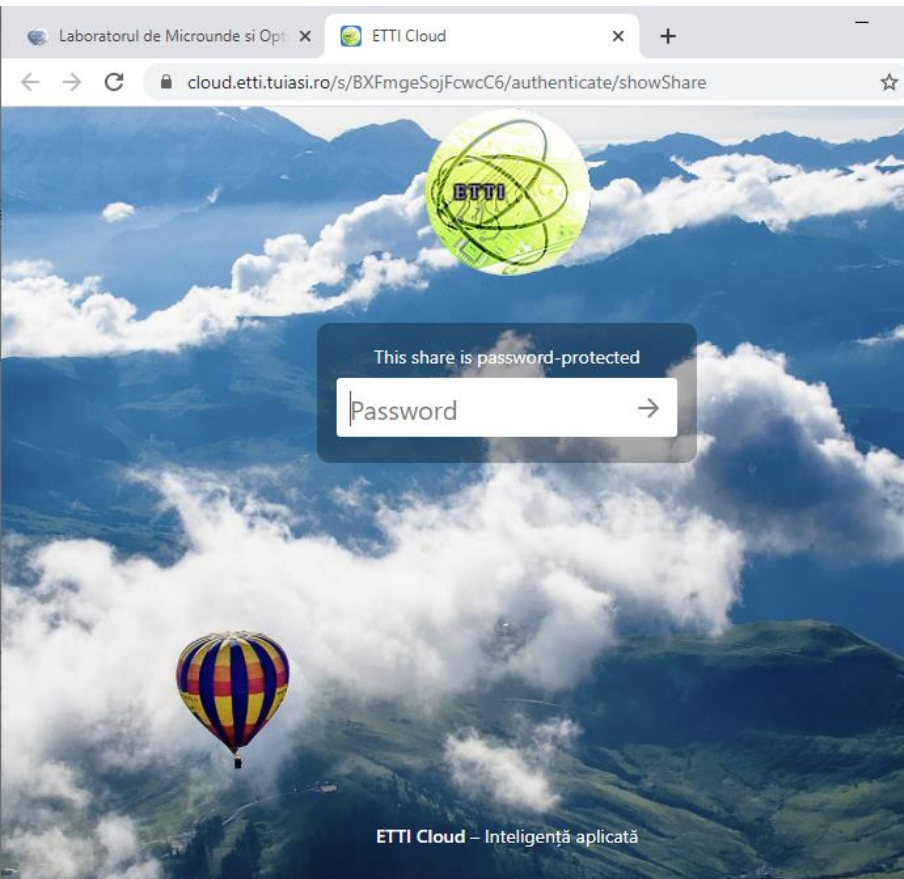
Examen

[Simulare Examen \(video\)](#) (mp4, 65.12 MB, ro, 🇷🇴)

[Manual examen on-line](#) (pdf, 2.65 MB, ro, 🇷🇴)

Server referinta

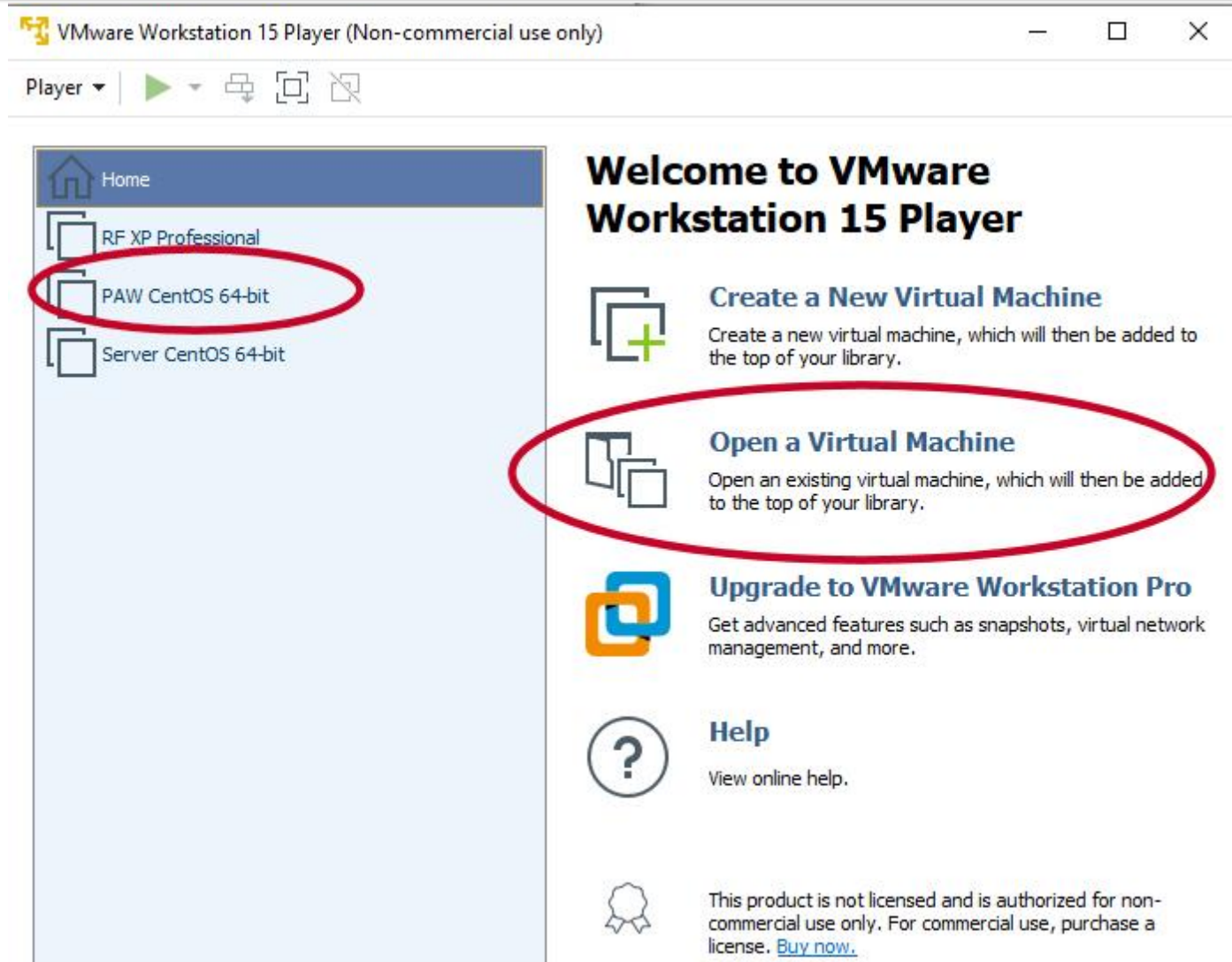
■ Cloud ETTI: RF-opto3#



Server referinta

- Masina virtuala
- VMware Workstation Player
 - Gratuit (non-comercial)
 - <https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html>

Server referinta



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 -> **18**

Server referinta

The image shows a file explorer window titled "Server Debian" with a tab for "Curs PAW". The file list includes several Debian 12.x 64-bit files, with "Debian 12.x 64-bit.vmx" circled in red. To the right, a text editor window titled "Debian 12.x 64-bit.vmx" displays the configuration file content. The configuration includes settings for encoding, version, and hardware. The line `virtualHW.version = "21"` is circled in red.

File Explorer (Server Debian):

- Desktop
- Downloads
- Documents
- Pictures
- Music
- Videos
- c3
- rezultate
- 2024

File List:

Name	Size	Modified	Type
Debian 12.x 64-bit.nvram			File
Debian 12.x 64-bit.scoreboard			File
Debian 12.x 64-bit.vmdk			File
Debian 12.x 64-bit.vmsd			File
Debian 12.x 64-bit.vmx			File
Debian 12.x 64-bit.vmx			File
Debian 12.x 64-bit.vmx			File
Debian 12.x 64-bit.vmx			File
Debian 12.x 64-bit-0.scoreboard			File
Debian 12.x 64-bit-1.scoreboard			File
Debian 12.x 64-bit-2.scoreboard			File

VMX Configuration (Debian 12.x 64-bit.vmx):

```
1 .encoding = "windows-1252"
2 config.version = "8"
3 virtualHW.version = "21"
4 pciBridge0.present = "TRUE"
5 pciBridge4.present = "TRUE"
6 pciBridge4.virtualDev = "pcieRoot"
7 pciBridge4.functions = "8"
8 pciBridge5.present = "TRUE"
9 pciBridge5.virtualDev = "pcieRoot"
10 pciBridge5.functions = "8"
11 pciBridge6.present = "TRUE"
12 pciBridge6.virtualDev = "pcieRoot"
13 pciBridge6.functions = "8"
```

File Name	Size	Modified	Type
Debian 12.x 64-bit.vmx	21-Feb-24 09:45	VMXF	File
Debian 12.x 64-bit-0.scoreboard	04-Mar-24 14:35	SCORE	File
Debian 12.x 64-bit-1.scoreboard	04-Mar-24 14:23	SCORE	File
Debian 12.x 64-bit-2.scoreboard	04-Mar-24 13:18	SCORE	File

Aplicatii suport

- 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>

Adresa IP

- 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

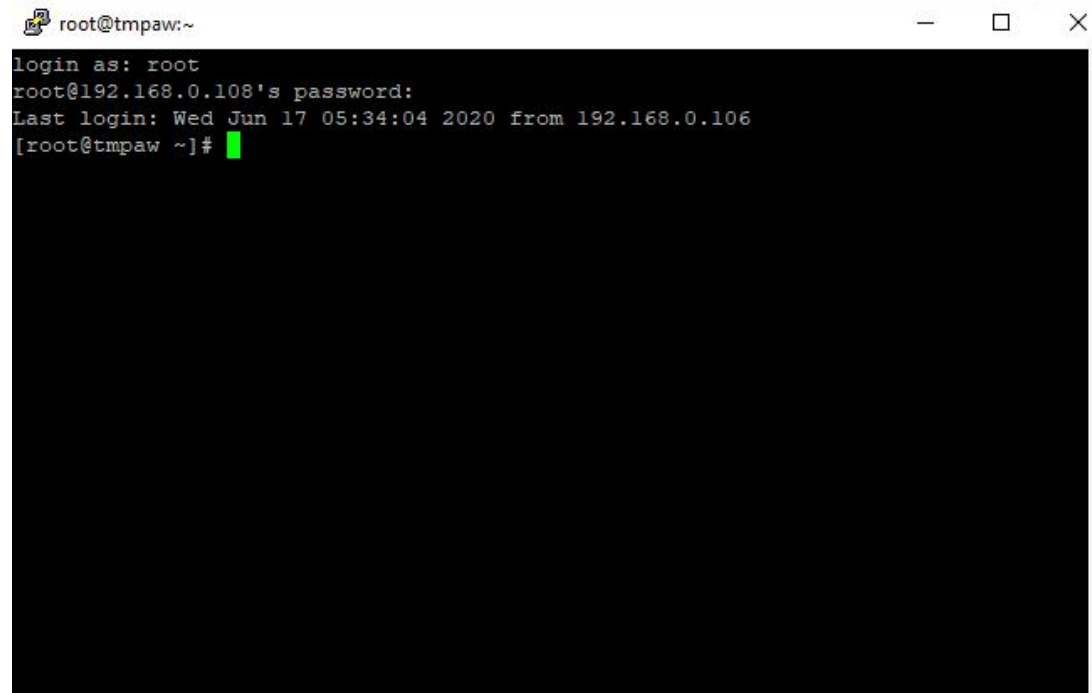
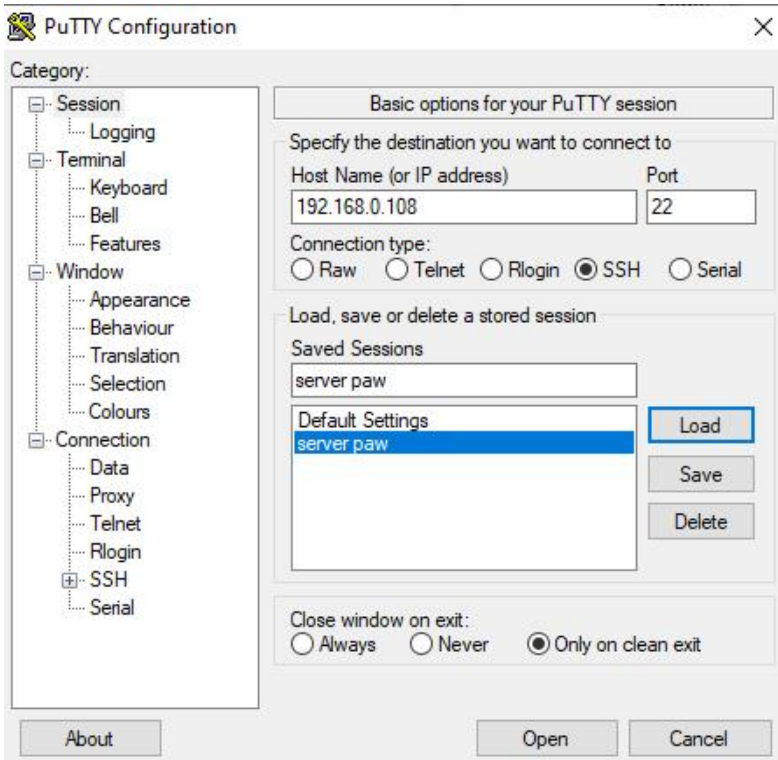
tmpaw login: root
Password:
Last login: Wed Jun 17 05:35:16 from 192.168.0.106
[root@tmpaw ~]# ifconfig
eno16777736: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.108 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 fe80::250:56ff:fe3e:1693 prefixlen 64 scopeid 0x20<link>
    ether 08:00:56:3e: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 ~]# _
```

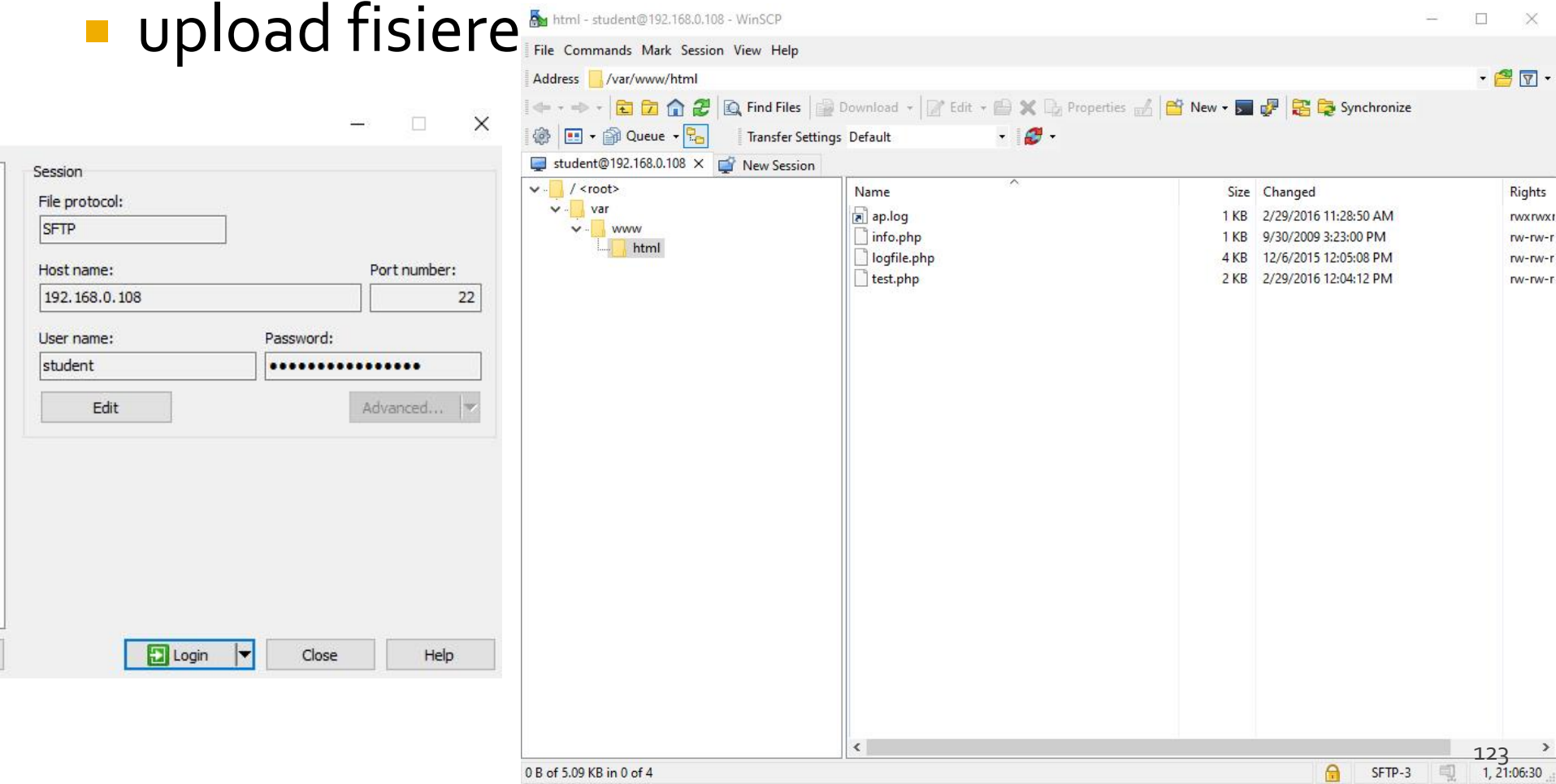
Putty

- putty.exe
- evitare captura mouse, copy/paste etc.



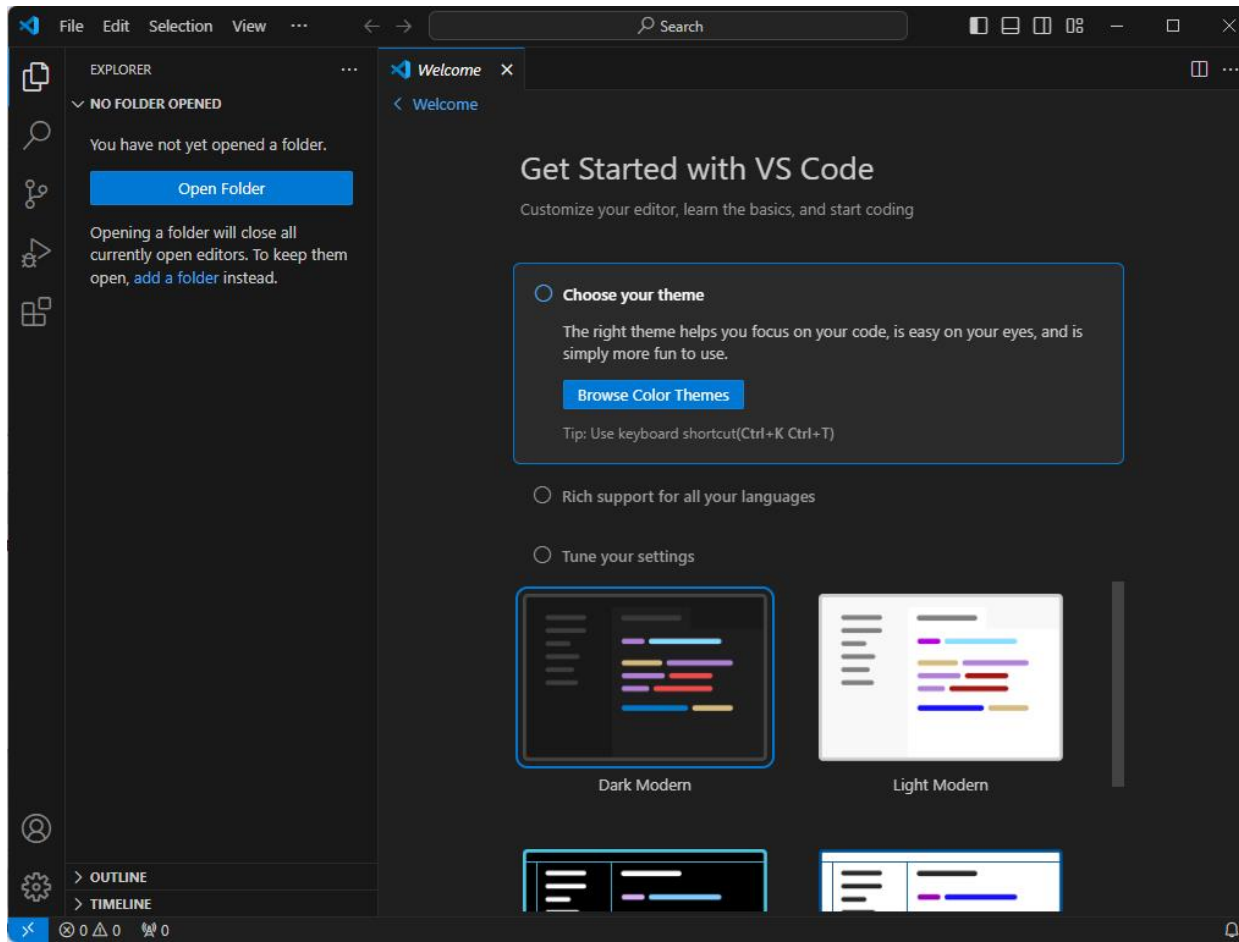
WinSCP

- client FTP
- upload fisiere



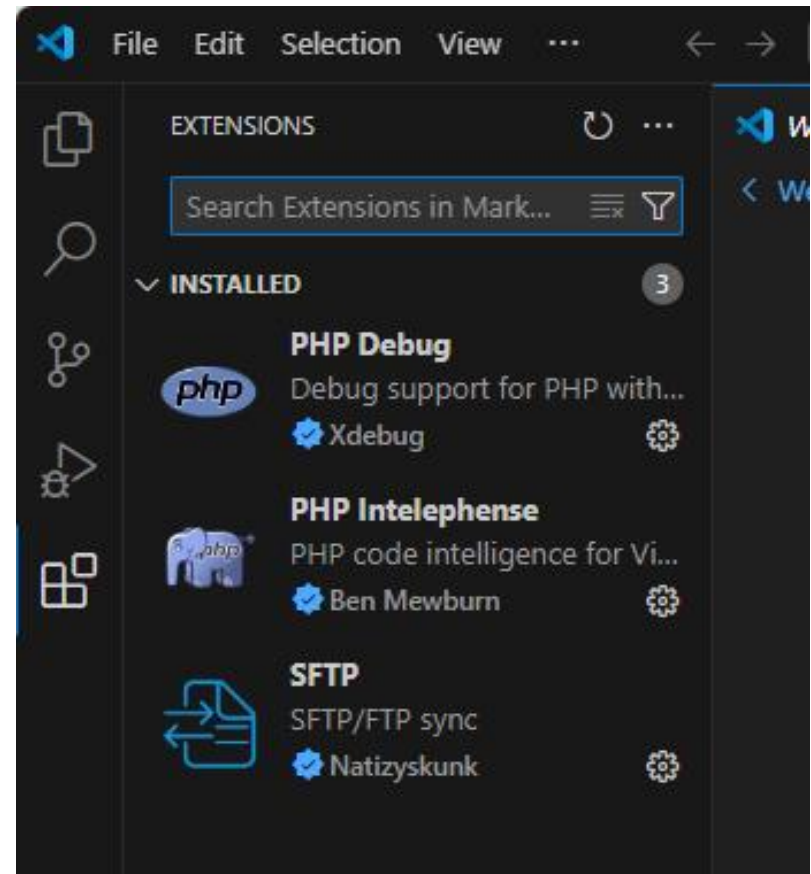
Visual Studio Code

■ 1.87 Portabil

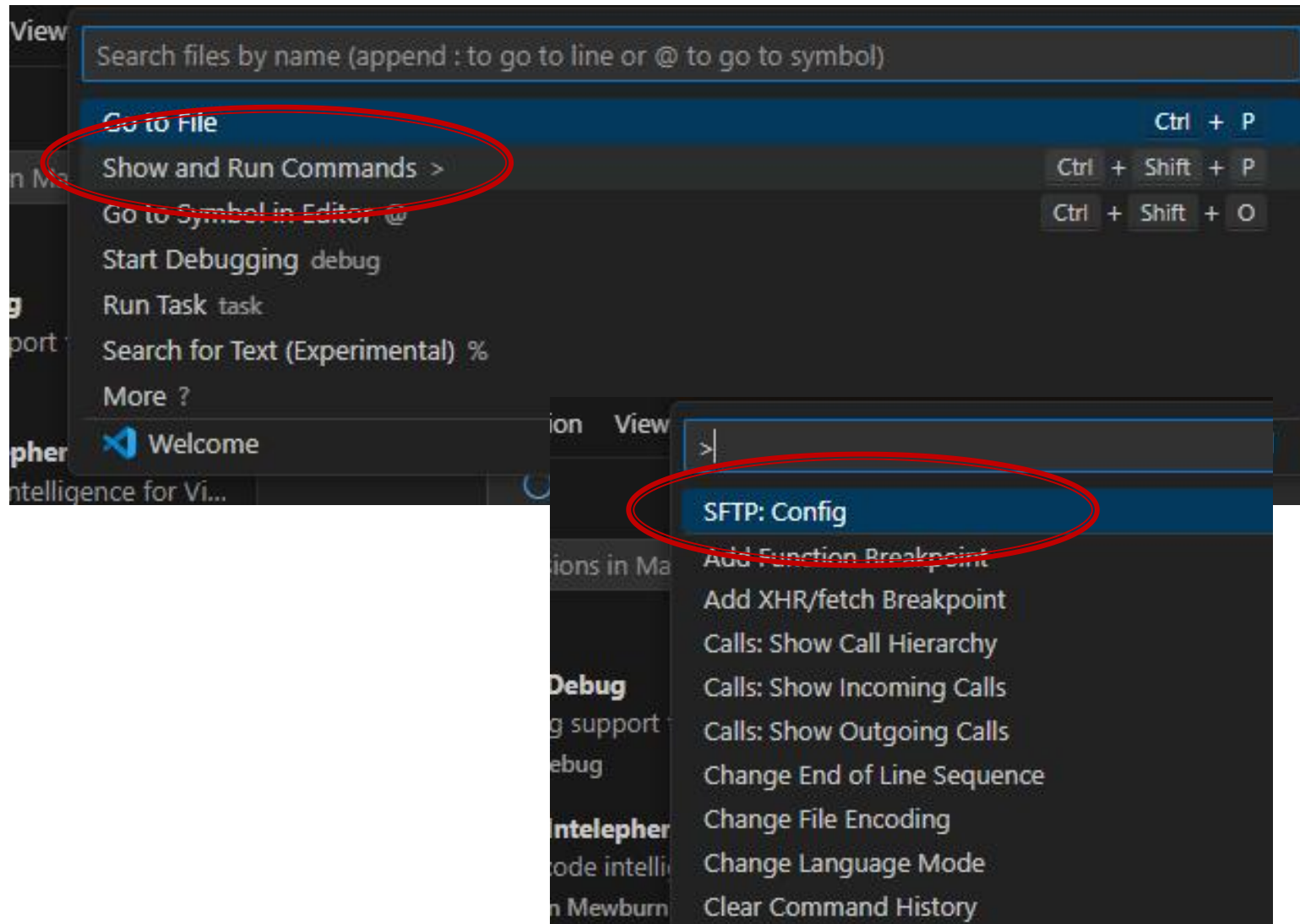


Visual Studio Code

- Extensii instalate
 - PHP Intelephense
 - PHP 8 -> Debian
 - PHP Debug (inactiv momentan)
 - SFTP – salvare automata pe un server



Visual Studio Code

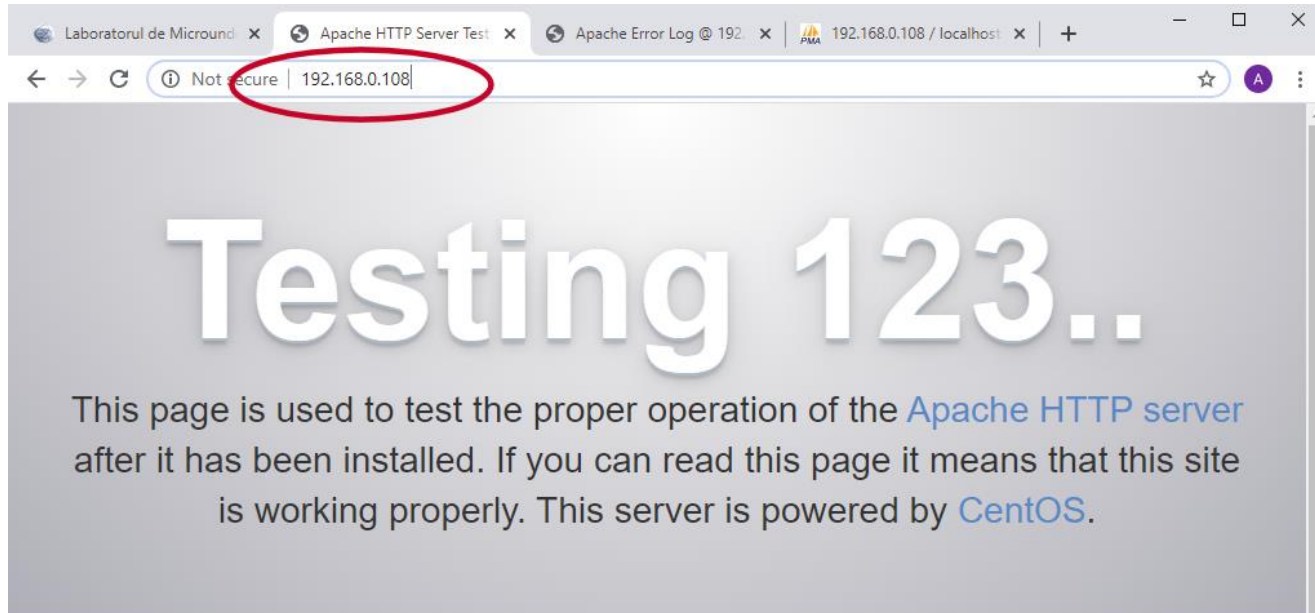


Visual Studio Code

```
{ } sftp.json x
.vscode > { } sftp.json > ...
1  {
2    "name": "My Server",
3    "host": "localhost",
4    "protocol": "sftp",
5    "port": 22,
6    "username": "username",
7    "remotePath": "/",
8    "uploadOnSave": false,
9    "useTempFile": false,
10   "openSsh": false
11 }
12
```

```
{ } sftp.json •
.vscode > { } sftp.json > ...
1  {
2    "name": "Debian Server",
3    "host": "192.168.30.5",
4    "protocol": "sftp",
5    "port": 22,
6    "username": "student",
7    "remotePath": "/var/www/html/",
8    "uploadOnSave": true,
9    "useTempFile": false,
10   "openSsh": false
11 }
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

The screenshot displays the phpMyAdmin web interface. The browser's address bar shows the URL `192.168.0.108/phpmyadmin/...PMAURL-5:index.php?db=&table=&server=1&target=&token=f7dda12d42a1...`, with the domain `192.168.0.108` circled in red. The interface features a left sidebar with a tree view of databases: `New`, `information_schema`, `mysql`, `performance_schema`, `tmpaw`, and `world`. The main content area is divided into several sections:

- General Settings**: Includes a `Change password` link and a `Server connection collation` dropdown set to `utf8mb4_unicode_ci`.
- Appearance Settings**: Includes a `Language` dropdown set to `English`, a `Theme` dropdown set to `pmahomme`, and a `Font size` dropdown set to `82%`. A `More settings` link is also present.
- Database server**: Lists server details:
 - 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**: Lists web server details:
 - 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**: Lists version and resource information:
 - Version information: 4.4.15.1
 - Documentation
 - Wiki
 - Official Homepage
 - Contribute
 - Get support
 - List of changes

Contact

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- <http://rf-opto.etti.tuiasi.ro>
- rdamian@etti.tuiasi.ro