

Laborator 2 (in loc de Curs 3)

2019/2020

Programarea aplicațiilor web

Introdúcere

PAW 2019-2020

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

Nota 2019-2020

- An V
 - 33% E
 - 66% Aplicatii
 - 33% L (0%)
 - 33% P (66%)

Documentatie

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



English | Romana

Main Courses **Master** Staff Research Students

Radiocommunication Systems Microwave IC Web Design

Modern Web Applications Design

Course: TMPAW (2014-2015)

Course Coordinator: Assist.P. Dr. Radu-Florin Damian
Code: DS507RC
Discipline Type: DOMS; Alternative, Synthesis
Credits: 7
Enrollment Year: 5, Sem. 10

Activities

Course: Instructor: Assist.P. Dr. Radu-Florin Damian, 2 Hours/Week, Specialization Section, Timetable:
Laboratory: Instructor: Assist.P. Dr. Radu-Florin Damian, 1 Hours/Week, Half Group, Timetable:

Evaluation

Type: **Examen**

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

Grades

Not yet

Attendance

Not yet

Materials

Course Slides

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

rf-opto.etti.tuiasi.ro

- http://rf-opto.etti.tuiasi.ro/master_it.php
- Laborator 2011-2012
 - Exerciții/Performanța MySQL
 - optional

Web Design

Concepte generale

Concepte

- Steve Krug: “Don't Make Me Think”
- Utilizatorii scaneaza pagina, nu o citesc
- Informatia trebuie redusa la minimul necesar in majoritatea locurilor
- “Daca ceva e greu de utilizat, mai bine nu o utilizez”
- Utilizatorii au comportament de **rechin**
- Originalitatea **nu e** intotdeauna **recomandata**

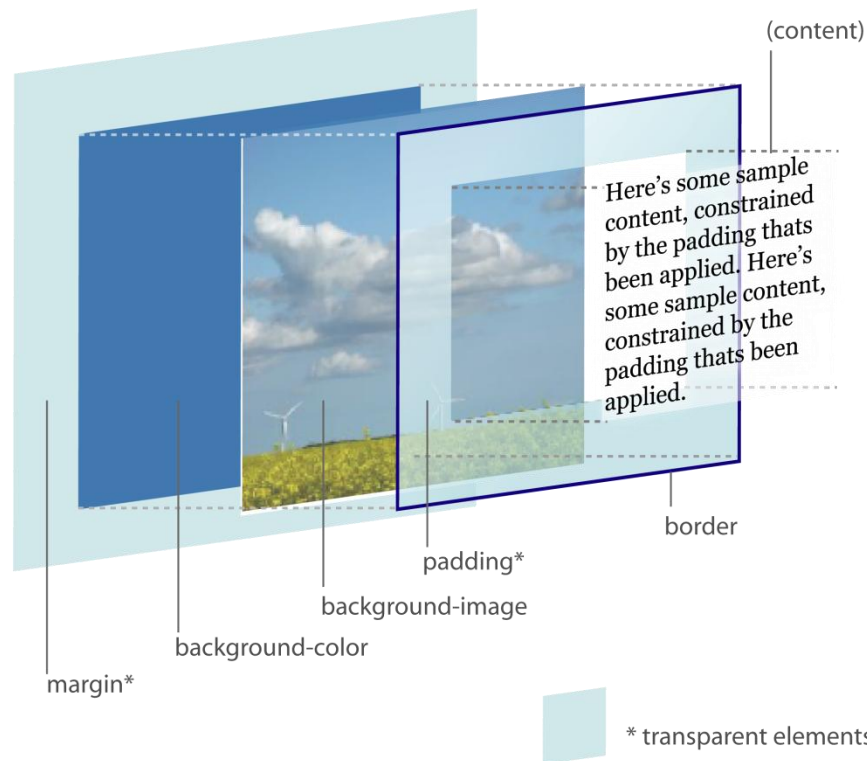
Capitolul II

CSS

CSS Box Model

- Orientat in jurul conceptului de “cutie” – Box model

THE CSS BOX MODEL HIERARCHY

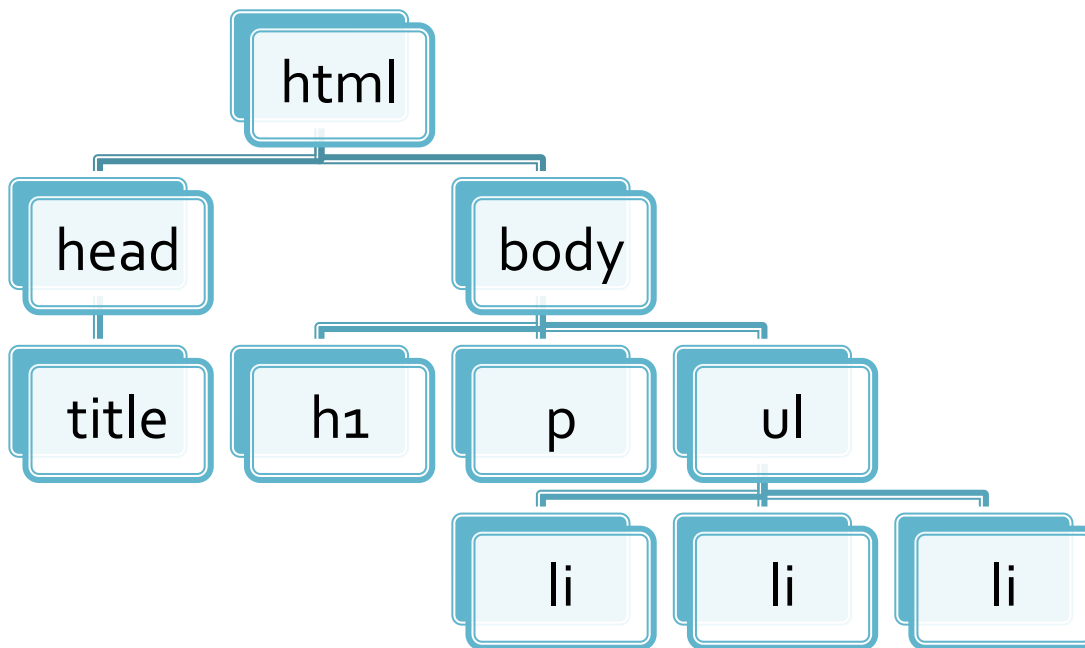


Pozitionare

- `position`: absolute | fixed | relative | static | inherit;
- `top, right, bottom, left`: auto | [valoare] | [%] | inherit;
- `z-index`: [valoare intreaga]; - mai mare = deasupra

DOM

- DOM – Document Object Model: structura de tip graf



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

Relatie cu Javascript in aplicatii

- Javascript poate accesa prin intermediul obiectului DOM atasat documentului HTML elementele din structura arbore DOM si modifica proprietatile corespunzatoare
- se deschide astfel calea spre aplicatii dinamice

CSS Zen Garden

- <http://www.csszengarden.com/>
- un fisier html comun
- schimbarea formei permisa numai prin intermediul CSS

CSS Zen Garden – HTML original

css Zen Garden

The Beauty of CSS Design

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

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

The Road to Enlightenment

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

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

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

So What is This About?

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

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

CSS Zen Garden



Css Zen Garden

the beauty of css design.

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

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



The Road To Enlightenment

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

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

SELECT A DESIGN:

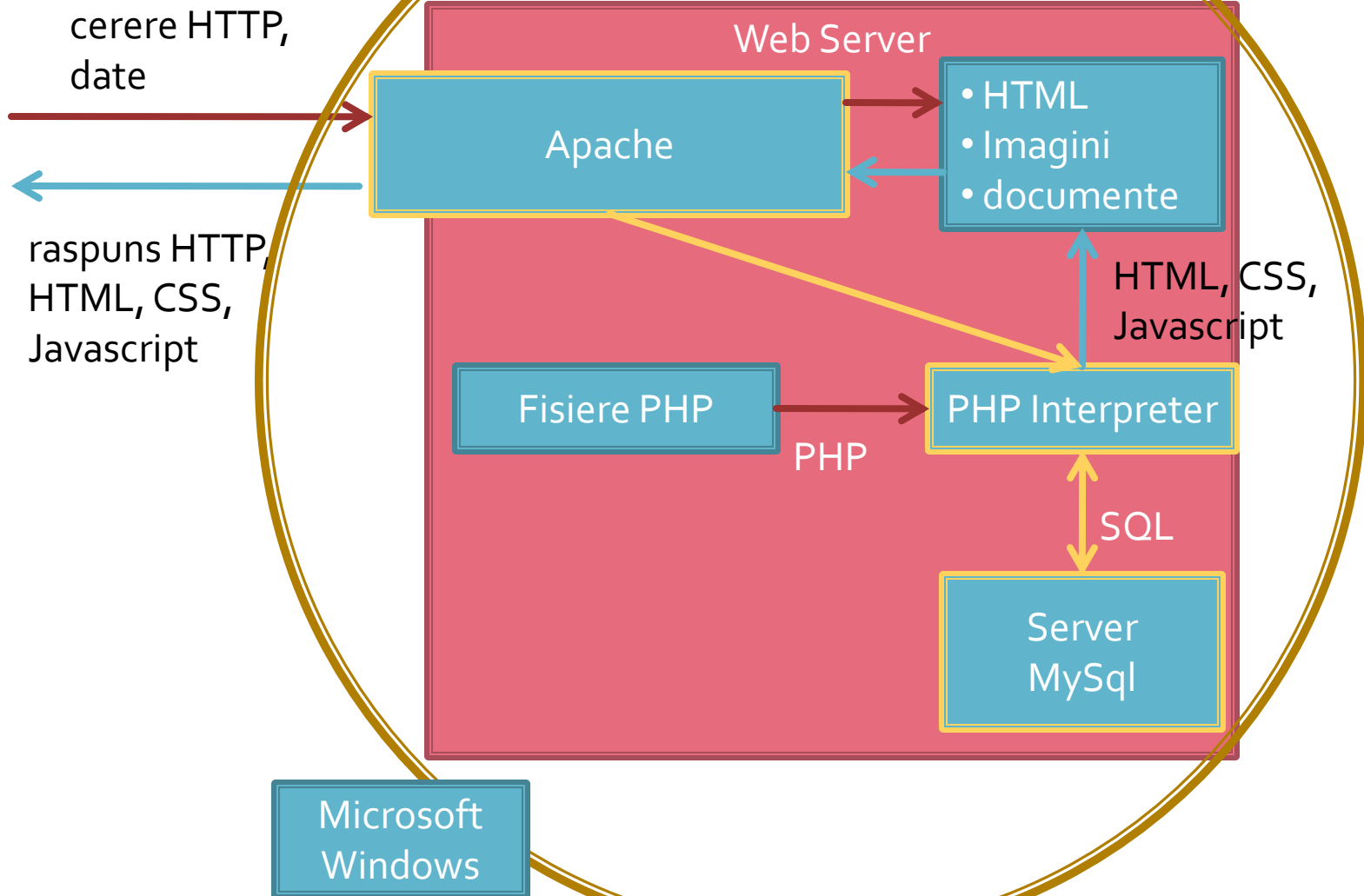
 [Under the Sea!](#)
by Eric Stoltz

 [Make 'em Proud](#)
by Michael McAghon and
Scotty Reif snyder

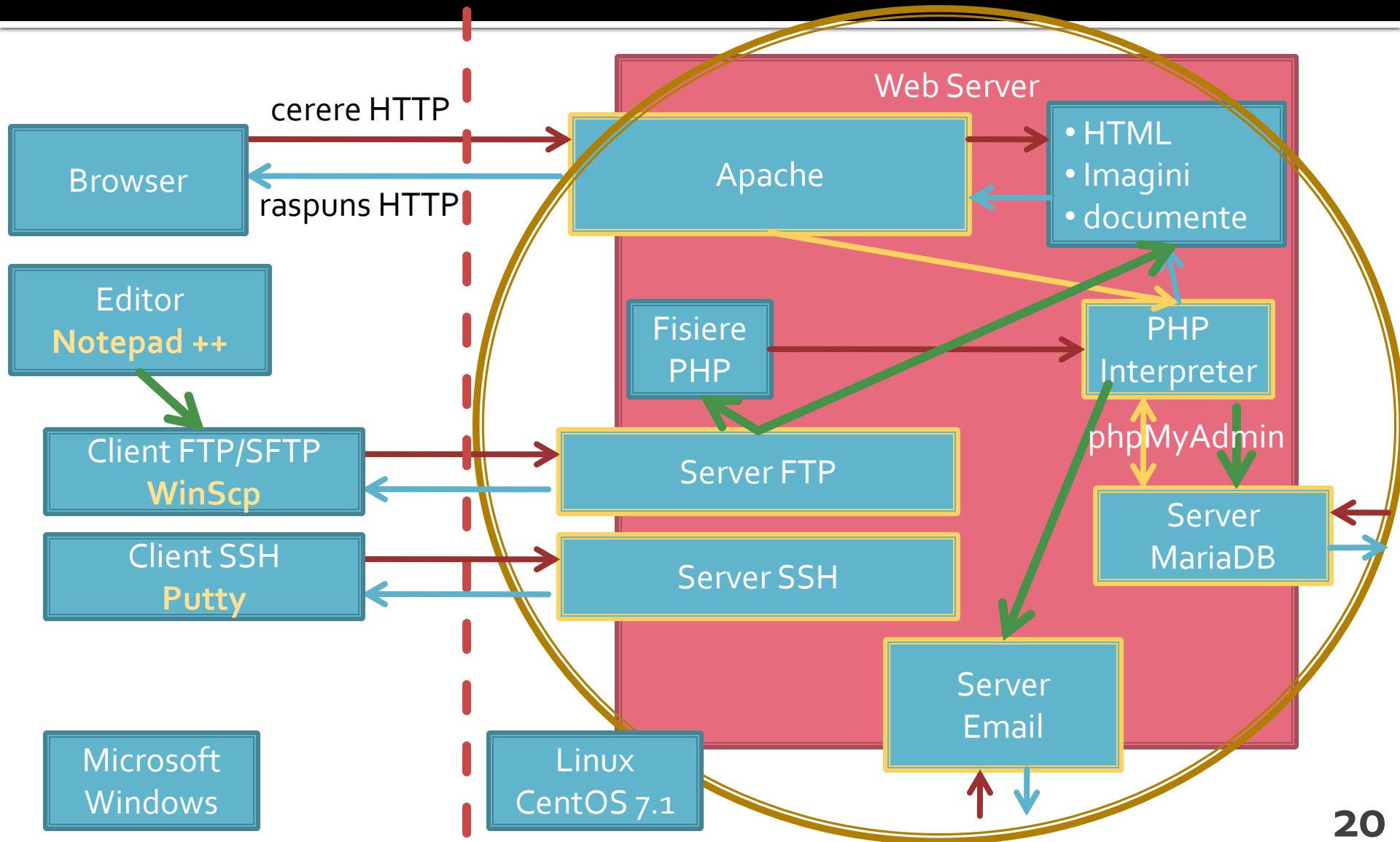
Consideratii generale

Aplicatii

WAMP



LAMP



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

- 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



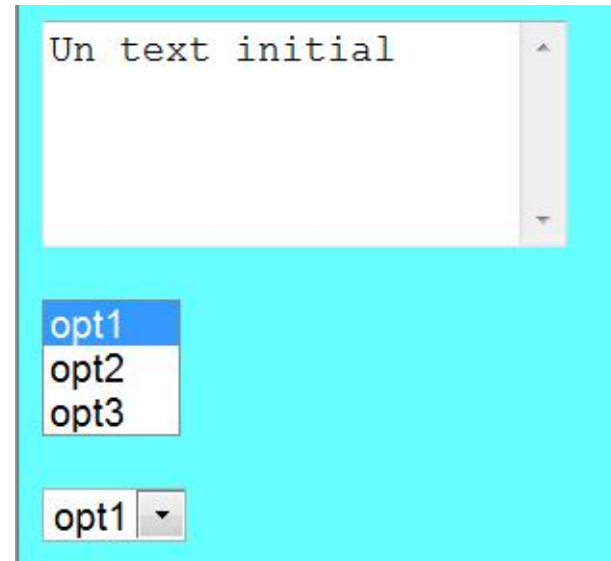
but2

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



Exemplu – forma

- Mic magazin online
- Formular de comanda cu procesarea comenzii

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

Magazin online XXX SRL

Realizati comanda

Produs	Cantitate
Carti	1
Caiete	2
Penare	3

Exemplu – raspuns static

- fisier html
- fisierele HTML sunt doar “servite” de server
- in aparenta a existat o procesare, real **nu**

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

Magazin online XXX SRL

Rezultate comanda

Comanda receptionata

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

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

```
539         <td><?php echo $row['Documente'];?>&nbsp;</td>
540         <td><?php echo $row['user_creat'];?>&nbsp;</td>
541         <td class="smaller"><a href="control_lot.php?id=-<?php echo $row['ID_LOT'];?>">dezactiveaza</a><br /><a href=
"control_lot.php?id=<?php echo $row['ID_LOT'];?>">modifica</a></td>
542     </tr>
543     <?php $index++;
544     } while ( $row = mysql_fetch_assoc($result));?>
545 </table><?php
546 }
547 else
548 {
549     echo "<p>Nu exista loturi active</p>";
550 }
551 ?>
552
553 <p class="title">Loturi inactive</p>
554 <?php
555 $query = "SELECT l.*, c.`nume_user` AS `user_creat`
556         FROM `lot` AS l
557         LEFT JOIN `users` AS c ON (l.`User`=c.`id_user`)
558         WHERE l.`Activ` = 0 ORDER BY l.`ID_LOT` DESC";
559 $result = mysql_query($query);
560 $total=0;
561 if ($result && (mysql_num_rows($result) > 0))
562 {
563     $total=mysql_num_rows($result);
564     $row = mysql_fetch_assoc($result);
565 }
566 if ($total>0)
567 {?>
568 <table align="center">
569     <tr class="lista_titlu">
570         <td align="center">Nr. </td>
```

Separare cod PHP

- un fisier sursa PHP este un fisier HTML (in general) cu sectiuni de cod PHP
- interpretorul PHP cauta sectiunile pe care trebuie sa le interpreteze si interiorul lor proceseaza instructiuni ca fiind PHP
- ce se gaseste in **exteriorul** acestor sectiuni este trimis spre server-ul web **nemodificat**

Separare cod PHP

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

Variante de integrare

- echo afiseaza un text la "iesire" (echivalent cu printf() 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

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>';  
?>
```

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

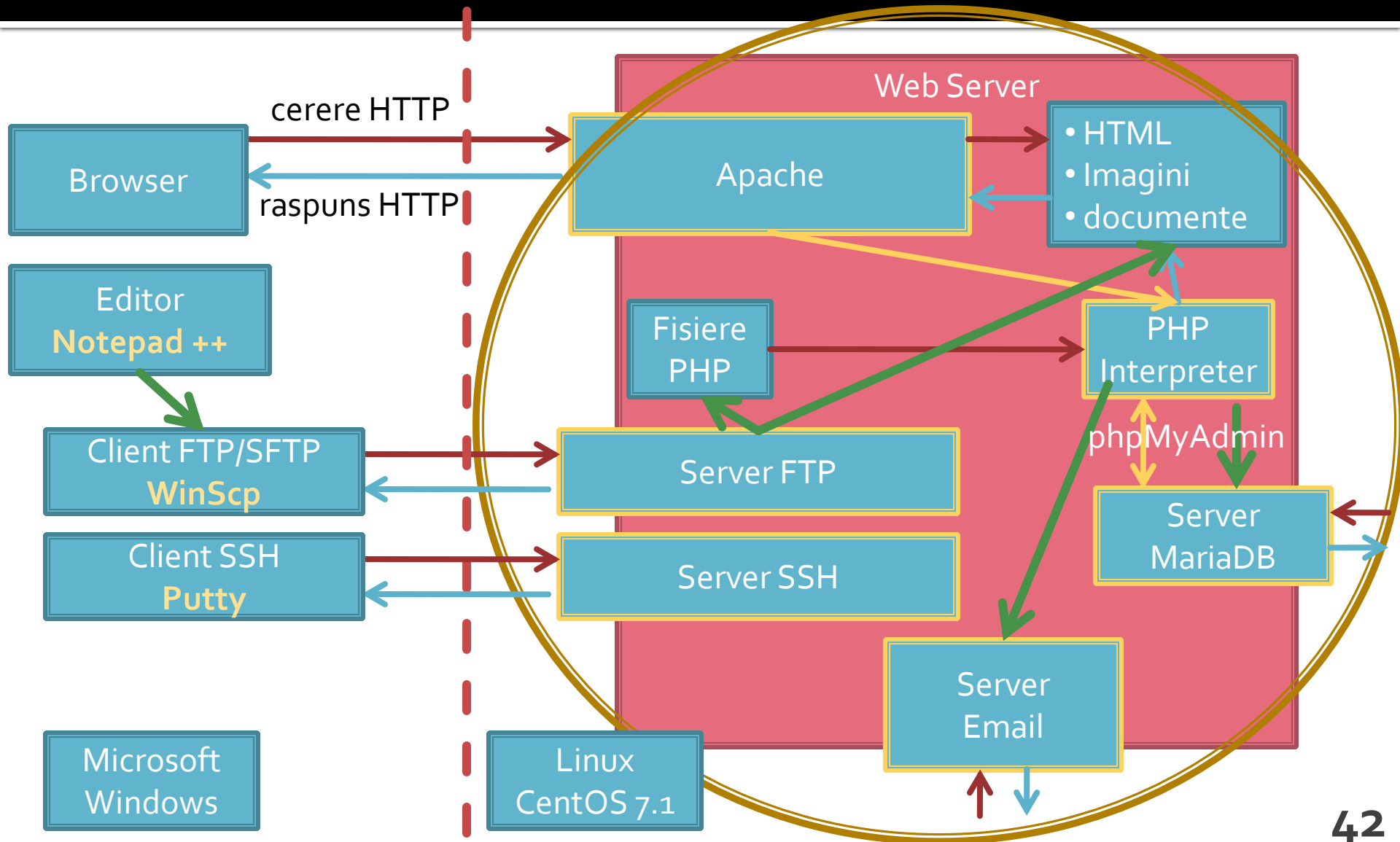
- forma din schita alaturata
- forma paginilor:
 - tabel controlat prin CSS

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

Exemplu

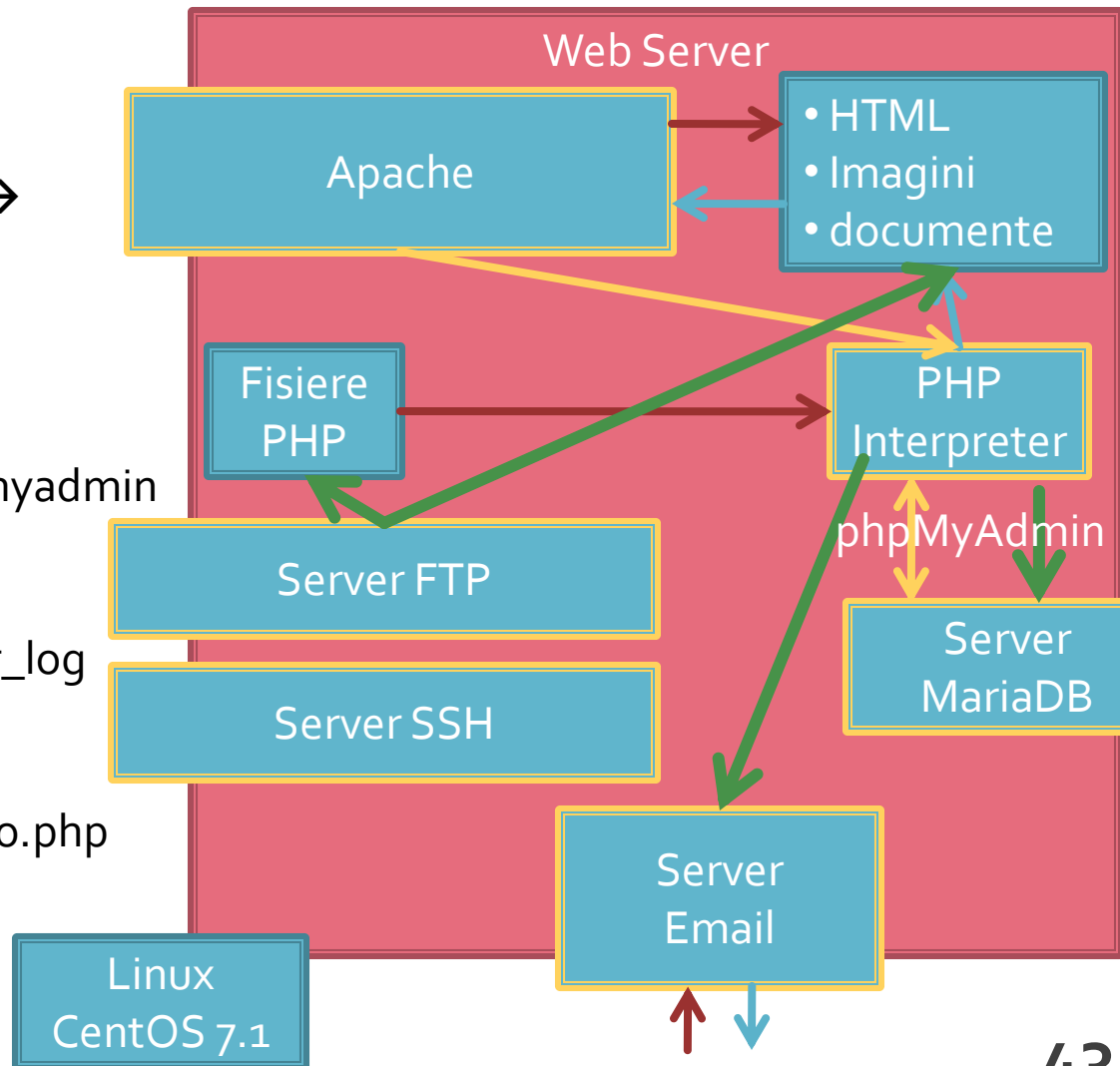
Magazin	Firma X SRL
Continut	

Utilizare LAMP



Utilizare LAMP

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



Contact

- Laboratorul de microunde si optoelectronica
- <http://rf-opto.etti.tuiasi.ro>
- rdamian@etti.tuiasi.ro