

Curs 4

2025/2026

# Programarea aplicațiilor web

# PAW

- 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

Grupa: 55RC Profesor: Alege un profesor Sala: Alege o sala



FACULTATEA DE ELECTRONICA, TELECOMUNICATII SI TEHNOLOGIA INFORMATIEI

55RC

11111111

	1	2	3	4	5	6	7	8	9	10	11	12
	8:00 - 8:50	9:00 - 9:50	10:00 - 10:50	11:00 - 11:50	12:00 - 12:50	13:00 - 13:50	14:00 - 14:50	15:00 - 15:50	16:00 - 16:50	17:00 - 17:50	18:00 - 18:50	19:00 - 19:50
L										PAW (C) 2.13 TC (R)	Damian R. PAW (P) 2.13 TC (R)	Damian R. PAW (L) 2.13 TC (R)
Ma								RCALSC (C) 2.13 TC (R)	Scripcariu L. RCALSC (C) 2.13 TC (R)		Mocanu F. RCALSC (L) 2.13 TC (R)	
Mi									Bozomitu R. SRDS (L) 3.20 Antene			
J						Iov C. Etic (C) Amf. C1 (Corp C)					Trifina L. TEFO (L) 3.25 TTI (L)	Trifina L. TEFO (L) 3.25 TTI (L)
V									Trifina L. TEFO (C) P8 (Amf.)	Bozomitu R. SRDS P8 (Amf.)	Iov C. Etic (S) P7 (Amf.)	
Sâ												

# Nota

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

# Documentatie

- <https://rf-opto.etti.tuiasi.ro> + WWW

The screenshot shows a web browser window with the URL `rf-opto.etti.tuiasi.ro/master_it.php`. The page has a dark blue navigation bar with links: Main, Courses, **Master**, Staff, Research, Students, Admin. Below this is a lighter blue bar with sub-links: Radiocommunication Systems, Microwave IC, Satellite Comm., **Web Design**, Ethics.

The main content area lists several resources:

- [Online Exam manual](#) (pdf, 2.56 MB, en, 🇸🇪)
- [Manual examen on-line](#) (pdf, 2.65 MB, ro, 🇷🇴)
- [Simulare Examen \(video\)](#) (mp4, 65.12 MB, ro, 🇷🇴)
- [Exam Simulation \(video\)](#) (mp4, 41.96 MB, en, 🇸🇪)

## Web Applications Design

### Course: PAW (2024-2025)

**Course Coordinator:** Assoc.P. Dr. Radu-Florin Damian  
**Code:** RC.IA.108  
**Discipline Type:** DIMS; Required, Synthesis  
**Credits:** 5  
**Enrollment Year:** 5, **Sem.** 10

### Activities

**Course:** Instructor: Assoc.P. Dr. Radu-Florin Damian, 1.5 Hours/Week, Specialization Section, Timetable:  
**Laboratory:** Instructor: Assoc.P. Dr. Radu-Florin Damian, 1 Hours/Week, Specialization Section, Timetable:  
**Project:** Instructor: Assoc.P. Dr. Radu-Florin Damian, 1 Hours/Week, Specialization Section, Timetable:  
**Online Exams:** Currently active: None

### Evaluation

Type: **Exam**

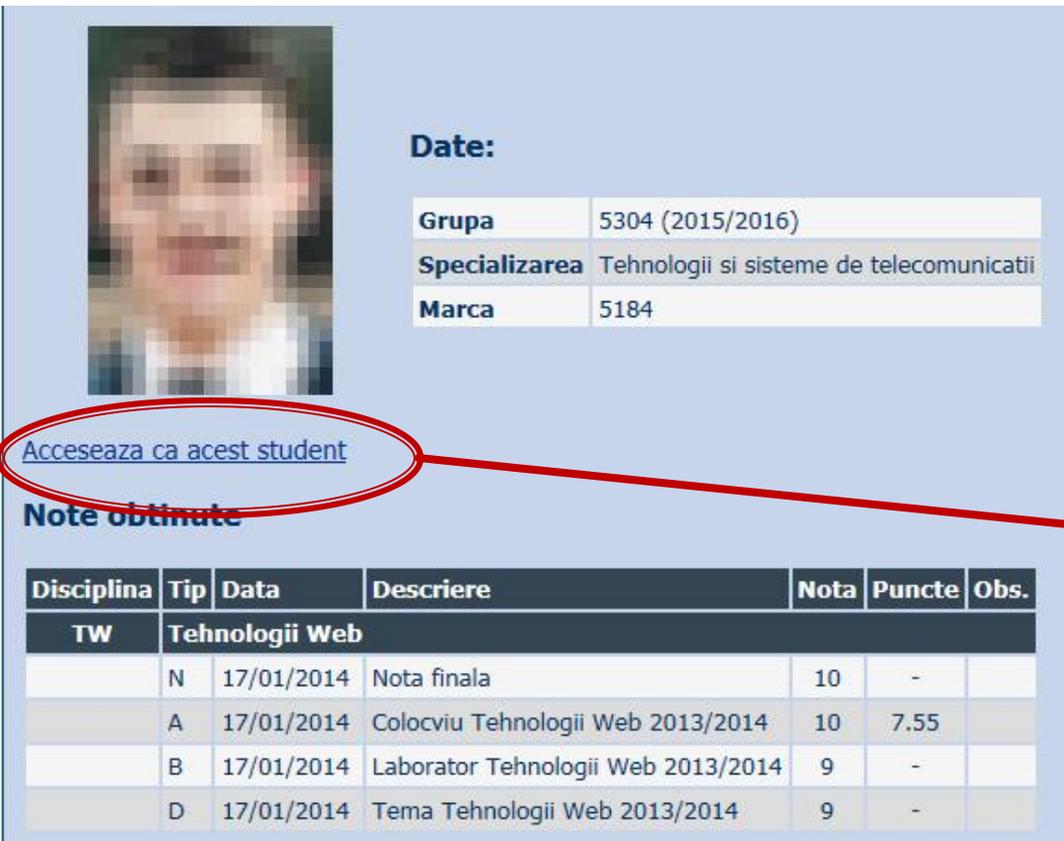
**A:** 33.33%, (Test/Colloquium)  
**B:** 33.33%, (Seminary/Laboratory/Project Activity)  
**D:** 33.33%, (Homework/Specialty papers)

### Previous years

2023-2024	2022-2023	2021-2022	2020-2021	2019-2020	More years...
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# Acces

- Personalizat (parola), Generic (email)



A student profile page with a blue background. On the left is a blurred student photo. To the right, under the heading "Date:", is a table with student details. Below this is a link "Acceseaza ca acest student" circled in red. At the bottom is a table of grades.

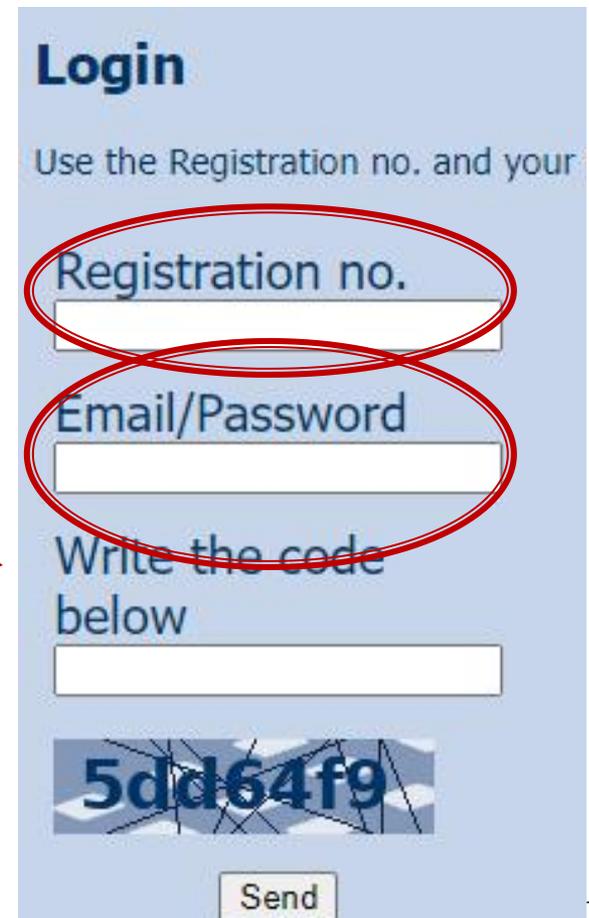
**Date:**

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			<b>Tehnologii Web</b>			
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	-	



A login form with a blue background. It includes a "Login" heading, instructions to use a registration number and password, and a CAPTCHA. The "Registration no." and "Email/Password" fields are circled in red. A red arrow points from the "Acceseaza ca acest student" link in the previous image to the "Registration no." field.

**Login**

Use the Registration no. and your

Registration no.

Email/Password

Write the code below

5dd64f9

Send

# Online – Numar matricol (marca)

- accesul la **examene** necesita **parola** primita prin email

The password is communicated during the lectures. It is necessary t

**Password**

**Registration no.**

**Name of the student**

**Proposed email 1**

**Proposed email 2**

**Write the code below**

 **RF-OPTO** 

English | Romana |

[Main](#) [Courses](#) [Master](#) [Staff](#) [Research](#) [Students](#)

[Login](#) [Tutoring](#)

**Login**

Use the Registration no. and your email or the password received by email

**Registration no.**

**Email/Password**

**Write the code below**

# Parola

## ■ primita prin 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 atentie: POPESCU GOPO ION**

Parola pentru a accesa examenele pe server-ul **rf-opto** este  
Parola: [REDACTED]

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: [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 Correspondents

☆	Important message from RF-OPTO	• ⇒ POPESCU GOPO ION
☆	Validation of MD/CR exam from 02/05/2020	[REDACTED]
☆	[REDACTED]	[REDACTED]

From Me <rdamian@etti.tuiasi.ro> ★  
Subject **Important message from RF-OPTO**  
To [REDACTED]  
Cc Me <rdamian@etti.tuiasi.ro> ★



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**In atentie: POPESCU GOPO ION**

Parola pentru a accesa examenele pe server-ul **rf-opto** este  
Parola: [REDACTED]

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: [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

- Aplicatia de examen online utilizata la:
  - ~~curs (prezenta)~~
  - laborator -> Activitate suplimentara
  - proiect -> Alocare/predare proiect
  - ~~examen~~

## 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

- intotdeauna **contratimp**
  - perioada lunga (proiect, activitate suplimentara)
  - ~~perioada scurta (teste: 15min, examen: 2h)~~

The screenshot shows a web interface for an online exam system. At the top, there is a navigation menu with options: Start, Didactic, Master, Colectiv, Cercetare, and **Studenti**. Below this, there are sub-menus: Note, Lista Studenti, **Examene**, and Fotografii. A horizontal bar contains several buttons: **Anunț** (17:28 (29/04/2020)), Material suport (17:30 (29/04/2020)), Subiecte (17:32 (29/04/2020)), Rezultate (17:35 (29/04/2020)), Finalizare (17:45 (29/04/2020)), and Confirmare (17:45 (30/04/2020)). To the right of this bar, a message states: 'Urmatorul interval de timp in. 01 m 08 s [Reincarca acum](#)'. Below the navigation, the main content area is titled 'Anunț' and contains the text: 'In acest examen se verifica diverse actiuni ale studentilor pentru examen'. Underneath, there is a section 'Ora pe server' with the text: 'Toate examenele sunt bazate pe fusul orar al server-ului (ar putea sa fie diferit de timpul local). Pentru referinta ora pe server este acum: 29/04/2020 17:28:51'. Red circles highlight the 'Anunț' button, the 'Examene' sub-menu, the 'Ora pe server' section, and the 'Reincarca acum' link.

Start Didactic Master Colectiv Cercetare **Studenti**

Note Lista Studenti **Examene** Fotografii

**Anunț** 17:28 (29/04/2020) Material suport 17:30 (29/04/2020) Subiecte 17:32 (29/04/2020) Rezultate 17:35 (29/04/2020) Finalizare 17:45 (29/04/2020) Confirmare 17:45 (30/04/2020)

Urmatorul interval de timp in. 01 m 08 s [Reincarca acum](#)

**Anunț**

In acest examen se verifica diverse actiuni ale studentilor pentru examen

**Ora pe server**

Toate examenele sunt bazate pe fusul orar al server-ului (ar putea sa fie diferit de timpul local). Pentru referinta ora pe server este acum: 29/04/2020 17:28:51

# Nota

- An V
  - 33% E
  - 33% L
  - 33% P
- Laborator - Prezenta
  - 1pz = 1p ( $p > 5 \leftrightarrow$  Curs)
- Examen
  - Prezenta la curs: 3pz = 0.5p
  - Asemanator cu materia de **proiect**
- Activitate suplimentara
  - Dupa terminarea activitatii la laborator
  - +2p la E/L

# Laborator 2

# HTML

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

culoare	<b>IMAGINE</b>	culoare
	<b>Continut</b> (cu alta culoare fundal)	

# Suplimentar

- forma din schita alaturata
- forma paginilor:
  - (tabel) controlat prin CSS
- se experimenteaza cu **functii** generale php de ex:
  - data
  - timp
  - etc.

culoare	<b>IMAGINE</b>	culoare
	<b>Continut</b> (cu alta culoare fundal)	
	<b>Copyright</b> (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="1"
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="#FFFACC">
Continut
</td></tr>
</table>
</body>
</html>
```

culoare	<b>IMAGINE</b>	culoare
	<b>Continut</b> (cu alta culoare fundal)	



tabel

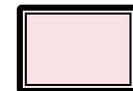
# Design 1



# 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="#FFFCC">
Continut
</td></tr>
</table>
</body>
</html>
```

culoare	<b>IMAGINE</b>	culoare
	<b>Continut</b> (cu alta culoare fundal)	



tabel

# Design 2

**Magazin** **Firma X SRL**

Continut

The diagram illustrates a layout design for a magazine page. It features a light blue background. At the top, there is a white header bar containing the text 'Magazin' in red and 'Firma X SRL' in blue. Below the header is a large yellow rectangular area representing the main content, with the word 'Continut' (Content) written in small black text at its top-left corner.

# 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

**Magazin**      **Firma X SRL**

Continut



# Continuare

- capacitatea de extindere?
  - va aparea 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 - recomandat
  - 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

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](http://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="Trinite" />
```

```
<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

Trinite



check1



but1



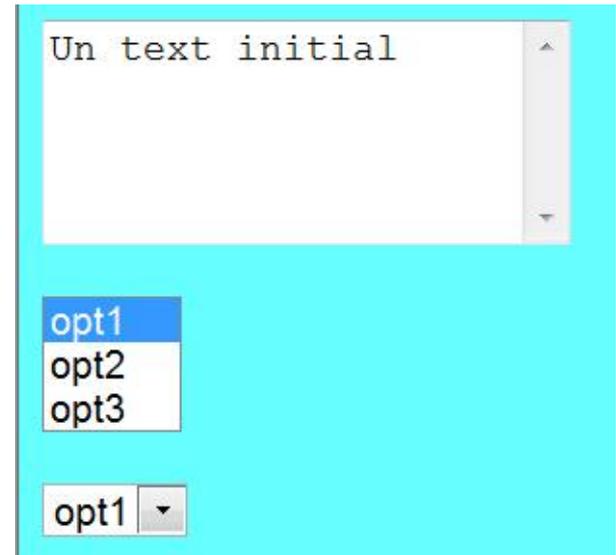
but2

# 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>
```



# 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:

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 – 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 nast

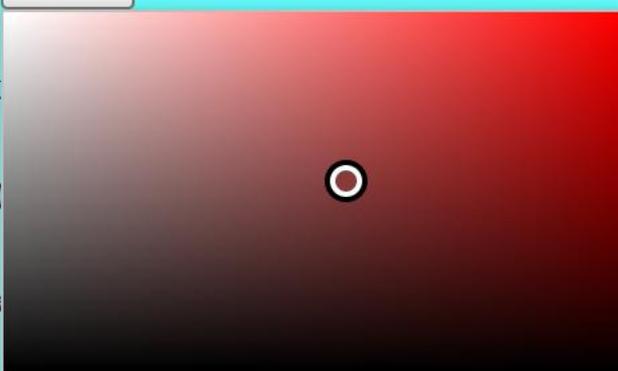
Examen (

Finalizare

Volum (0

Ora intal

Saptamar



The image shows a native browser color picker. It features a large square color gradient from black to red. A small white circle with a black border is positioned in the center of the gradient. Below the gradient, there is a circular color swatch, a horizontal rainbow color bar, and three input boxes for RGB values: 135, 59, and 59. The labels R, G, and B are positioned below their respective boxes.

135 59 59

R G B

Culoare:

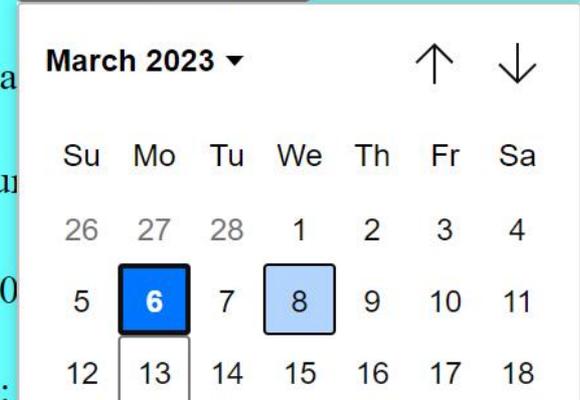
Data nastere:

Examen (data

Finalizare (lu

Volum (0 - 50

Ora intalnire:



The image shows a native browser date picker. It displays the month of March 2023. The days of the week are listed at the top: Su, Mo, Tu, We, Th, Fr, Sa. The dates are arranged in a grid. The date 6 is highlighted in a dark blue box, and the date 8 is highlighted in a light blue box. The date 13 is also highlighted in a light blue box.

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): 03/13/2023 05:24 PM 

Finalizare (luna si an) **March 2023**  

Volum (0 - 50):

Ora intalnire: --:--

Saptamana: Week --,

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

Clear Today

02	21	<b>PM</b>
03	22	AM
04	23	
<b>05</b>	<b>24</b>	
06	25	
07	26	
08		

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

Volum (0 - 50):

Ora intalnire: --:--

Saptamana: Week --,

2023

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

Clear This month

# HTML 5 – Interfata nativa browser

Volum (0 - 50):



Ora intalnire:

05:30 PM

Saptamana: W

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

Trimite

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

# 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

Hypertext PreProcessor

**PHP**

# PHP

- Hypertext PreProcessor - acronim recursiv
  - initial – Personal Home Page / Form Interpreter
  - 1995 – 1.0
- versiune curenta: 8.5.3
  - 2026-02-12
- versiune curenta: 8.4.18
  - 2026-02-12
- limbaj de scripting de uz general,
- rulare pe server (**server-side scripting**)
- open source

# 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>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; ?>&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['Greateate']; ?>&nbsp;</td>
581 <td><?php echo $row['Pui_Morti']; ?>&nbsp;</td>
582 <td><?php echo $row['Greateate_Morti']; ?>&nbsp;</td>
583 <td><?php echo $row['Ferma']; ?>&nbsp;</td>
584 <td><?php echo $row['Documente']; ?>&nbsp;</td>
```

```
<tr class="<?php if ($index%2) echo "lista_impar"; else echo "lista_p";
<td align="center"><?php echo $index; ?>&nbsp;</td>
<td><?php echo $row['Numar']; ?>&nbsp;</td>
<td><?php echo date("d/m/Y", strtotime($row['Data'])); ?>&nbsp;</td>
<td><?php echo $row['Pui']; ?>&nbsp;</td>
<td><?php echo $row['Greateate']; ?>&nbsp;</td>
```

```
<tr class="<?php if ($index%2) echo "lista_impar"; else echo "lista_p";
<td align="center"><?php echo $index; ?>&nbsp;</td>
```

# Separare cod PHP

- un fisier sursa PHP **este** un fisier HTML (in general) cu sectiuni de cod PHP **in interior**
- interpretorul PHP cauta sectiunile pe care trebuie sa le interpreteze si in interiorul lor proceseaza instructiunile ca fiind PHP
- ce se gaseste in **exteriorul** acestor sectiuni este trimis spre server-ul web **nemodificat**
- de cele mai multe ori rezultatul procesarii este un "fisier text" virtual continand cod **HTML** (strict) (+CSS/Javascript) transmis(e) server-ului web pentru distribuire

# 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 – instructiuni

- instructiunile PHP trebuie sa se termine cu ;
  - exceptie: se poate omite ; la sfarsitul blocului de cod php: **... echo `ceva` ?>**
- instructiunile pot sa fie scrise pe acelasi rand (fara trecerea la linia noua)
  - **echo `ceva1`; echo `ceva2`; ...**
  - nu este in general recomandat

# PHP – comentarii

- comentariile in PHP respecta regulile C si Perl
- la sfarsit de linie:
  - `// echo ceva; //comentariu`
  - `# echo ceva; #comentariu`
- comentariu bloc
  - `/* ... */`
  - `/* un comentariu  
pe mai multe  
linii */`

# 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

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

# PHP – tipuri de date

- **declararea** variabilelor **nu** e necesara decat cand se declara un domeniu de definitie (variabile globale)
  - `global $a, $b;`  
`$c=$a+$b;`
- eliberarea memoriei nu este necesara, se face automat la terminarea executiei

# 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**

# PHP – operatori

## ■ Atribuire

- `$a=$b`
- `$a+=$b` ( $a=a+b$ )
- `$a-=$b` ( $a=a-b$ )
- `$a/=$b` ( $a=a/b$ )
- `$a*=$b` ( $a=a*b$ )
- `$a%=$b` ( $a=a\%b$ )
- `$a.= $b` ( $a=a$  concatenat  $b$  - siruri)

# PHP – operatori

- Operatori la nivel de bit
  - similari celor din C
  - `~, &, |, ^, <<, >>`
- Operatori logici
  - ofera rezultat boolean true/false
  - similari celor din C
  - `&&, ||, !`
  - suplimentar
    - `and, or, xor` – echivalenti dar de prioritate mai mica
    - `$a=55/0 or die('impartire prin 0');`

# PHP – operatori

- Operatori de comparare
  - ofera rezultat boolean true/false
  - similari celor din C
  - == , != , > , < , <> , >= , <=
  - suplimentar
    - === identic, valoare egala **SI** de acelasi tip
    - !== “neidentic”, valoare diferita **SAU** de tipuri diferite

# Precedenta operatorilor PHP8

non-associative	clone new	<a href="#">clone</a> and <a href="#">new</a>
right	**	<a href="#">arithmetic</a>
non-associative	++ --	<a href="#">increment/decrement</a>
right	~ - (int) (float) (string) (array) (object) (bool) @	<a href="#">types</a>
<b>left</b>	instanceof	<a href="#">types</a>
right	!	<a href="#">logical</a>
left	* / %	<a href="#">arithmetic</a>
left	+ -	<a href="#">arithmetic</a>
left	<< >>	<a href="#">bitwise</a>
<b>left</b>	.	<a href="#">string</a>
non-associative	< <= > >= <>	<a href="#">comparison</a>
non-associative	== != === !== =<=>	<a href="#">comparison</a>
left	&	<a href="#">bitwise</a> and <a href="#">references</a>
left	^	<a href="#">bitwise</a>
left		<a href="#">bitwise</a>
left	&&	<a href="#">logical</a>
left		<a href="#">logical</a>
right	??	<a href="#">comparison</a>
<b>non-associative</b>	? :	<a href="#">ternary</a>
right	= += -= *= /= .= %= &=  = ^= <<= >>=	<a href="#">assignment</a>
left	and	<a href="#">logical</a>
left	xor	<a href="#">logical</a>
left	or	<a href="#">logical</a>
left	,	many uses

# 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

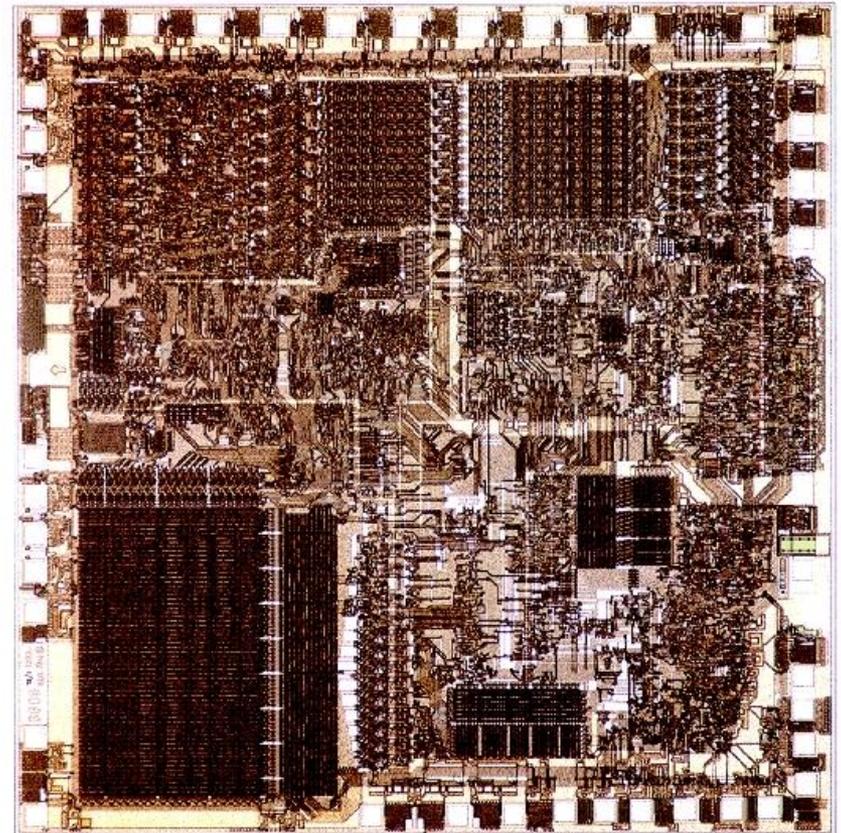
# Interactiunea cu utilizatorul

- Datele introduse de utilizator in forme se regasesc (in functie de metoda aleasa pentru forma, in script-ul indicat ca **tinta** in formular: **action**="...") 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

# Structuri repetitive – tablouri

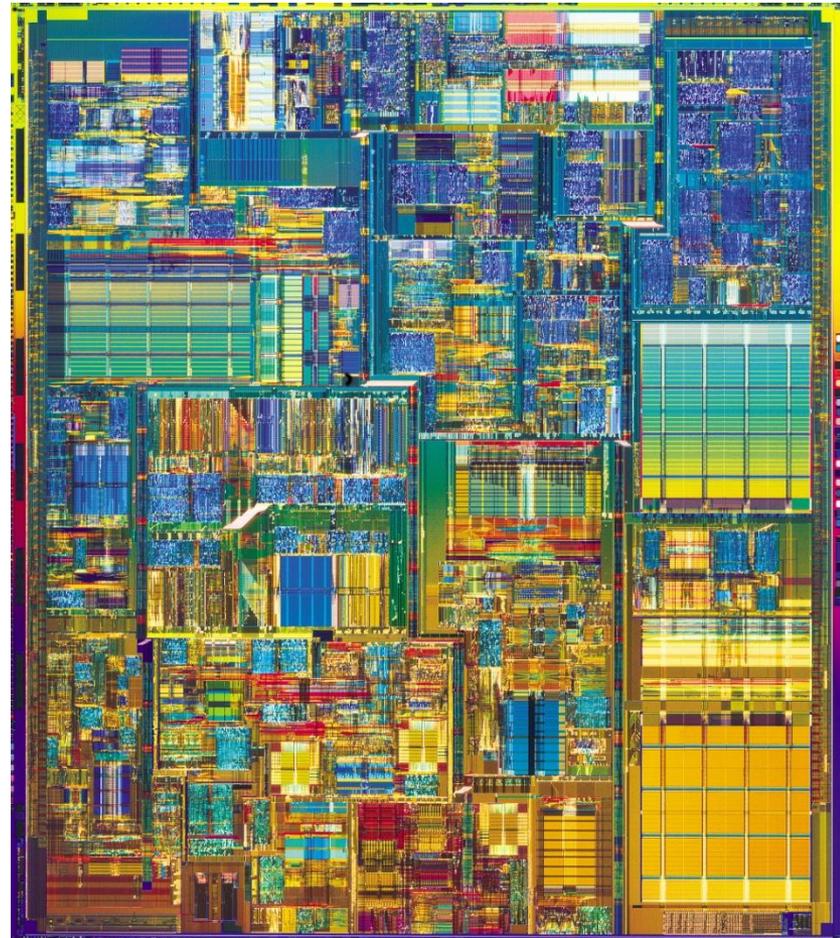
# Impresionant?

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



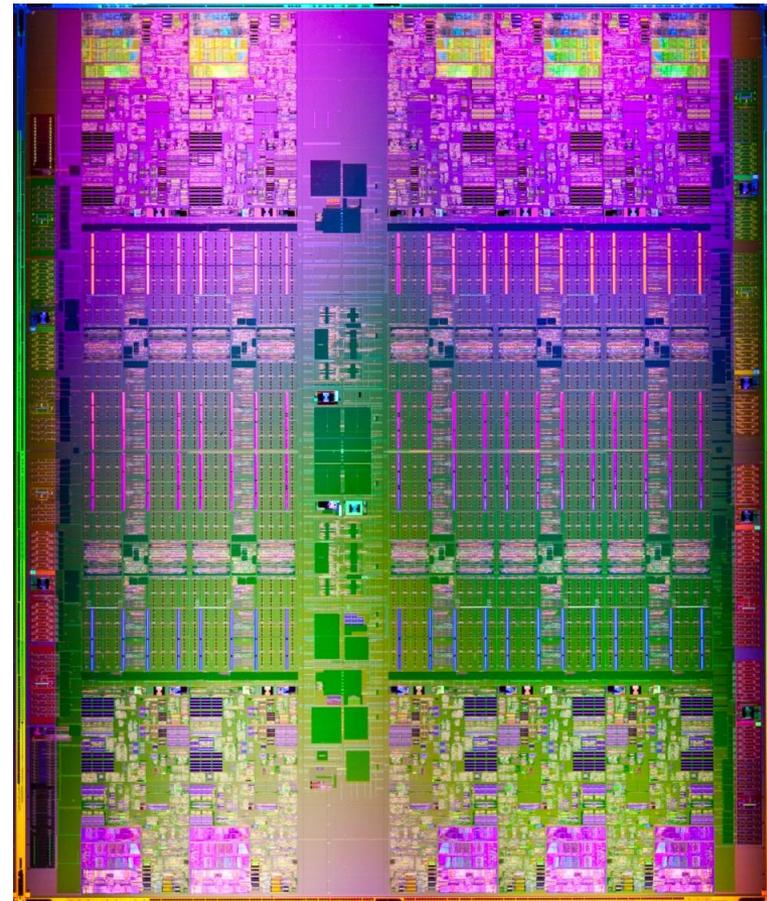
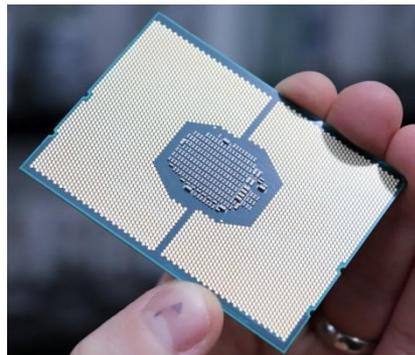
# Impresionant?

- 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

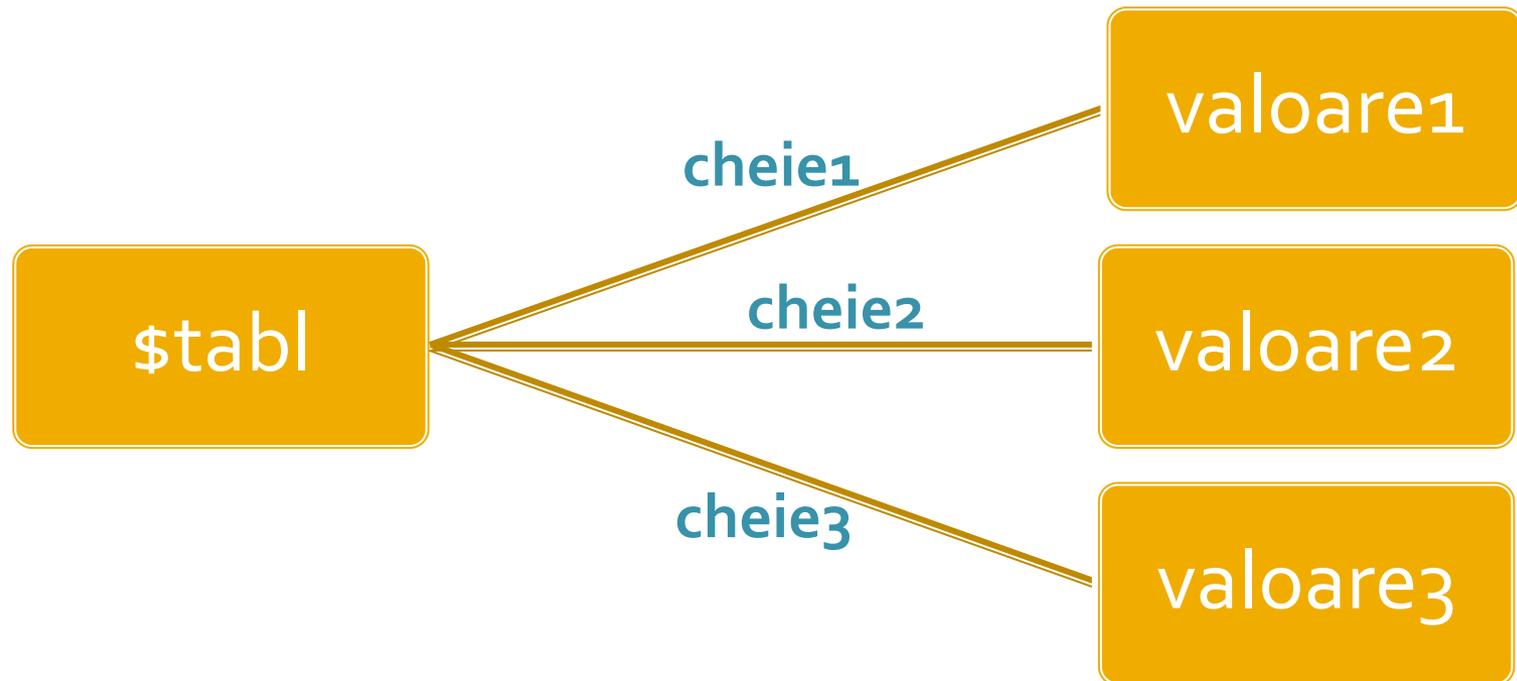
- Efectuare foarte rapida a unui numar **mic** de instructiuni, de **complexitate redusa**, repetate de un numar foarte mare de ori
- Programare: coborarea rationamentului la nivelul de **complexitate redusa**, cu obtinerea performantei prin structuri repetitive simple efectuate rapid.
- Operatii repetitive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

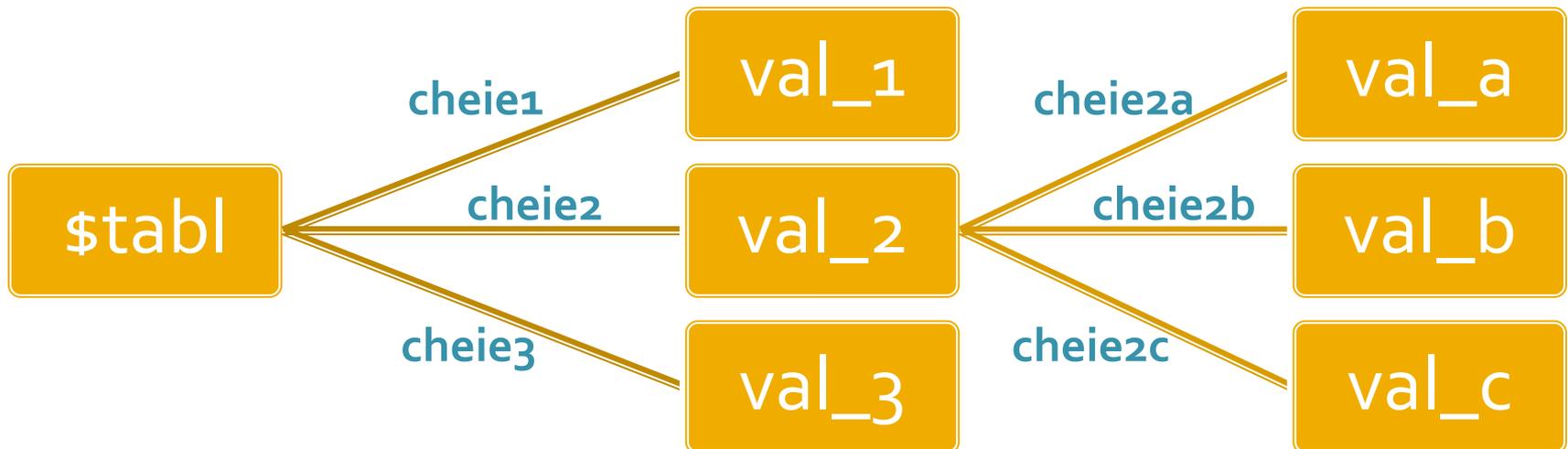
# Tablou = Arbore

- \$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
```

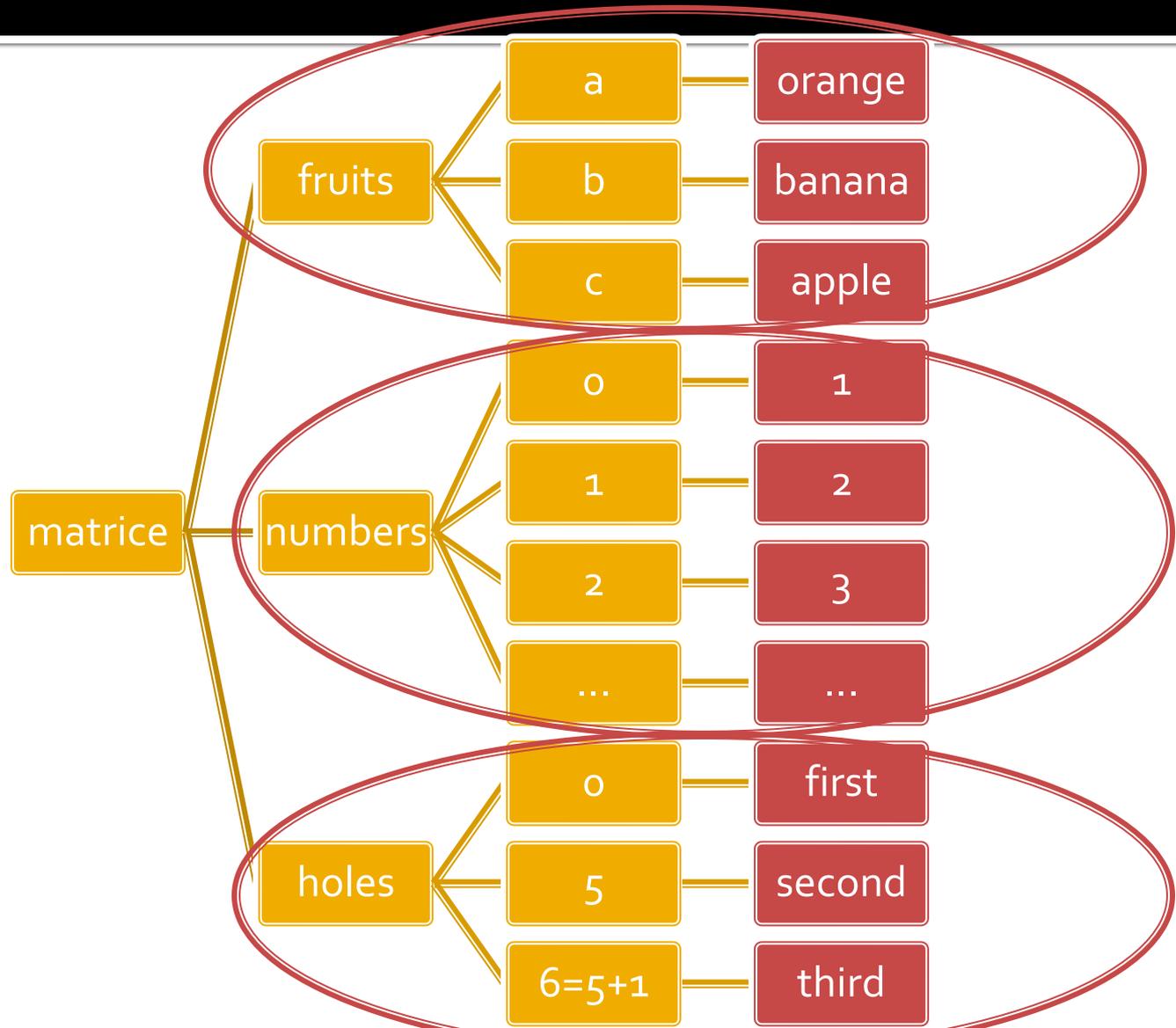
```
$matr[0]=3
```

```
$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 21%
  - 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	<b>IMAGINE</b>	culoare
	<b>Continut</b> (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

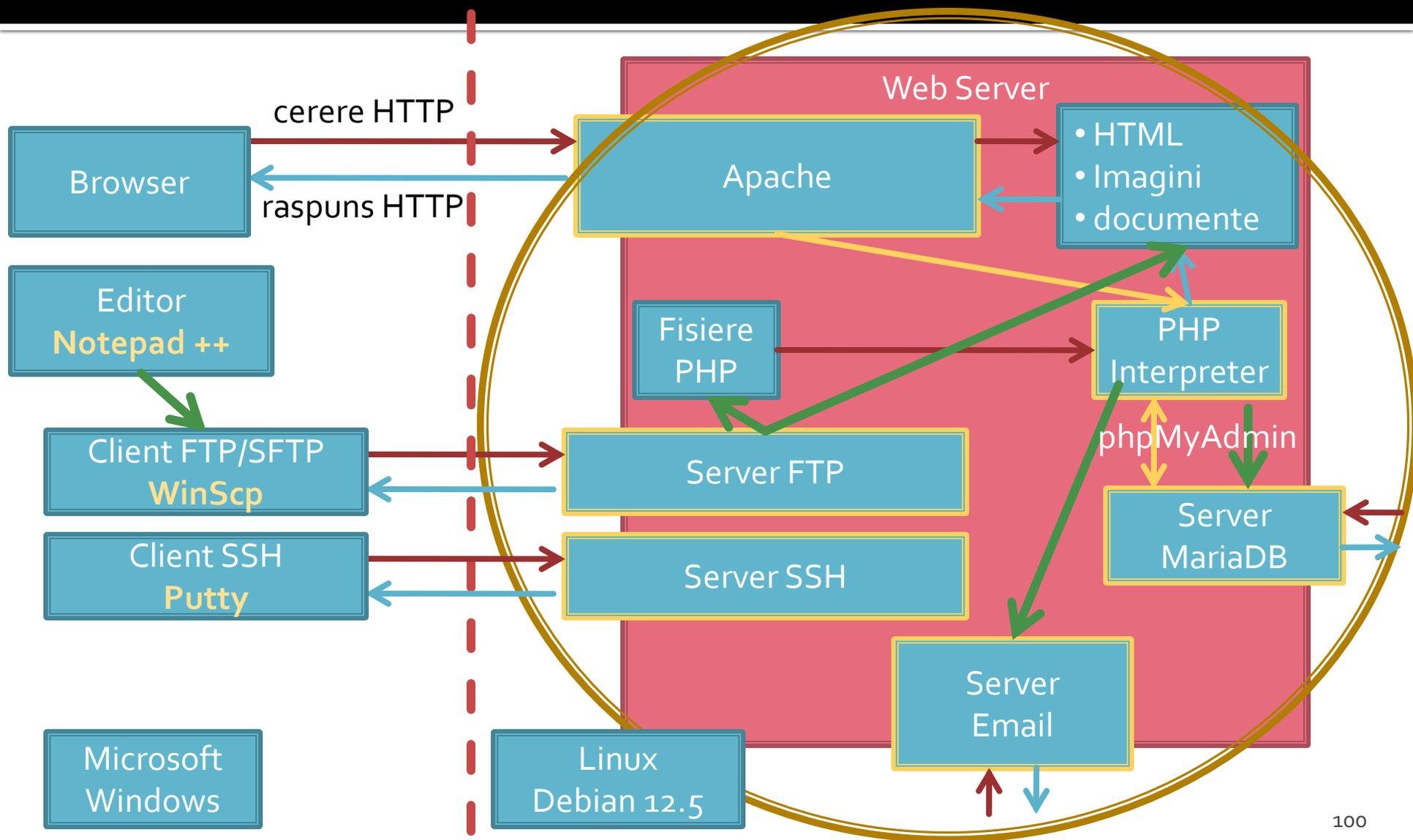
### Rezultate comanda

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

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"/>

Trimite

**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

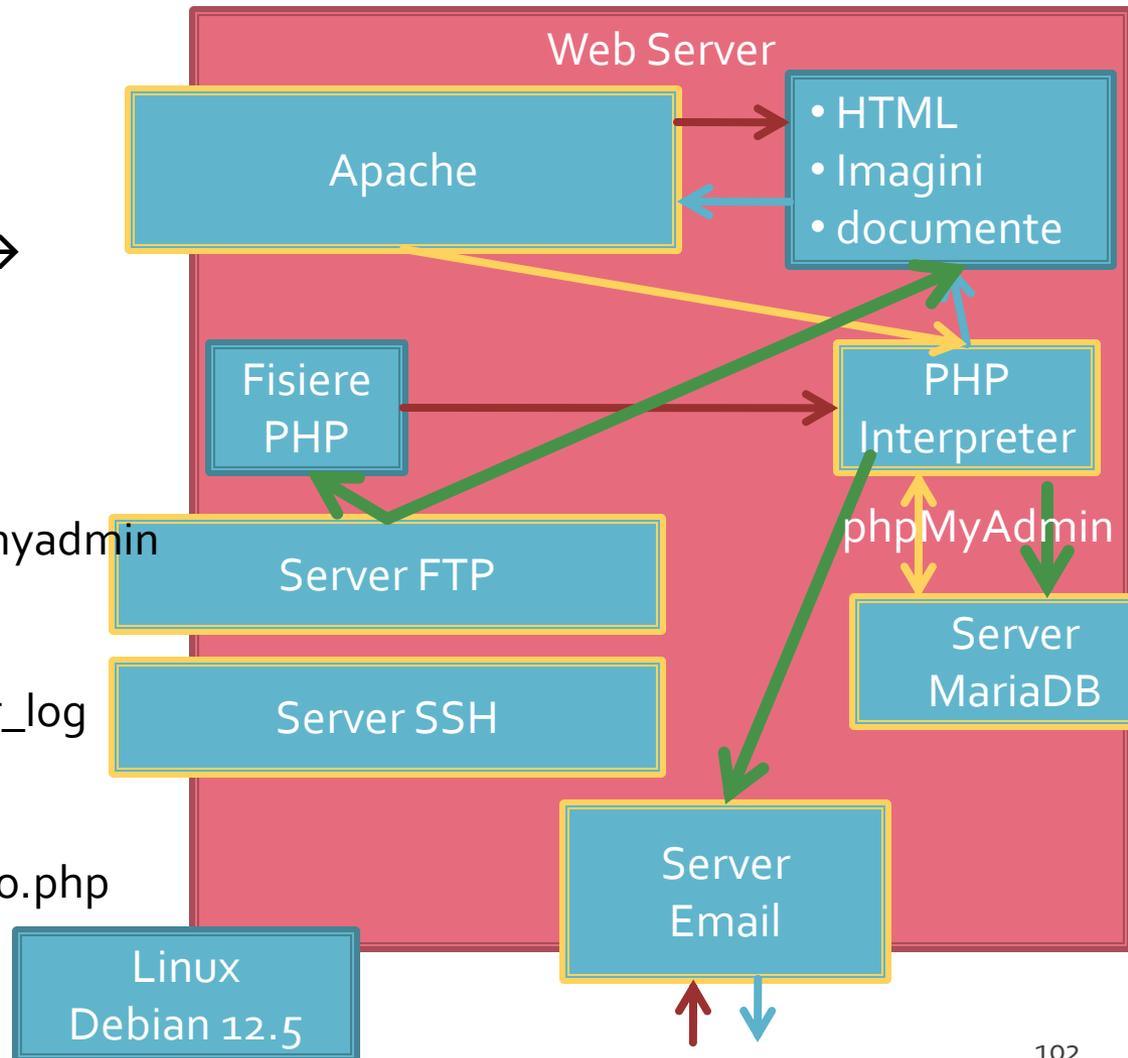
Apache

Server FTP

Server SSH

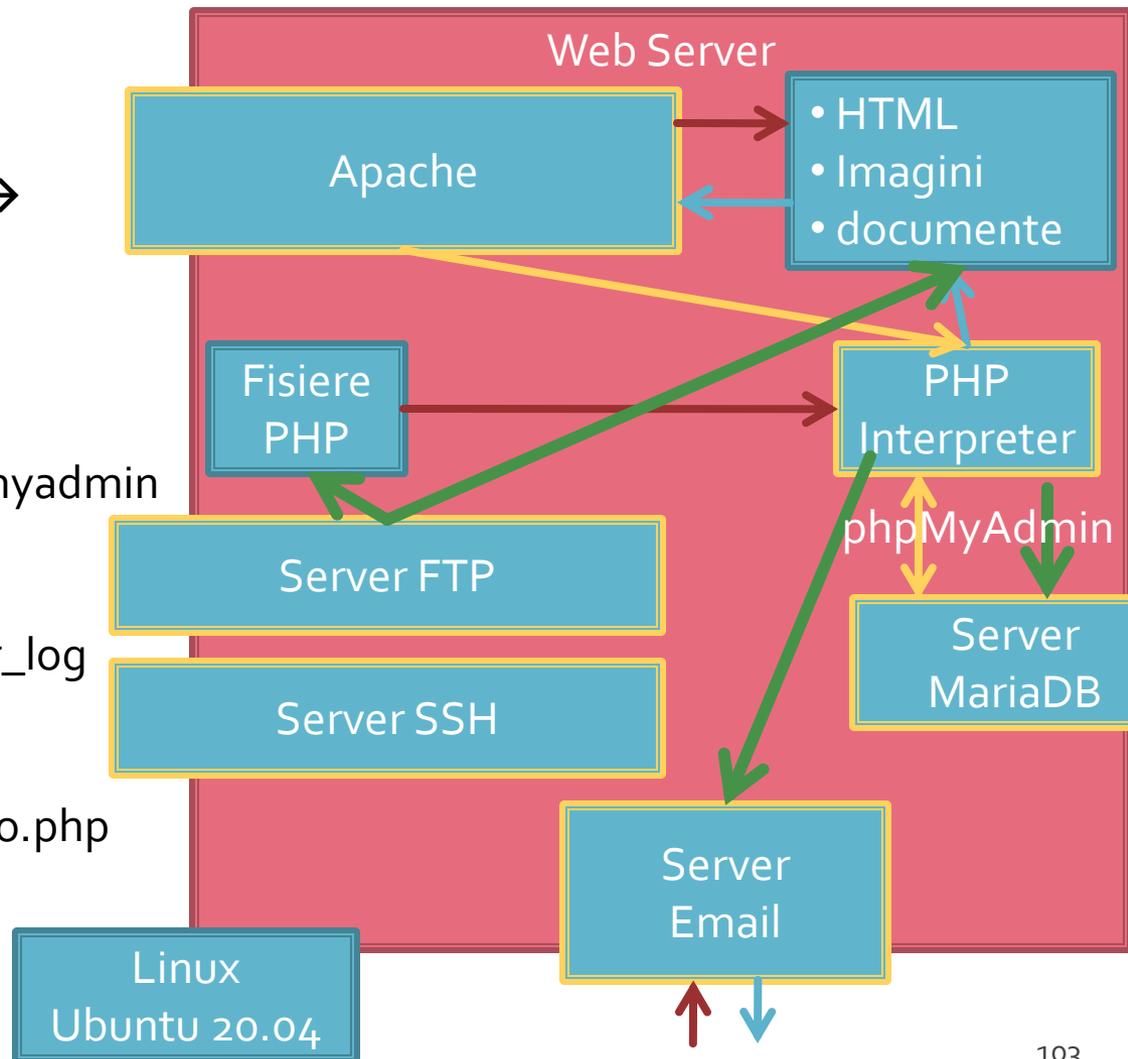
# Utilizzare LAMP

1. login → paw:masteretti
2. su - → 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



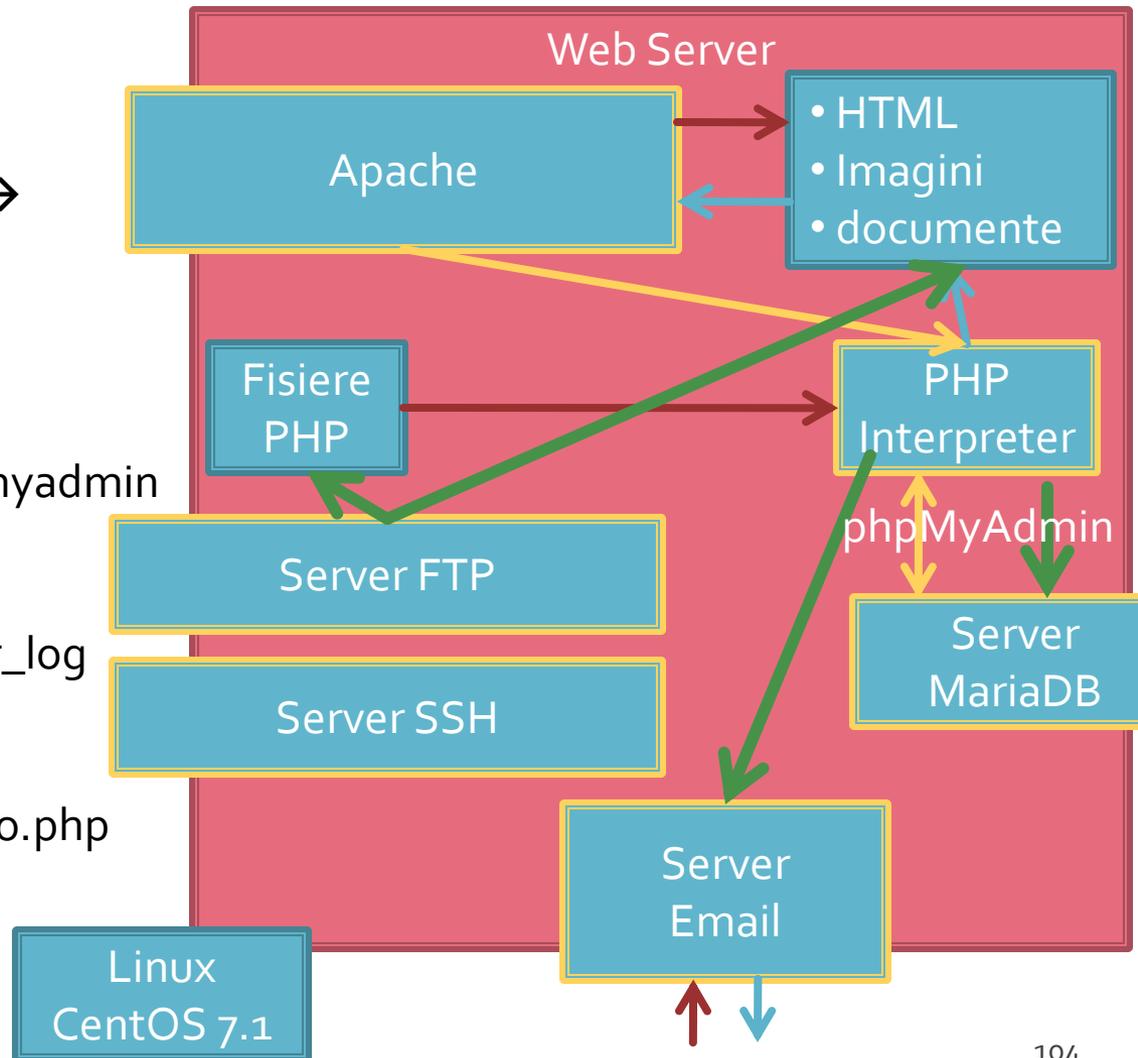
# Utilizzare LAMP

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

```
<input name="nume" ....>
```

```
echo $_POST['nume']; //ceva  
echo $_GET['nume']; //ceva  
echo $_REQUEST['nume']; //ceva
```

ceva

Trimite

get  
post

Interpretor PHP primeste  
\$\_POST  
\$\_GET  
\$\_REQUEST

# Depanare

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

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

# Server referinta LAMP 2026

- 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, 🇸🇪)~~

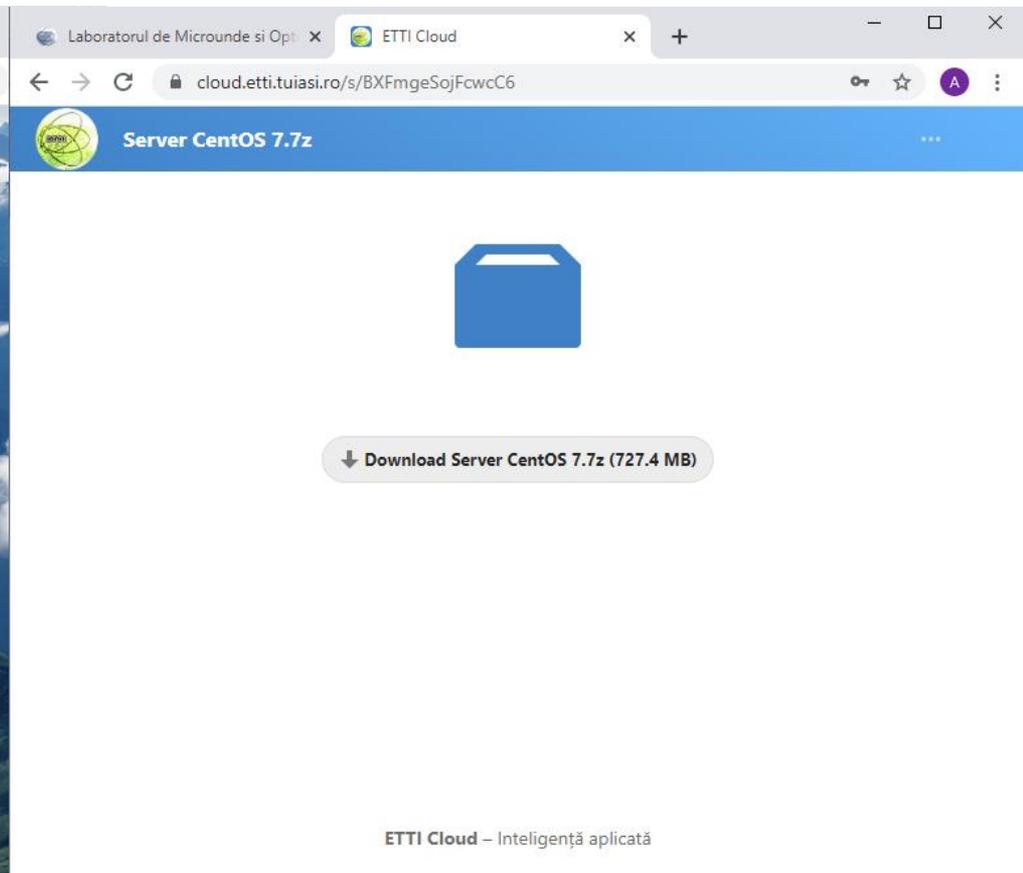
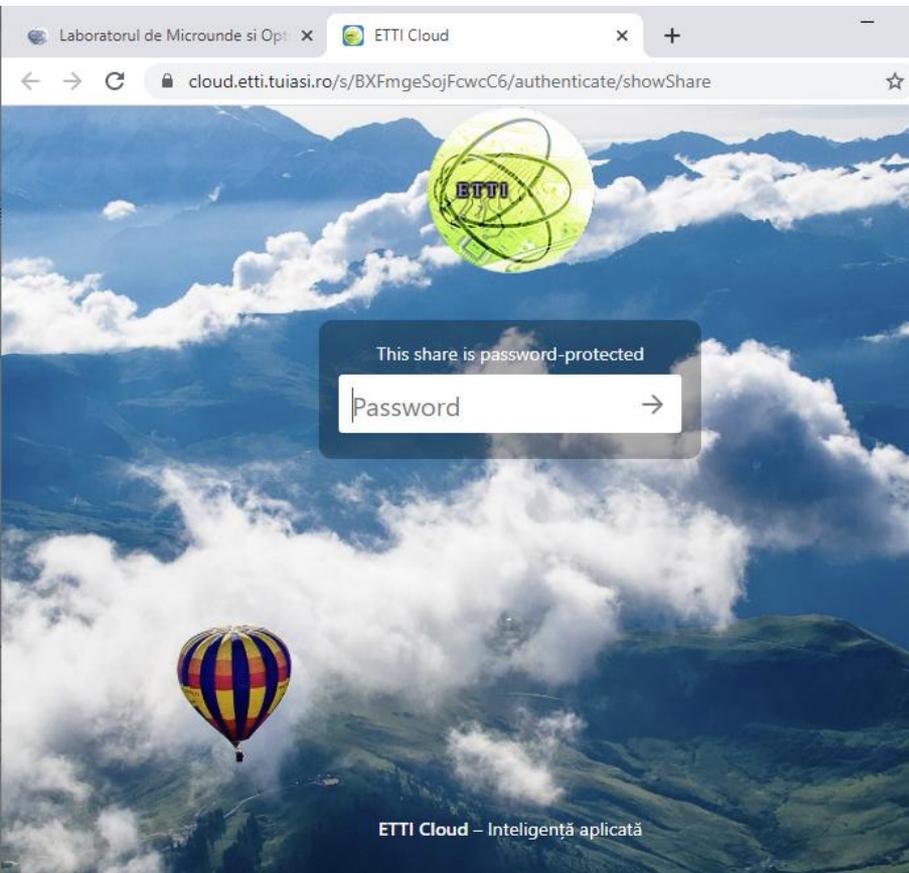
## Examen

[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>
- Inlocuit de VMware Workstation Pro



## VMware Workstation Pro for PC

Build and test nearly any app with the world's leading desktop hypervisor app for Windows and Linux.

DOWNLOAD NOW >

# Server referinta

- Masina virtuala
- VMware Workstation Pro (Broadcom)



## VMware Workstation Pro for PC

Build and test nearly any app with the world's leading desktop hypervisor app for Windows and Linux.

[DOWNLOAD NOW >](#)



Broadcom Inc. Customer sign-in

### Username

Enter your username

Remember me

Next

# Server referinta

The screenshot shows the VMware Workstation 15 Player interface. The title bar reads "VMware Workstation 15 Player (Non-commercial use only)". Below the title bar is a toolbar with a "Player" dropdown menu, a play button, a refresh button, a maximize button, and a close button. The main area is divided into two sections. On the left is a library of virtual machines, with a "Home" header and a list of three VMs: "RF XP Professional", "PAW CentOS 64-bit" (circled in red), and "Server CentOS 64-bit". On the right is a "Welcome to VMware Workstation 15 Player" screen. It features four main options: "Create a New Virtual Machine" (with a plus icon), "Open a Virtual Machine" (with a document icon and circled in red), "Upgrade to VMware Workstation Pro" (with a blue and orange icon), and "Help" (with a question mark icon). At the bottom, there is a disclaimer: "This product is not licensed and is authorized for non-commercial use only. For commercial use, purchase a license. [Buy now.](#)"

VMware Workstation 15 Player (Non-commercial use only)

Player | ▶ | ↻ | □ | ✕

Home

- RF XP Professional
- PAW CentOS 64-bit
- Server CentOS 64-bit

## Welcome to VMware Workstation 15 Player

**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.

**Upgrade to VMware Workstation Pro**  
Get advanced features such as snapshots, virtual network management, and more.

**Help**  
View online help.

This product is not licensed and is authorized for non-commercial use only. For commercial use, purchase a license. [Buy now.](#)

# 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 Windows file explorer window titled "Server Debian" with the address bar set to "Documents > Curs PAW". The file list includes several Debian 12.x 64-bit files. The file "Debian 12.x 64-bit.vmx" is circled in red. An inset window shows the contents of this file, which is a VMX configuration file. The following lines are circled in red:

```
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"
```

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

# 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>

# Aplicatii suport

- Variante portabile

## Laboratory

[Laborator 1](#) (pdf, 1.48 MB, ro, 🇷🇴)

[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, 🇺🇸)

[Server Ubuntu pentru VMWare Player \(cloud\)](#) (link, 0 Bytes, en, 🇺🇸)

[Instalare Ubuntu](#) (pdf, 1.82 MB, en, 🇺🇸)

# 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

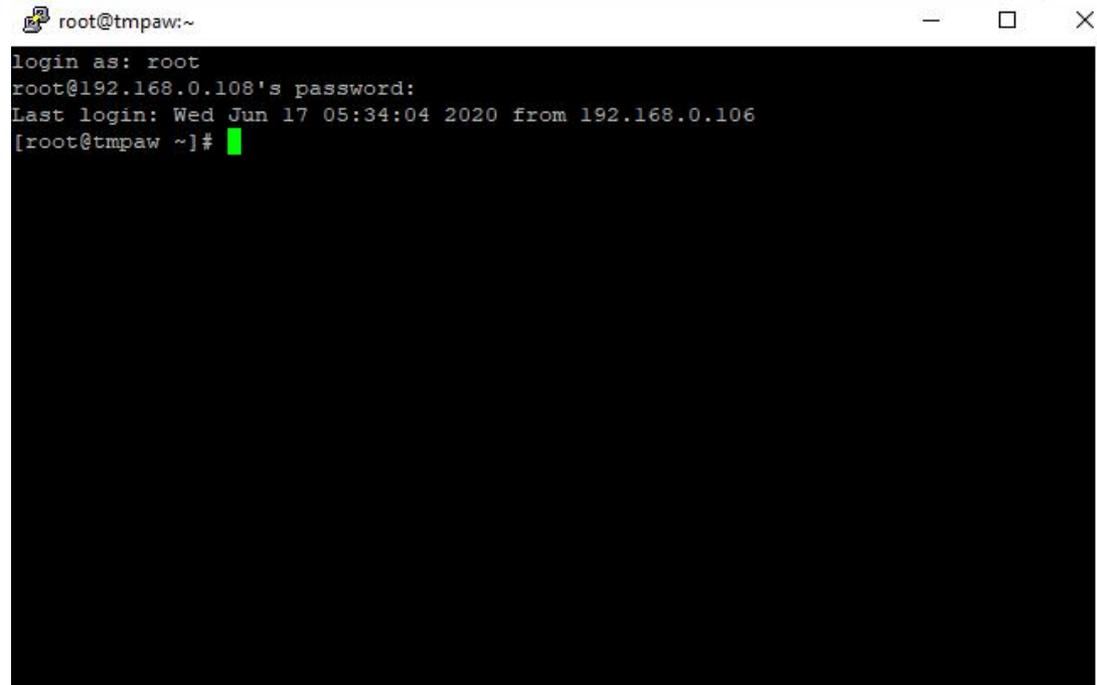
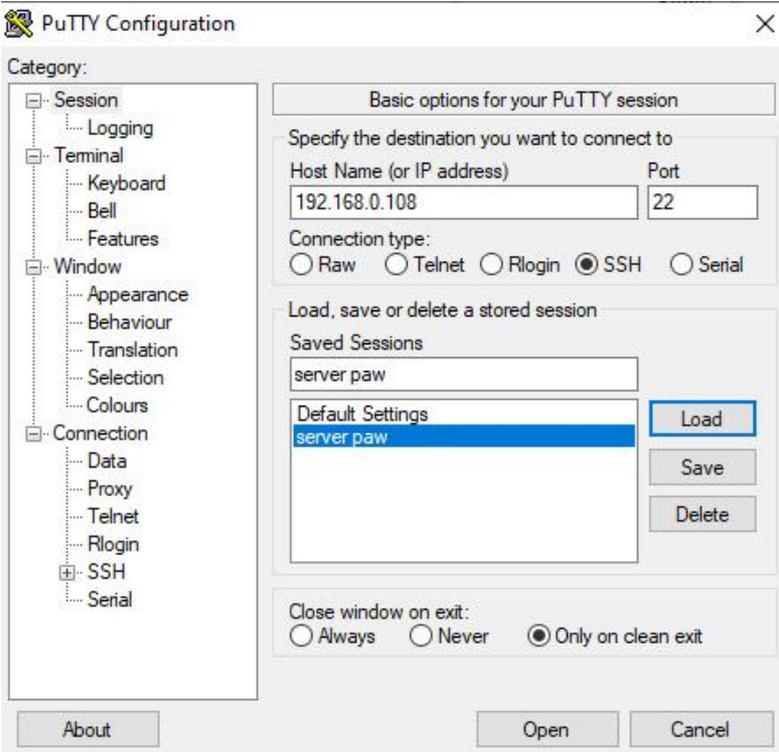
tmpaw login: root
Password:
Last login: Wed Jun 17 05:35:16 from 192.168.0.106
[root@tmpaw ~]# ifconfig
eno16777736: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.108 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 fe80::250:56ff:fe3e:1693 prefixlen 64 scopeid 0x20<link>
    ether 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
- evitare captura mouse, copy/paste etc.



# WinSCP

- client FTP
- upload fisiere

The image shows the WinSCP interface. On the left is a 'Session' configuration dialog box. The 'File protocol' is set to 'SFTP'. The 'Host name' is '192.168.0.108' and the 'Port number' is '22'. The 'User name' is 'student' and the password field is masked with dots. There are 'Edit', 'Advanced...', 'Login', 'Close', and 'Help' buttons.

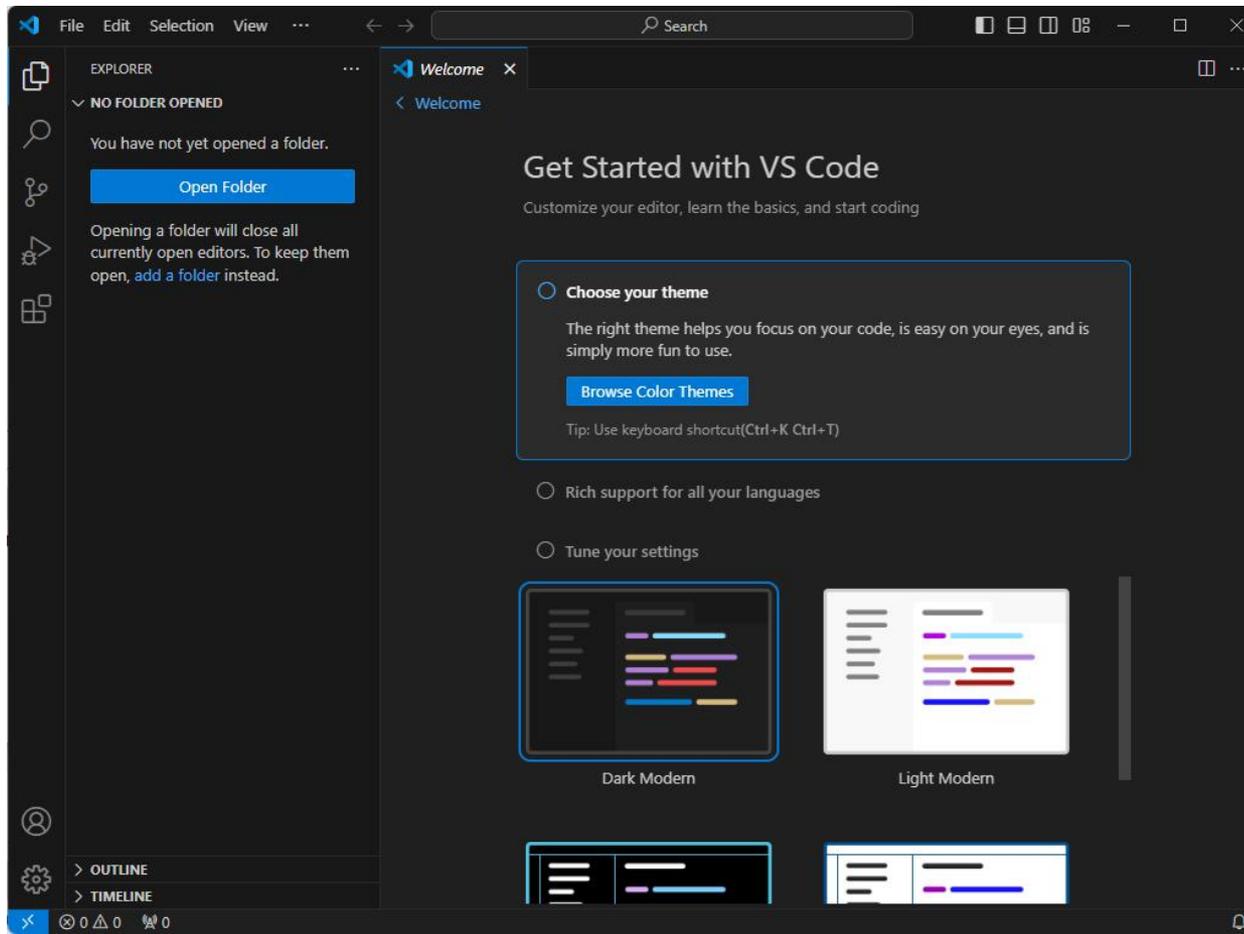
The main window shows a file explorer view of the remote directory. The address bar indicates the path is '/var/www/html'. The file list is as follows:

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

The status bar at the bottom shows '0 B of 5.09 KB in 0 of 4' and the system tray includes 'SFTP-3' and the time '1, 21:06:30'.

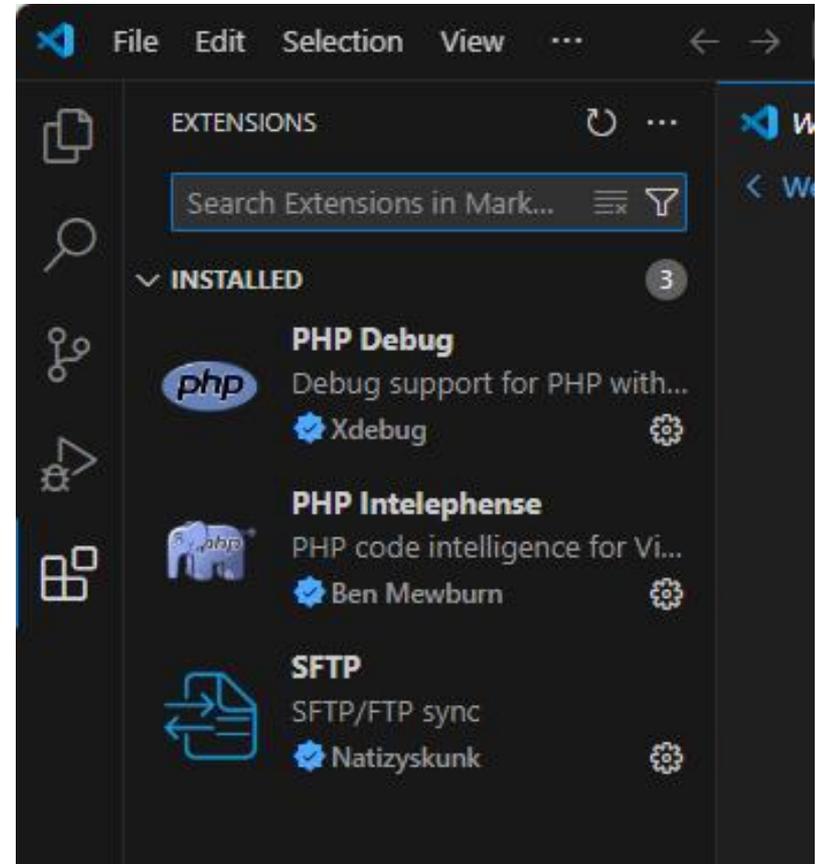
# Visual Studio Code

- 1.87 Portabil (curent 1.97.2)

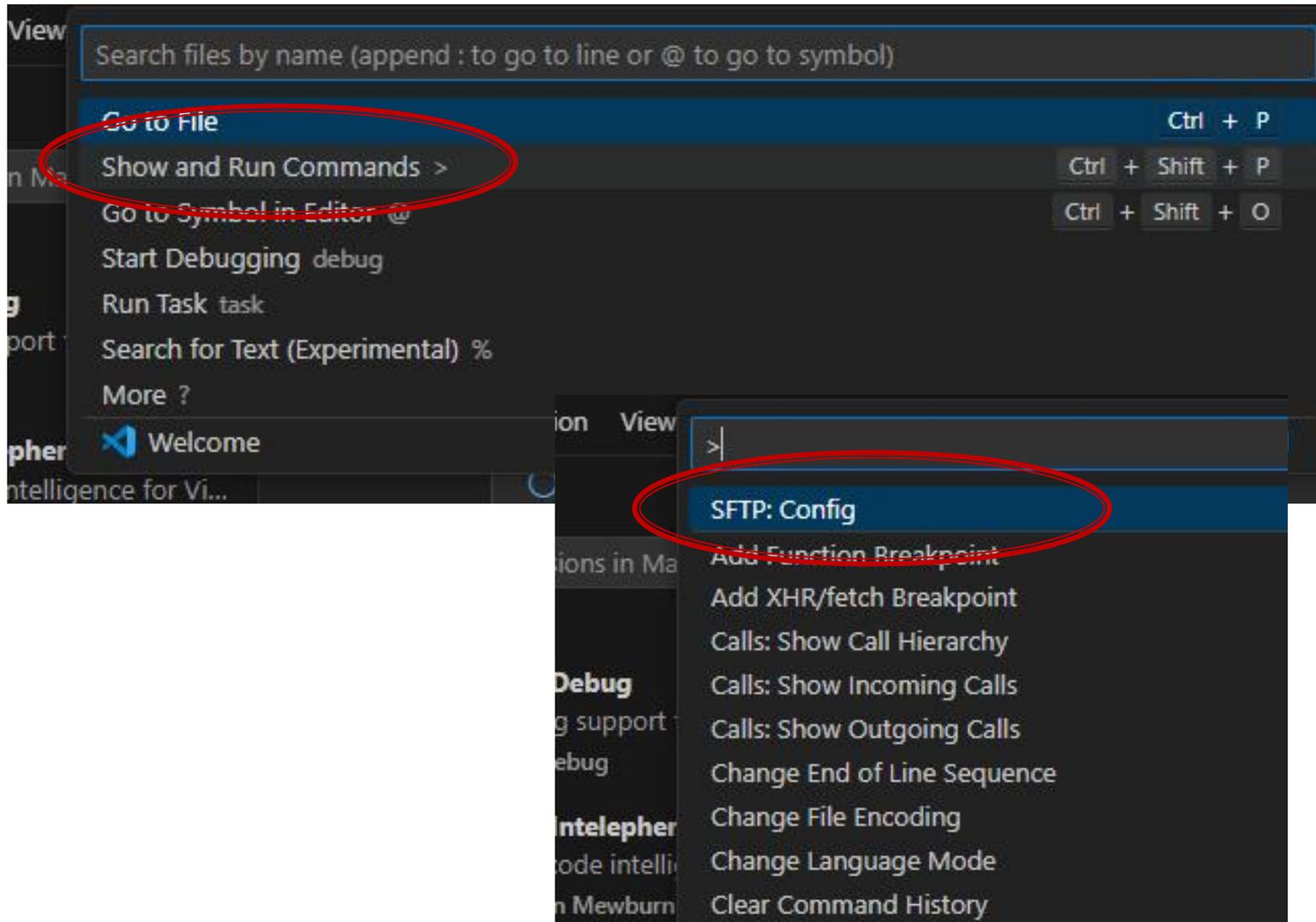


# Visual Studio Code

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



# Visual Studio Code

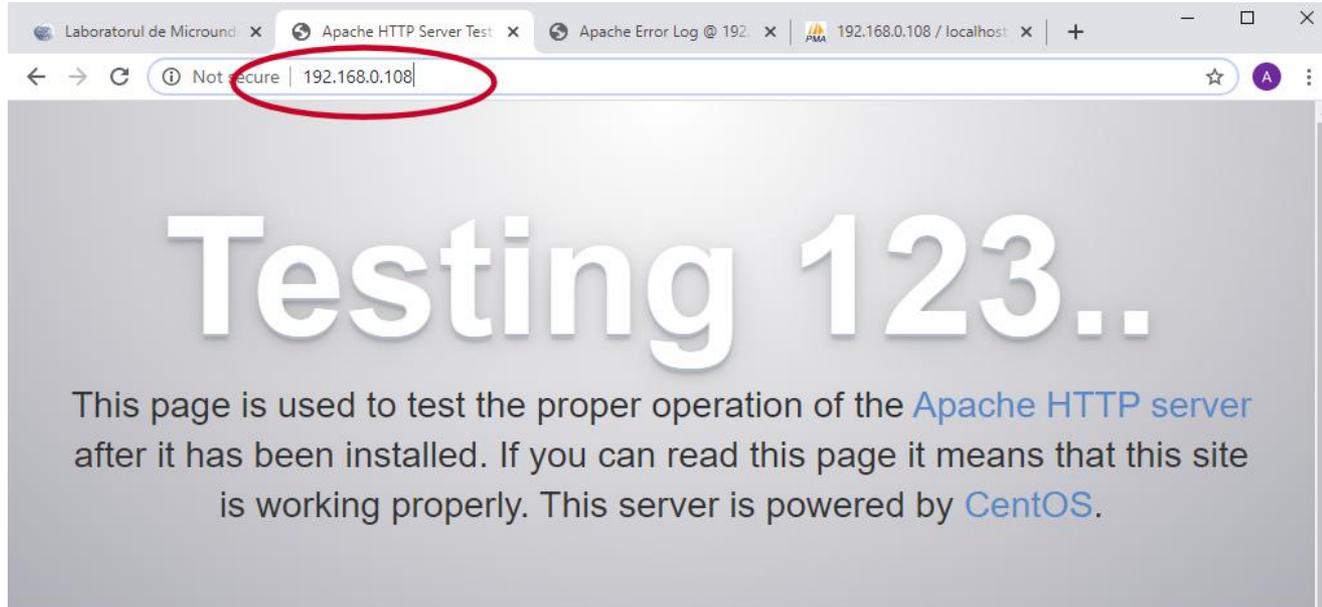


# Visual Studio Code

```
{ } 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 in a browser window. The address bar shows the URL `192.168.0.108/phpmyadmin/...`, which is circled in red. The interface includes a left sidebar with a database tree and a main content area with several settings panels.

**General Settings**

- Change password
- Server connection collation: `utf8mb4_unicode_ci`

**Appearance Settings**

- Language: `English`
- Theme: `pmahomme`
- Font size: `82%`
- More settings

**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: `mysql`
- PHP version: 5.4.16

**phpMyAdmin**

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

# Contact

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