

Curs 11

2020/2021

# Databases, Web Programming and Interfacing

- Databases, Web Programming and Interfacing
  - An VI IT<sub>4</sub>T
    - 1C/1L/1P
- Orar
  - every week (fiecare saptamana) 1C + 2L (17-20)

# Grade

- 10% - Test/Examen – last week – 1h
- 40% - Personal/Team Project

# Acces

## ■ Personalizat



### Date:

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

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### Note obtinute

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

Nume

Email

Cod de verificare

Trimite

# Online

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

English | Romana |

Start Didactic Master Colectiv Cercetare Studii

Note Lista Studenti Examene Fotografii

**POPESCU GOPO ION**

Fotografia nu exista

Date:

Grupa	5700 (2019/2020)
Specializarea	Inginerie electronica si telecomunicatii
Marca	7000021

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**Note obtinute**

Inca nu a fost notat.

Start Didactic Master Colectiv C

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**Identificare**

Introduceti numele si adresa de email utilizata la inscriere

Nume  
POPESCU GOPO

**E-mail/Parola**

Introduceti codul afisat mai jos

**4db4457**

Trimite

# Online

- acces email/parola

[Start](#) [Didactic](#) [Master](#) [Colectiv](#)

[Note](#) [Lista Studenti](#) [Examene](#) [Fotografii](#)

## POPESCU GOPO ION

Fotografia  
nu exista

**Date:**

Grupa	5700 (2019/2020)
Specializarea	Inginerie electronica
Marca	7000021

Se acceseaza site-ul **ca acest student!**

[Start](#) [Didactic](#) [Master](#) [Colectiv](#) [C](#)

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## POPESCU GOPO ION

Fotografia  
nu exista

**Date:**

Grupa	5700 (2019/2020)
Specializarea	Inginerie electronica s
Marca	7000021

Se acceseaza site-ul **ca acest student (inclusiv examene)!**


# Manual examen online

- Aplicatia de examen online utilizata intens la:
  - curs (prezenta)
  - laborator
  - 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 (prezenta curs/rezultate laborator)
  - perioada scurta (teste: 15min, examen: 2h)

The screenshot shows a web interface for an online exam. At the top is a dark blue navigation bar with links: Start, Didactic, Master, Colectiv, Cercetare, and **Studenti**. Below this is a lighter blue bar with links: Note, Lista Studenti, **Examen**, and Fotografii. A horizontal timeline of exam stages is displayed, with the first stage, 'Anunț 17:28 (29/04/2020)', highlighted with a red circle. The other stages are: '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 the timeline, another red circle highlights a timer showing '01 m 08 s' and a button 'Reincarca acum'. Below the timeline, the section 'Anunț' contains the text: 'In acest examen se verifica diverse actiuni ale studentilor pentru examen'. Underneath, the section 'Ora pe server' states: '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', with the timestamp circled in red.

Start Didactic Master Colectiv Cercetare **Studenti**

Note Lista Studenti **Examen** Fotografii

<b>Anunț</b> 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**



2020/2021

# Project

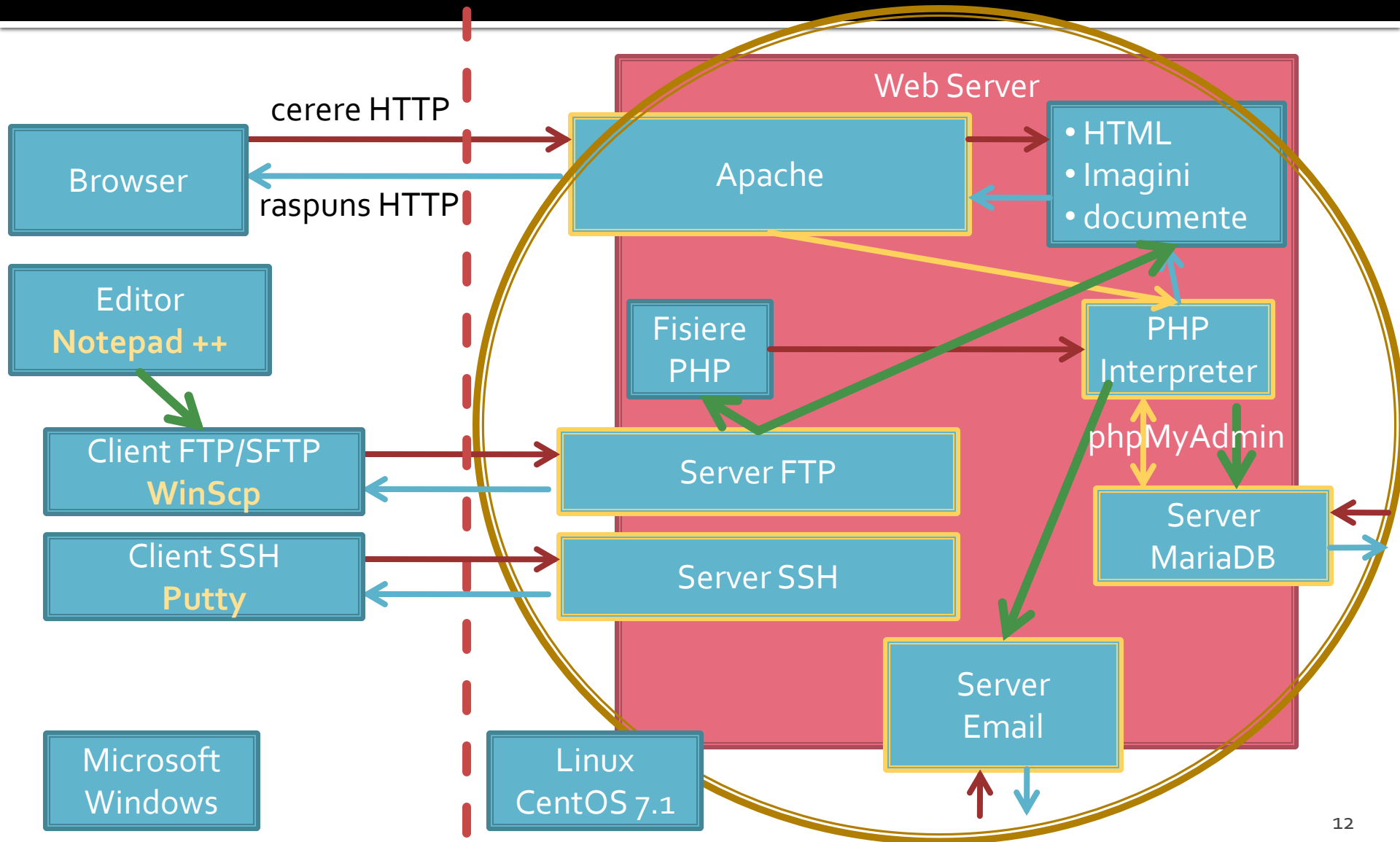
# Proiect

- On-line
- Teme mai simple
- Evaluare complexa (sustinere + fisiere)
- Predare 3 fisiere
  - un fișier **\*.pdf** (print-screen din aplicația rulată, cu scurte explicații de utilizare, un mini-manual al aplicației respective)
  - un fișier **\*.sql** cu backup-ul bazei de date de care are nevoie aplicația pentru a funcționa
  - un fișier cu arhiva directorului conținând aplicația (fișiere \*.php, \*.jpg, structură de directoare etc., arhivate: **\*.zip**, **\*.7z** etc.)

# Evaluarea proiectelor

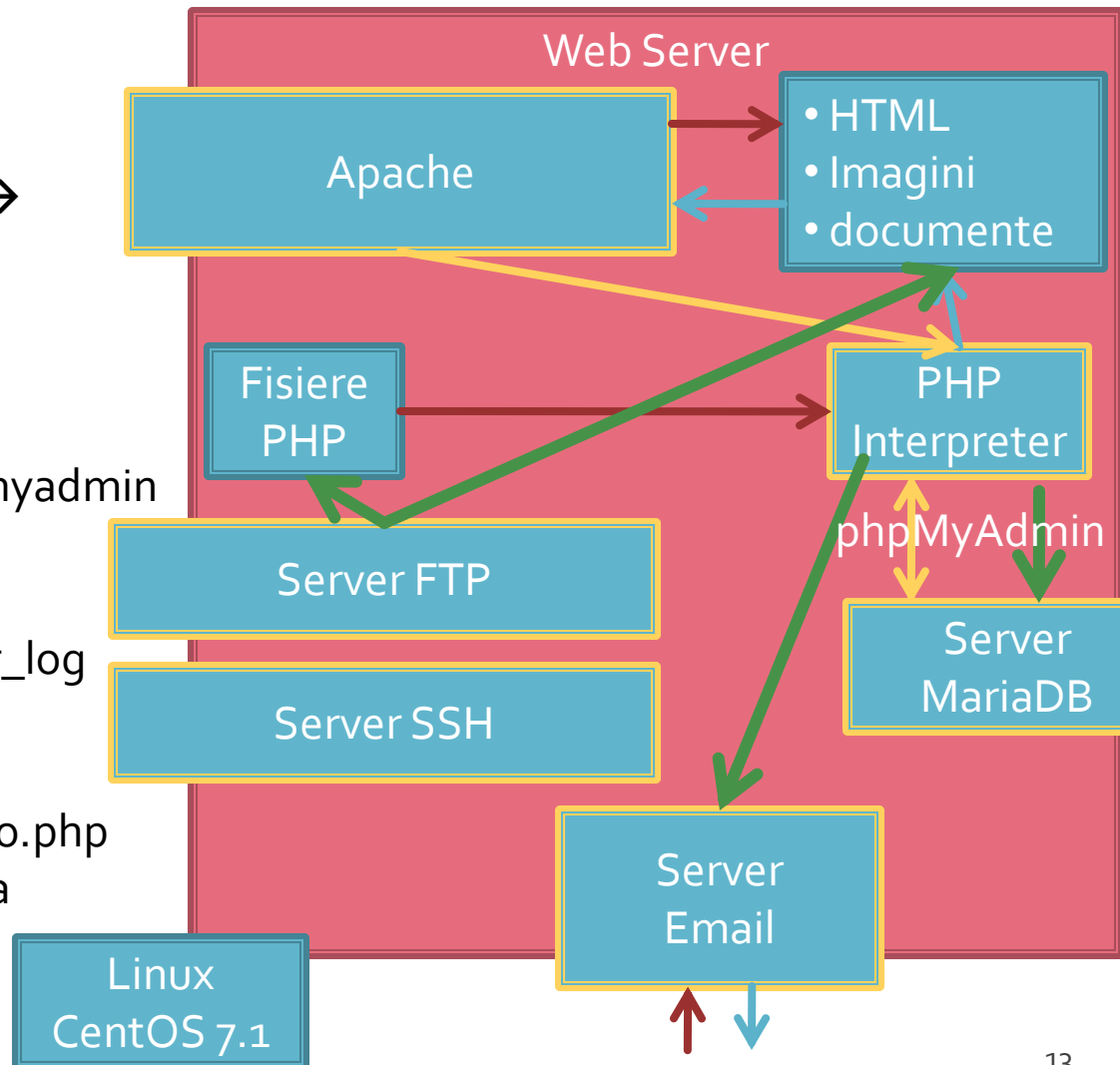
- **(2p)** aplicația rulează pe **server-ul de referință** (care se poate download-a de pe serverul laboratorului: CentOS 7, php 5): se scot fișierele din arhiva **\*.zip** într-un director din rădăcina serverului, se restaurează baza de date (import) din fișierul **\*.sql**
- **(2p)** fișierul **\*.pdf** cu manualul aplicației există și corespunde cu tema primită
- **(2p)** rularea **aplicației instalate** produce aceleași efecte ca în manualul **\*.pdf** și corespunde cu tema primită
- **(4p)** susținerea/prezentarea on-line (Teams) **a aplicației realizate**

# Utilizare LAMP



# 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
9. daca serviciul DHCP duce la oprirea Apache: service httpd restart



# Includerea / controlul formei in fisierile PHP - Template

# 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

# Test – F Shape Reading Pattern

- Obisnuinta utilizatorilor de a urmari anumite zone de pe ecran





# Microsoft

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**NEWS** New Technology Fights Child Porn by Tracking Its 'PhotoDNA' ▼

**Highlights ▶**

- Latest releases
- Using your computer
- For Business
- For IT Professionals
- For Developers



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Windows Small Business Server 2008  
Access Your Data From Anywhere

# Intel



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- Faster performance enabled by Intel® microarchitecture, codenamed Nehalem
- Automatically increase processor frequency and utilize Intel® Hyper-Threading Technology (Intel® HT Technology) as needed
- Efficiently manage energy expense by scaling power consumption to workload, enabled by Intel® Intelligent Power Technology
- Next generation Intel® Virtualization Technology enables best-in-class virtualization performance, superb scalability, enhanced flexibility, and simplified server management
- Intel® Data Center Manager (Intel® DCM) software development kit provides power and thermal monitoring and management for servers, racks, and groups of servers in data centers. Management Console Vendors (ISVs) and System Integrators (SIs) can integrate Intel® DCM into their console or command-line applications and provide high-value power management features to IT organizations.

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Join industry experts for a live webinar showcasing breakthrough features of the new Intel® Xeon® processor.

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### Virtualization ROI

Use this tool to see the potential ROI for using virtualization in your data center.

[» ROI calculator](#)

# Mozilla

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## Firefox Features

See what's new, what's been improved and what's just as awesome as ever.

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- Features
- Performance
- Security
- Customization
- 100% Organic Software
- Tips & Tricks
- Videos
- Fastest Firefox

### Top Features



#### Awesome Bar

**improved** Find the sites you love in seconds (and without having to remember clunky URLs).

#### One-Click Bookmarking

Bookmark, search and organize Web sites quickly and easily.

#### Super Speed

**new** View Web pages way faster, using less of your computer's memory.

#### Easy Customization

**improved** Thousands of add-ons give you the freedom to make your browser your own.

#### Private Browsing

**new** Surf the Web without leaving a single trace.

#### Anti-Phishing & Anti-Malware

**improved** Enjoy the most advanced protection against online bad guys.

#### Tabs

**improved** Do more at once with tabs you can organize with the drag of a mouse.

#### Password Manager

Remember site passwords without ever seeing a pop-up.

#### Session Restore

**improved** Unexpected shutdown? Go back to exactly

#### Instant Web Site ID


Avoid online scams, unsafe transactions and forgeries with

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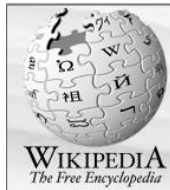
### Get Firefox 3.5

3.5.6, English (US), Windows (7.7MB)

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# Wikipedia



## navigation

- Main page
- Contents
- Featured content
- Current events
- Random article

## search

## interaction

- About Wikipedia
- Community portal
- Recent changes
- Contact Wikipedia
- Donate to Wikipedia
- Help

## toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link
- Cite this page

## languages

- Afrikaans
- Alemannisch
- العربية
- Aragonés
- Azərbaycan
- বাংলা
- Беларуская (тарашкевіца)
- Boarisch
- Bosanski
- Brezhoneg
- Български
- Català

Try Beta Log in / create account

[article](#) [discussion](#) [edit this page](#) [history](#)

## Please read: A personal appeal from Wikipedia founder Jimmy Wales

[Hide]

## HTML

From Wikipedia, the free encyclopedia

*For the use of HTML on Wikipedia, see [Help:HTML in wikitext](#).*

**HTML**, which stands for **Hyper Text Markup Language**, is the predominant [markup language](#) for [web pages](#). It provides a means to create [structured documents](#) by denoting structural [semantics](#) for text such as headings, paragraphs, lists etc as well as for links, quotes, and other items. It allows [images](#) and [objects](#) to be embedded and can be used to create [interactive forms](#). It is written in the form of [HTML elements](#) consisting of "tags" surrounded by [angle brackets](#) within the web page content. It can include or can load [scripts](#) in languages such as [JavaScript](#) which affect the behavior of HTML processors like [Web browsers](#); and [Cascading Style Sheets \(CSS\)](#) to define the appearance and layout of text and other material. The [W3C](#), maintainer of both HTML and CSS standards, encourages the use of CSS over explicit presentational markup.<sup>[1]</sup>

### Contents [hide]

- History
  - 1.1 Origins
  - 1.2 First specifications
  - 1.3 Version history of the standard
    - 1.3.1 HTML version timeline
    - 1.3.2 HTML draft version timeline
    - 1.3.3 XHTML versions
- Markup
  - 2.1 Elements
    - 2.1.1 Attributes
  - 2.2 Character and entity references
  - 2.3 Data types
  - 2.4 Document type declaration
- Semantic HTML
- Delivery
  - 4.1 HTTP
  - 4.2 HTML e-mail
  - 4.3 Naming conventions
  - 4.4 HTML Application
- Current variations
  - 5.1 SGML-based versus XML-based HTML
  - 5.2 Transitional versus strict
  - 5.3 Frameset versus transitional

### HTML (HyperText Markup Language)

<b>Filename extension</b>	.html, .htm
<b>Internet media type</b>	text/html
<b>Type code</b>	TEXT
<b>Uniform Type Identifier</b>	public.html
<b>Developed by</b>	World Wide Web Consortium & WHATWG
<b>Type of format</b>	Markup language
<b>Extended from</b>	SGML
<b>Extended to</b>	XHTML
<b>Standard(s)</b>	ISO/IEC 15445 <div>W3C HTML 4.01 </div> W3C HTML 5  (draft)

**2017**





# Google



Google Search

I'm Feeling Lucky

Google.ro offered in: Română magy Deutsch

**I'm Feeling Lucky 😊**

# Intel

The screenshot displays the Intel website's homepage. At the top, a blue navigation bar contains the Intel logo, links for 'Products', 'Learn & Develop', and 'Support', and a language selector set to 'USA (English)'. Below the navigation bar is a large hero image of Tom Brady sitting on a bed in a modern room. Overlaid on this image is the text 'BRADY EVERYDAY #SB51 AD' and a sub-headline: 'Intel® 360 Replay Technology can make anything look epic. Even Tom Brady.' A blue button labeled 'Check it out' is positioned below the sub-headline. A dark blue footer bar features five icons and their corresponding labels: 'Support', 'Product Specs', 'See Products', 'Processor Comparison', and 'Download Center'. Below the footer is another advertisement featuring Tom Brady holding a football, with a hand drawing wings on his back. The text 'BRADY NEVER LOOKED BETTER' is at the bottom of this section.

Products Learn & Develop Support

intel

USA (English) Sign In

**BRADY EVERYDAY #SB51 AD**

Intel® 360 Replay Technology can make anything look epic. Even Tom Brady.

Check it out

Support Product Specs See Products Processor Comparison Download Center

**BRADY NEVER LOOKED BETTER**



# Intel

The image shows the Intel website homepage with a blue header and four main banners. The browser address bar shows the URL <http://www.intel.com/content/www/us/en/homepage.html>. The first banner features a man in a bed with the text "BRADY EVERYDAY #8B51 AD". The second banner features a man's face with a blue and black patterned background and the text "BRADY NEVER LOOKED BETTER". The third banner features a night city scene with the text "LIGHT TAKES FLIGHT". The fourth banner features a laptop with the text "UNLEASH CORE PERFORMANCE".

[Create a drop-down list - Offic...](#) [Intel | Data Center Solutions...](#) [tell you what you need - Goo...](#)

**BRADY EVERYDAY #8B51 AD**

**BRADY NEVER LOOKED BETTER**

**LIGHT TAKES FLIGHT**

**SEE HOW BUSINESSES RUN ON INTEL**

**UNLEASH CORE PERFORMANCE**



# SUPPORT

Support Home > Drivers & Software > Intel® PROSet/Wireless Software and Drivers for Windows 7\*



## Intel® PROSet/Wireless Software and Drivers for Windows 7\*

Version: 19.20.3 (Latest)

Date: 12/5/2016

### Available Downloads

#### Windows 7, 64-bit\*

Language: English

Size: 89.39 MB

MD5: 02f828f9a0d4edc62b5ba927d6eff4f1

[Wireless\\_19.20.3\\_PROSet64\\_Win7.exe](#)

#### Windows 7, 32-bit\*

Language: English

Size: 76.95 MB

MD5: e834ceca534cc74dfb5b344ffdf49b7

[Wireless\\_19.20.3\\_PROSet32\\_Win7.exe](#)

### Other Versions

19.20.0

19.10.0

19.1.0

### Detailed Description

#### Purpose

Intel® PROSet/Wireless WiFi Software is recommended for end-customers, including home users and business customers who do not need advanced IT administrator tools.

#### Not sure what to download?

Confirm you have the Windows® 7 operating system before installing. [Check if your operating system is 32-bit or 64-bit.](#)

Determine which [file type](#) to download for your wireless adapter.

Intel® Wireless Adapter [driver versions](#) of some products may not update. Ensure this download supports your wireless adapter.

To determine which wireless adapter is installed in your computer system:

- [Automatically detect](#) and update your drivers and software with the Intel® Driver Update Utility.
- [Manually identify](#) your Intel® Wireless Adapter and driver version number.

#### Software and drivers:

Intel® PROSet/Wireless WiFi Software (includes drivers):

Wireless\_19.20.3\_PROSet32\_Win7.exe (32bit) and Wireless\_19.20.3\_PROSet64\_Win7.exe (64bit)

#### Note:

Intel® PROSet software version = 19.20.3

# Design 2017

- Dispozitive
  - Mobile
  - Ecran mic
- Nu pentru lucrurile importante
  - Retur la F-Shape
- “I know better what you need, please don’t think”
  - I’m feeling lucky

# Regula nr. 1

---

**Don't Make Me Think**

# Analiza critica

- design?
  - in aplicatiile web forma este importanta
  - nu trebuie sa fie inovativa ci familiara
  - "Don't make me think!"
- ~~■ capacitatea de extindere?~~
  - ~~■ mai multe produse~~
  - ~~■ schimbare de pret~~

# Template

---

- Sablon
- controlul simultan al formei pentru toate paginile din site
- separarea aplicatiei de forma

# Lista produse

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

**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](#)

```
<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>
```

# 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



# Exemplu – design 2

- sectiunile repetabile pot fi mutate intr-un fisier separat si introduse cu require()
- se identifica zonele comune

```
<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>
```

# Lista produse

```
<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>
```

antet.php

```
<html>
<head>
<title>Magazin online Firma X
SRL</title>
</head>
<body bgcolor="#CCFFFF"><?php
//orice cod comun PHP
?><table width="600" border="0"
align="center">
<tr><td></td></tr>
<tr><td height="600" valign="top"
bgcolor="#FFFFCC">
<h1>Magazin online Firma X SRL</h1>
```

subsol.php

```
</td></tr>
</table>
</body>
</html>
```

# Utilizare template

- antet.php
  - orice cod de structura (HTML) comun
  - orice cod de aplicatie comun (PHP) – aproape toate paginile dintr-o aplicatie au nevoie de:
    - acces la date
    - verificare drepturi de acces
    - definitii constante
    - definire/incarcare date **din** sesiunea de lucru (\$\_SESSION)
- subsol.php
  - orice cod de structura (HTML) comun
  - orice cod de aplicatie comun (PHP) – de obicei mai redus:
    - salvare date **in** sesiunea de lucru (\$\_SESSION)

# Lista produse

- Orice fisier php realizez in aplicatie:
  - <?php require('antet.php');?>
  - <?php require('subsol.php');?>
- si preia automat aceeaasi forma

\*.php

```
<?php require('antet.php');?>
```

```
<h2>Lista Produse</h2>
```

```
<table border="1">
```

```
...
```

```
</table>
```

```
<?php require('subsol.php');?>
```

# Lista produse/template

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

**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](#)

# Avantajul lucrului cu sabloane

- viteza de dezvoltare a aplicatiei
- separare clara a formei de aplicatie
- forma unitara
  - “don’t make me think”
- modificarea simultana a formei pentru toate paginile din site
- posibilitatea definirii datelor comune intr-un singur fisier
  - `define('PRET_CARTE',100);`

**Link-uri active**

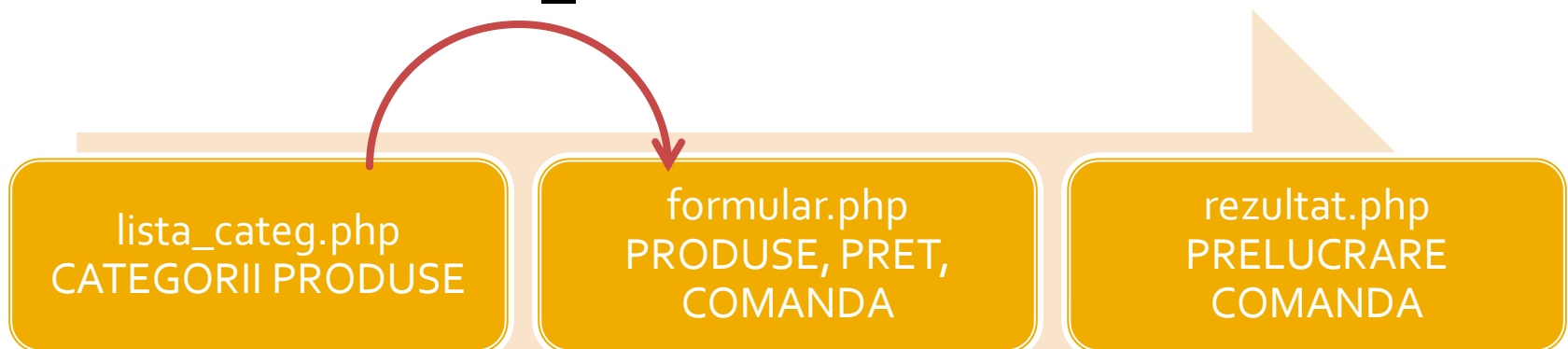
# Forma – Metode de transmitere

- **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



# Link-uri active

- folosite pentru a transmite o **informatie**
- in `lista_categ.php`
  - `<a href="lista_prod.php?categ=<?php echo $cat;?>"> <?php echo $cat;?> </a>`
- are efect in `formular.php`
  - `$_GET['categ']="valoarea $cat corespunzatoare"`  
**\$cat – \$\_GET**



# Link-uri active

## Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	<a href="#">Papetarie</a>	3
2	<a href="#">Instrumente</a>	3
3	<a href="#">Audio-video</a>	3
4	<a href="#">Calculatoare</a>	3
5	<a href="#">Jucarii</a>	2

Total produse: 14

# Plan aplicatie

# Aplicatie laborator

## Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	<a href="#">Papetarie</a>	3
2	<a href="#">Instrumente</a>	3
3	<a href="#">Audio-video</a>	3
4	<a href="#">Calculatoare</a>	3
5	<a href="#">Jucarii</a>	2

Total produse: 14

## 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

# Plan aplicatie – Cumparator

- Pe masura ce aplicatia paraseste un fir liniar de executie este necesara introducerea unui plan (graf) al aplicatiei
- Cumparator
  - citirea fisierului XML (accesarea bazei de date) se realizeaza in antet.php, comun pentru toate fisierele

lista\_categ.php  
CATEGORII PRODUSE

formular.php  
PRODUSE, PRET,  
COMANDA

rezultat.php  
PRELUCRARE  
COMANDA

# Plan aplicatie – Vanzator

- Aparitia aplicatiei pentru vanzator
  - introduce un fir paralel de executie cu necesitatea alegerii initiale: cumparator/vanzator
  - aduce posibilitatea scrierii fisierului XML (completarea bazei de date)
  - diverse operatii de scriere
    - introducere categorie de produse
    - introducere produs nou intr-o categorie existenta
    - modificare produs existent
  - modificarea fisierului (completarea bazei de date) implica 2 actiuni:
    - colectare date
    - prelucrare

# Rezultat (vanzator)

Magazin

Firma X

[Inceput](#) | [Inapoi](#)

## Magazin online Firma X SRL

Alegeti:

- [Cumparator](#)
- [Vanzator](#)

### Lista produse in categoria Calculatoare

Nr.	Produs	Descriere	Pret	Cantitate	Actiuni
1	Laptop	calculator mic	2000	2	<a href="#">modifica</a>
2	Desktop	calculator mare	1000	5	<a href="#">modifica</a>
3	Imprimanta	prn	200	2	<a href="#">modifica</a>
-	Produs nou				<a href="#">adauga</a>

### Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	<a href="#">Papetarie</a>	3
2	<a href="#">Instrumente</a>	3
3	<a href="#">Audio-video</a>	3
4	<a href="#">Calculatoare</a>	3
5	<a href="#">Jucarii</a>	2

Total produse: 14

Categorie noua de produse:

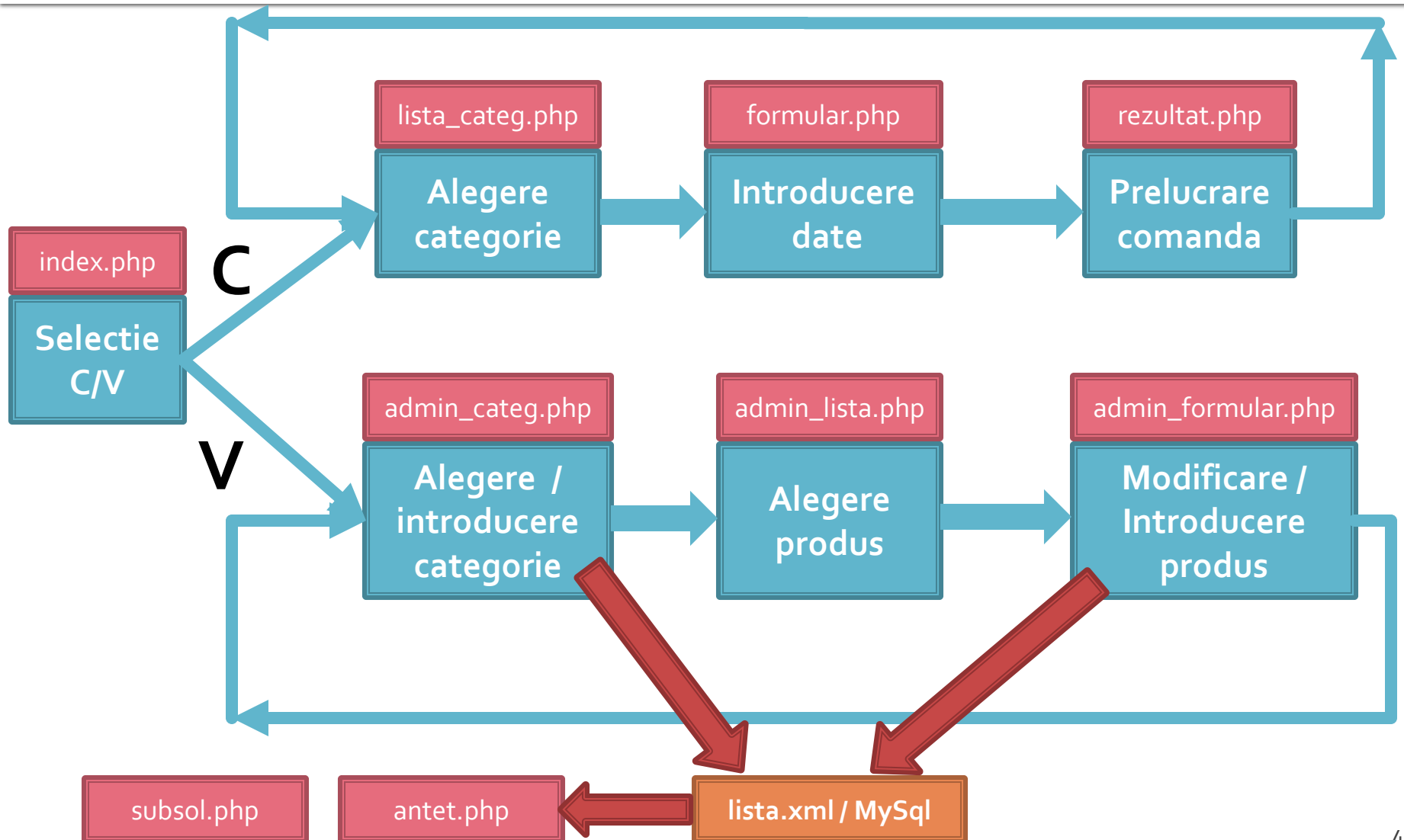
Trimite

### Produs in categoria Calculatoare

Produs	<input type="text" value="laptop"/>
Descriere	<input type="text" value="calculator mic"/>
Pret	<input type="text" value="2000"/>
Cantitate	<input type="text" value="2"/>
<input type="button" value="Trimite"/>	

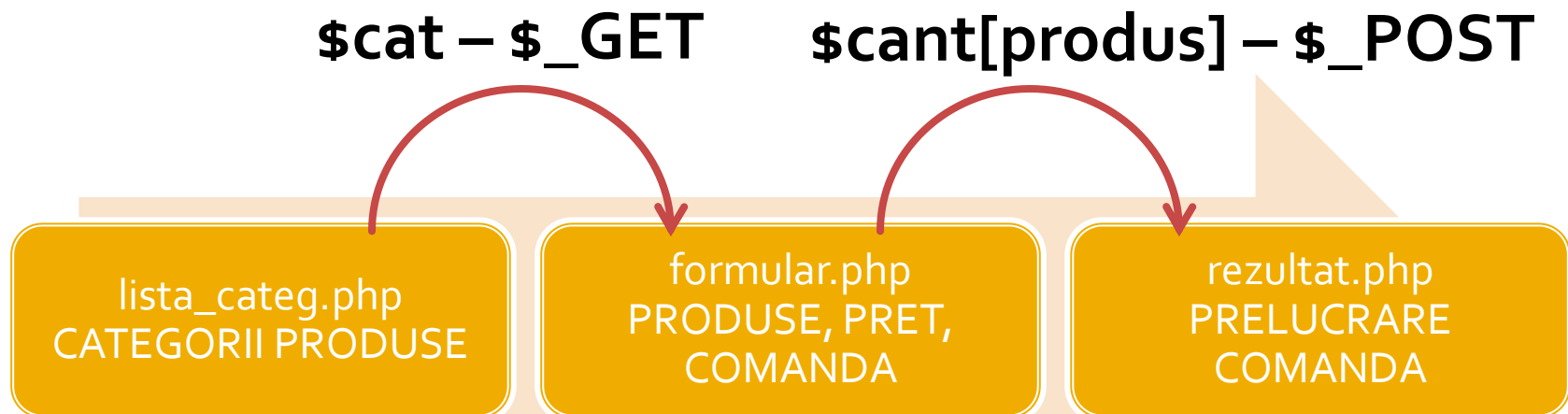


# Plan aplicatie



# Plan aplicatie

- Planul aplicatiei trebuie sa cuprinda si informatii relative la:
  - **ce date** se transmit intre diferitele pagini
  - **cum** se transmit datele intre pagini

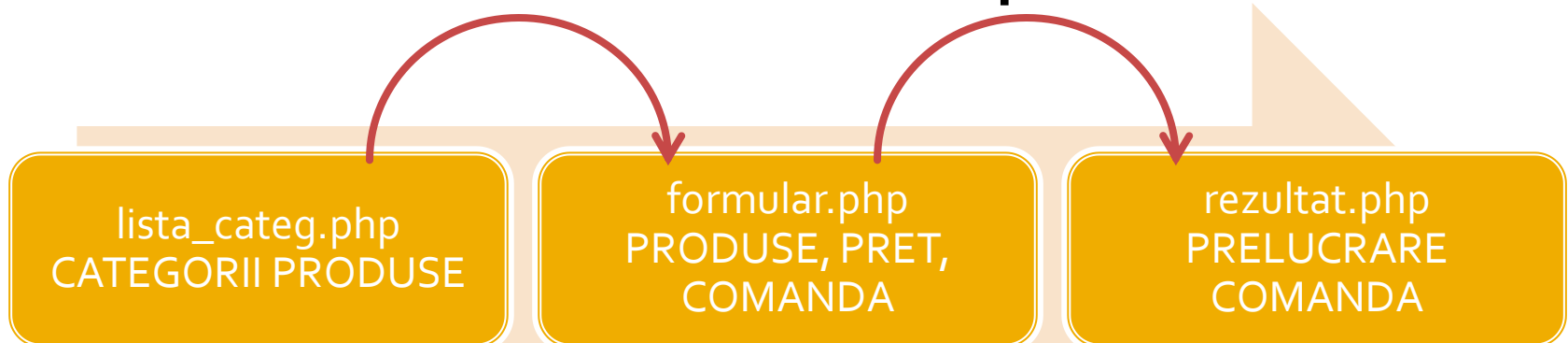


# Plan aplicatie

- Planul aplicatiei – Exemplu
  - lista de categorii va contine “**link-uri active**” deci transmiterea unei singure variabile se face cu **\$\_GET**
  - formularul de comanda transmite date multiple incluse intr-o forma deci transmiterea se face cu **\$\_POST**
- Alegerea \$\_GET/\$\_POST are implicatii:
  - atat in pagina care transmite datele
  - cat si in pagina care le receptioneaza

**\$cat – \$\_GET**

**\$cant[produs] – \$\_POST**



# Rezultat (comparator)

**Categorii Produse**

Alegeti categoria:

Nr.	Categorie	Total Produse
1	<a href="#">Papetarie</a>	3
2	<a href="#">Instrumente</a>	3
3	<a href="#">Audio-video</a>	3
4	<a href="#">Calculatoare</a>	3
5	<a href="#">Jucarii</a>	2

Total produse: 14

**Magazin online Firma X SRL**

Finalizati 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



# Rezultat (vanzator)

**Magazin** Firma X

[Inceput](#) | [Inapoi](#)

## Magazin online Firma X SRL

Alegeti:

- [Cumparator](#)
- [Vanzator](#)

### Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	<a href="#">Papetarie</a>	3
2	<a href="#">Instrumente</a>	3
3	<a href="#">Audio-video</a>	3
4	<a href="#">Calculatoare</a>	3
5	<a href="#">Jucarii</a>	2

Total produse: 14

Categorie noua de produse:

### Lista produse in categoria Calculatoare

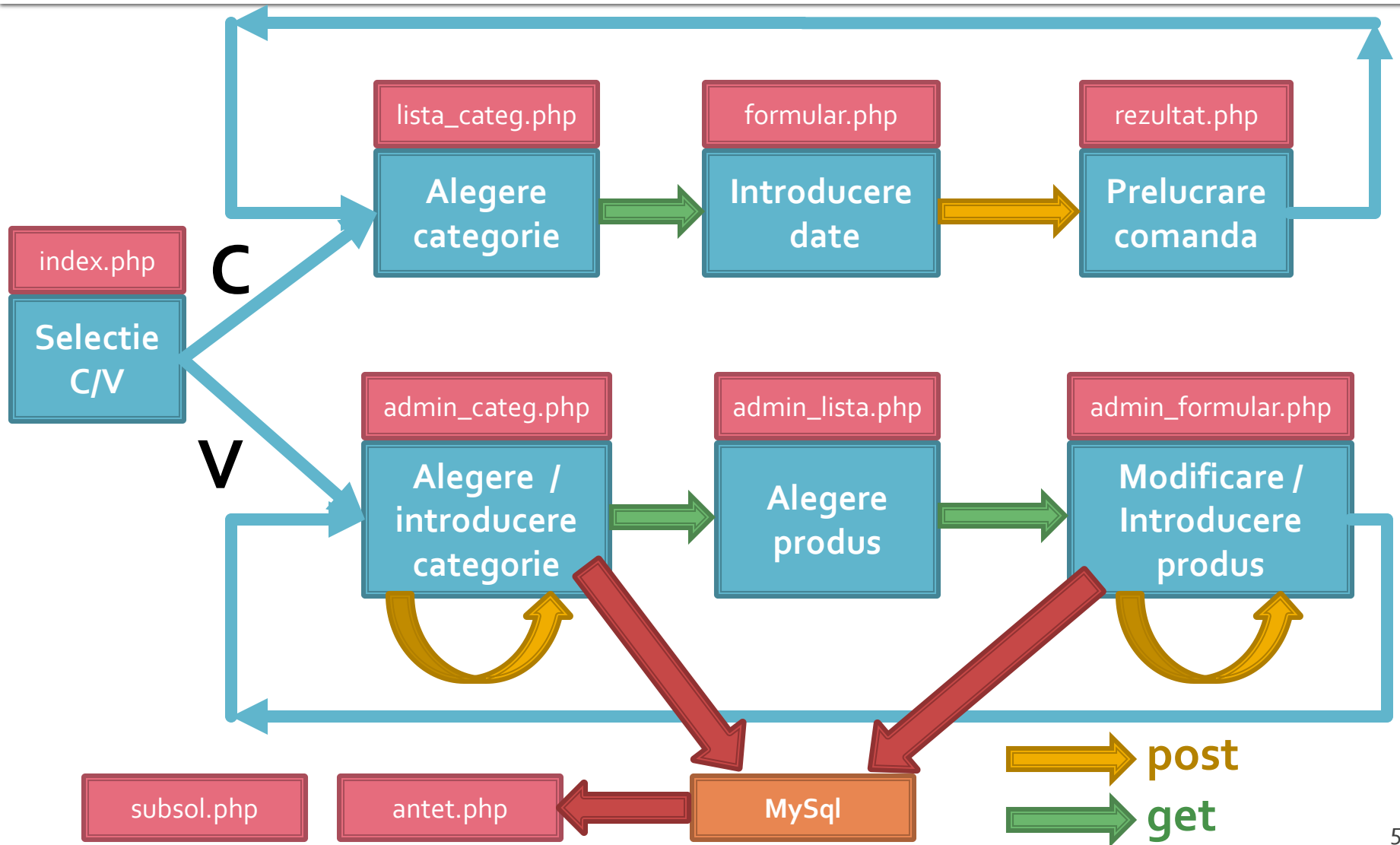
Nr.	Produs	Descriere	Pret	Cantitate	Actiuni
1	Laptop	calculator mic	2000	2	<a href="#">modifica</a>
2	Desktop	calculator mare	1000	5	<a href="#">modifica</a>
3	Imprimanta	prn	200	2	<a href="#">modifica</a>
-	Produs nou				<a href="#">adauga</a>

### Produs in categoria Calculatoare

Produs	<input type="text" value="laptop"/>
Descriere	<input type="text" value="calculator mic"/>
Pret	<input type="text" value="2000"/>
Cantitate	<input type="text" value="2"/>

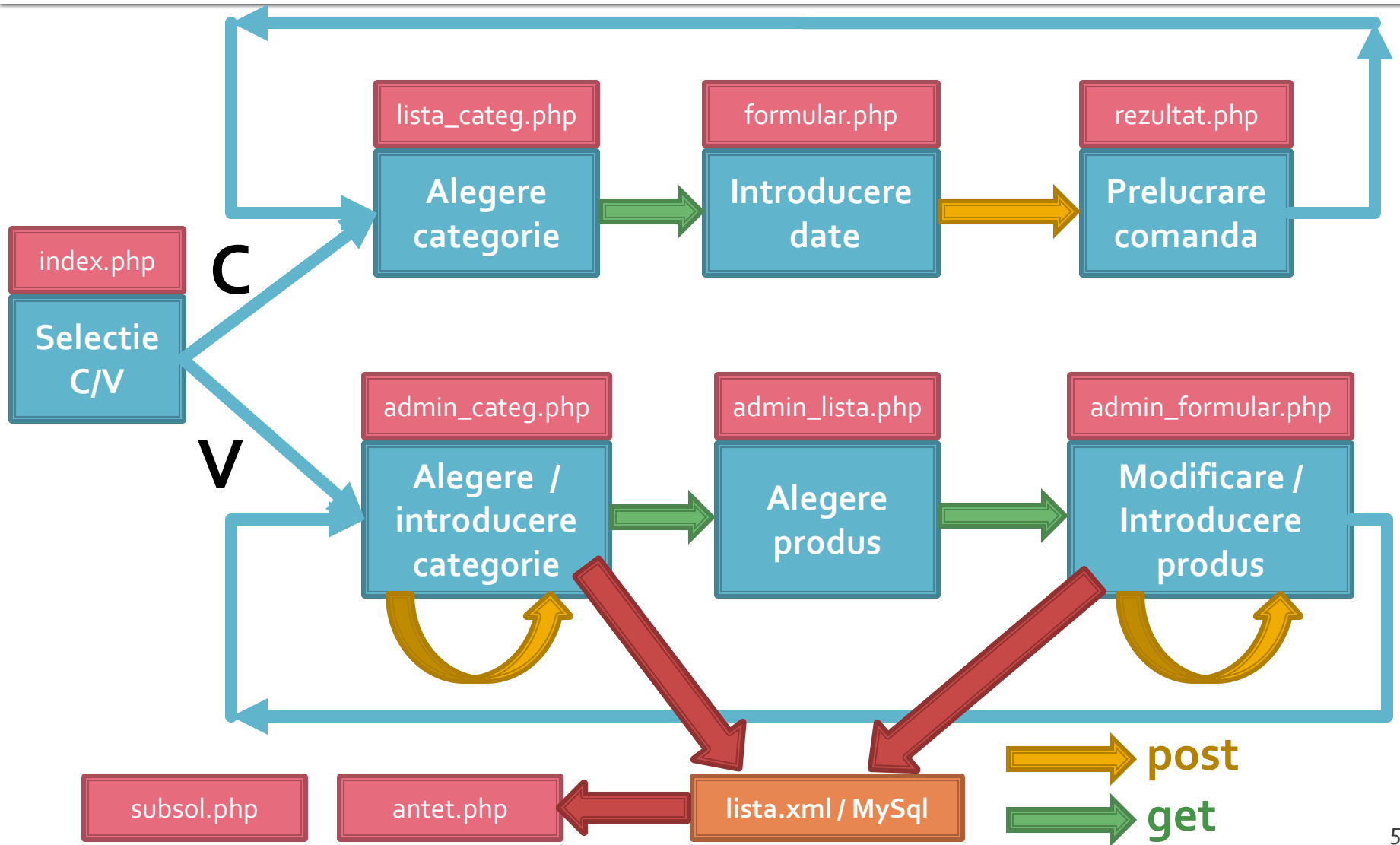


# Plan aplicatie



**Fisier unic pentru colectare SI  
prelucrare date**

# Plan aplicatie





# Rezultat (vanzator)

**Magazin** Firma X

[Inceput](#) | [Inapoi](#)

## Magazin online Firma X SRL

Alegeti:

- [Cumparator](#)
- [Vanzator](#)

### Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	<a href="#">Papetarie</a>	3
2	<a href="#">Instrumente</a>	3
3	<a href="#">Audio-video</a>	3
4	<a href="#">Calculatoare</a>	3
5	<a href="#">Jucarii</a>	2

Total produse: 14

Categorie noua de produse:

### Lista produse in categoria Calculatoare

Nr.	Produs	Descriere	Pret	Cantitate	Actiuni
1	Laptop	calculator mic	2000	2	<a href="#">modifica</a>
2	Desktop	calculator mare	1000	5	<a href="#">modifica</a>
3	Imprimanta	prn	200	2	<a href="#">modifica</a>
-	Produs nou				<a href="#">adauga</a>

### Produs in categoria Calculatoare

Produs	<input type="text" value="laptop"/>
Descriere	<input type="text" value="calculator mic"/>
Pret	<input type="text" value="2000"/>
Cantitate	<input type="text" value="2"/>



# Fisier unic pentru colectare SI prelucrare date

- De multe ori se prefera aceasta varianta
- Permite pastrarea unitara a tuturor operatiilor pentru indeplinirea unei actiuni
  - acces mai simplu
  - usurinta la programare
  - evitarea erorilor: File does not exist: D:/Server/...
- Acelasi fisier e folosit initial pentru a colecta date si apoi, daca se detecteaza prezenta acestora, pentru prelucrarea lor

# Fisier unic pentru colectare SI prelucrare date


- Fisierul de receptie pentru <form> va fi fisierul curent
- se recomanda utilizarea variabilei globale `$_SERVER['SCRIPT_NAME']`
  - flexibilitate la redenumirea fisierelor
- alternativ `$_SERVER['PHP_SELF']` nu este recomandata
  - probleme de securitate
- Sectiunea de colectare date se afiseaza numai in absenta datelor

```
<form action="<?php echo $_SERVER['SCRIPT_NAME'];?>" method="post">  
<p><input name="date_ok" type="submit" value="Trimite" /></p>  
</form>
```

# Fisier unic pentru colectare SI prelucrare date

- Detectia existentei datelor se face prin verificarea existentei ( **isset**(\$variabila) ) valorilor introduse
  - eventual pentru un plus de protectie se poate verifica si continutul lor

```
if (isset($_POST["date_ok "]))
{ //date trimise
  if ($_POST["date_ok "]=="Trimite" )
    { //date trimise de fisierul curent
      //prelucrare
    }
}
else
{
  //colectare date
  <form action="<?php echo $_SERVER['SCRIPT_NAME '];?>" method="post">
  <p><input name="date_ok" type="submit" value="Trimite" /></p></form>
}
```



# Depanare cod PHP

# Faza de verificare/depanare

- Se recomanda utilizarea posibilitatii vizualizarii matricilor
  - In fisierul care receptioneaza datele
  - temporar pina la definitivarea codului
- utilizarea de cod "verbose" (manual) in etapele initiale de scriere a surselor PHP poate fi extinsa si la alte tipuri de date
  - singura (aproape) metoda de depanare(debug) in PHP
  - `<p>temp <?php echo "a=";echo $a; ?> </p>`

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

# Depanare

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

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

```
echo "<pre>".print_r($_GET,true)."</pre>";
```

# Aspecte practice recomandate in realizarea aplicatiilor web



# Metode de lucru recomandate 1

- Daca nu aveti acces simplu la “log-urile” server-ului **MySQL** puteti vedea cum ajung efectiv interogarile la el afisand temporar textul interogarii
  - `$query = "SELECT * FROM `produse` AS p  
WHERE `id_categ` = ".$row_result_c['id_categ'];  
echo $query; //util in perioada de testare`
    - Textul prelucrat de PHP al interogarii va fi afisat in clar pe pagina facand mai usoara depanarea programului
    - Aceste linii **trebuie** eliminate in forma finala a programului ca masura de securitate

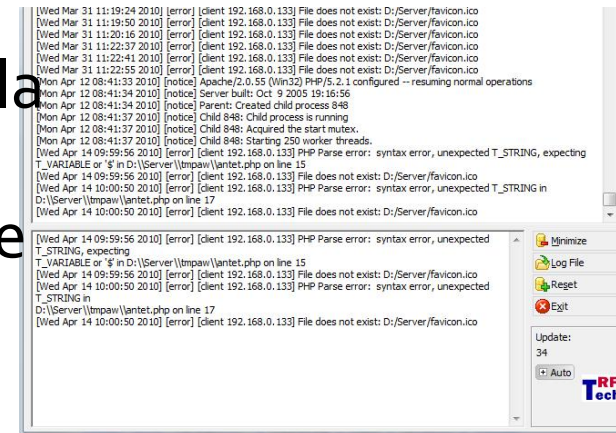
# Metode de lucru recomandate 2

- Verificarea “log-ului” de erori al server-ului Apache ramane principala metoda de depanare a codului PHP.

- W2000: Utilizarea aplicatiei prezentata la laborator este mai comoda datorita automatizarii dar orice alta varianta este utila

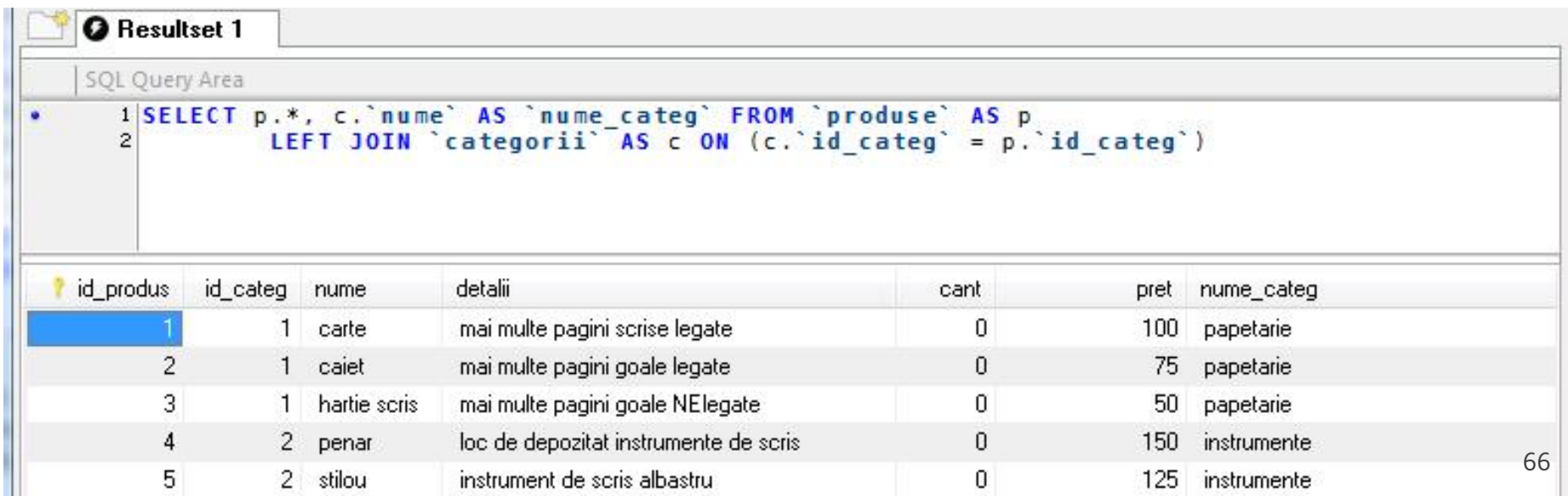
- Centos 7.1:

- putty → nano /var/log/httpd/error\_log
- <http://192.168.30.5/logfile.php> (nonstandard)
- tema suplimentara (php.ini + log PHP **recomandat**)



# Metode de lucru recomandate 3

- In perioada de definitivare a formei interogarilor MySql este de multe ori benefic sa se utilizeze mai intai **MySql Workbench/PhpMyAdmin** pentru incercarea interogarilor, urmand ca apoi, cand sunteti multumiti de rezultat, sa transferati interogarea SQL in codul PHP



The screenshot shows the MySQL Workbench interface. At the top, there's a tab labeled 'Resultset 1'. Below it is the 'SQL Query Area' containing the following SQL query:

```
1 SELECT p.*, c.`nume` AS `nume_categ` FROM `produse` AS p
2 LEFT JOIN `categorii` AS c ON (c.`id_categ` = p.`id_categ`)
```

Below the query area, the results are displayed in a table with the following columns: id\_produs, id\_categ, nume, detalii, cant, pret, and nume\_categ. The table contains 5 rows of data.

id_produs	id_categ	nume	detalii	cant	pret	nume_categ
1	1	carte	mai multe pagini scrise legate	0	100	papetarie
2	1	caiet	mai multe pagini goale legate	0	75	papetarie
3	1	hartie scris	mai multe pagini goale NElegate	0	50	papetarie
4	2	penar	loc de depozitat instrumente de scris	0	150	instrumente
5	2	stilou	instrument de scris albastru	0	125	instrumente

# Metode de lucru recomandate 3

MySQL Query Browser - Connection: root@server / tmpaw

File Edit View Query Script Tools Window Help

Transaction Explain Compare

Resultset 1

SQL Query Area

```
1 SELECT p.*, c.`nume` AS `nume_categ` FROM `produse` AS p
2 LEFT JOIN `categorii` AS c ON (c.`id_categ` = p.`id_categ`)
```

id_produs	id_categ	nume	detalii	cant	pret	nume_categ
1	1	carte	mai multe pagini scrise legate	0	100	papetarie
2	1	caiet	mai multe pagini goale legate	0	75	papetarie
3	1	hartie scris	mai multe pagini goale NElegate	0	50	papetarie
4	2	penar	loc de depozitat instrumente de scris	0	150	instrumente
5	2	stilou	instrument de scris albastru	0	125	instrumente
6	2	creion	instrument de scris gri	0	25	instrumente
7	3	cd	canta	0	50	audio-video
8	3	dvd	vizual	0	100	audio-video
9	3	blue ray	vizual extrem	0	500	audio-video

9 rows fetched in 0.0035s (0.0016s)

Edit Apply Changes Discard Changes First Last Search

1: 1

# Metode de lucru recomandate 4

- eficienta unei aplicatii web
  - 100% - toate prelucrarile "mutate" in RDBMS
  - PHP doar afisarea datelor
- eficienta unei aplicatii MySql
  - 25% alegerea corecta a tipurilor de date
  - 25% crearea indecsilor necesari in aplicatii
  - 25% normalizarea corecta a bazei de date
  - 20% cresterea complexitatii interogarilor pentru a "muta" prelucrarile pe server-ul de baze de date
  - 5% scrierea corecta a interogarilor

# Metode de lucru recomandate 5

- La implementarea unei aplicatii noi (proiect)
  1. Imaginarea planului aplicatiei (ex: S53)
    - "cum as vrea eu sa lucrez cu o astfel de aplicatie"
    - hartie/creion/timp – esentiale
  2. Identificarea datelor/transmisia de date intre pagini
    - get/post/fisier unic colectare-prelucrare
    - baza de date read/write
  3. Identificarea structurii logice a datelor utilizate
    - "clase" de obiecte/fenomene tratate identic
    - se are in vedere scalabilitatea (posibilitatea de crestere a numarului de elemente dintr-o clasa)

# Metode de lucru recomandate 5

- La implementarea unei aplicatii noi (proiect)
  - 4. Realizarea structurii bazei de date
    - In general un tabel pentru fiecare clasa logica distincta **DAR...**
    - se are in vedere scalabilitatea (daca aplicatia creste sa **NU** apara cresterea numarului de clase/tabele) **SI...**
    - normalizare
  - 5. Identificarea tipului de date necesar pentru coloane
    - de preferat numerele intregi in orice situatie care presupune ordonare
    - dimensiunea campurilor nu mai mare decat e necesar (poate fi fortata prin atributul "size" in eticheta HTML "input")
  - 6. Imaginarea forme fizice a paginilor
    - "am mai vazut asa si mi-a placut" (Don't make me think!)
    - investigarea posibilitatii de a introduce functionalitate template

# Metode de lucru recomandate 5

- La implementarea unei aplicatii noi (proiect)
  - 7. Popularea manuala a bazei de date cu date initiale
    - MySql Query Browser (sau PhpMyAdmin) / automat / imprumut
    - programarea individuala a paginilor are nevoie de prezenta unor date
  - 8. Programare individuala a paginilor
    - In general in ordinea din planul aplicatiei (de multe ori o pagina asigura datele necesare pentru urmatoarea din plan)
    - modul "verbose" activ pentru PHP (adica: `echo $a; print_r($matr)`)
  - 9. Pregatirea pentru distributie/mutare
    - testare detaliata (eventual un "cobai")
    - eliminarea adaosurilor "verbose"
    - backup
    - generarea unui eventual install/setup



# Tehnici PHP avansate

# HTTP headers

- Permite transmiterea unor header-e specifice protocolului HTTP
- Structura mesajului
  - <initial line, different for request vs. response>
  - Header1: value1
  - Header2: value2
  - Header3: value3
  - 
  - <optional message body goes here, like file contents or query data; it can be many lines long, or even binary data \$&\*%@!^\$@>

# HTTP headers

- header(string, code)

```
<?php header("HTTP/1.0 404 Not Found");?>
```

```
<?php header("Location: http://www.example.com/");  
/* Redirect browser */?>
```

```
<meta http-equiv="refresh" content="5;  
url=http://www.example.com/">
```

# HTTP headers

- Header-ele HTTP se trimit inaintea oricaror alte date (HTML)
  - Inceput fisier: `<?php header("..."); ?><!DOCTYPE HTML PUBLIC ...  
<html>...<body>...</body></html>`
  - Nici macar **un spatiu** nu trebuie sa apara inainte de primul `<?php`
  - Daca necesitatea de a trimite header-e poate aparea mai tarziu in script se foloseste obligatoriu Buffer iesire

# Buffer iesire

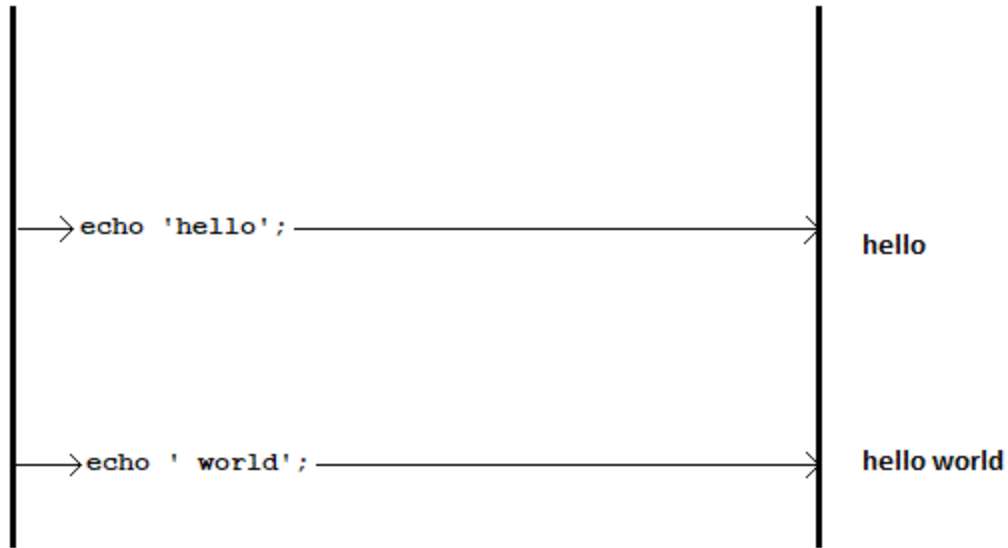
- Copie orice iesire a scriptului PHP intr-un buffer de memorie fara sa transmita nimic clientului
- Utilizat in general pentru conlucrarea cu header-e HTTP, evitarea generarii de HTML inainte de terminarea lucrului cu header-e
- `ob_start();`
- `ob_end_flush ( );`
- `ob_end_clean ( );`
- `ob_get_contents ( )`

# Buffer issue

## No output buffering

PHP script

Client Browser

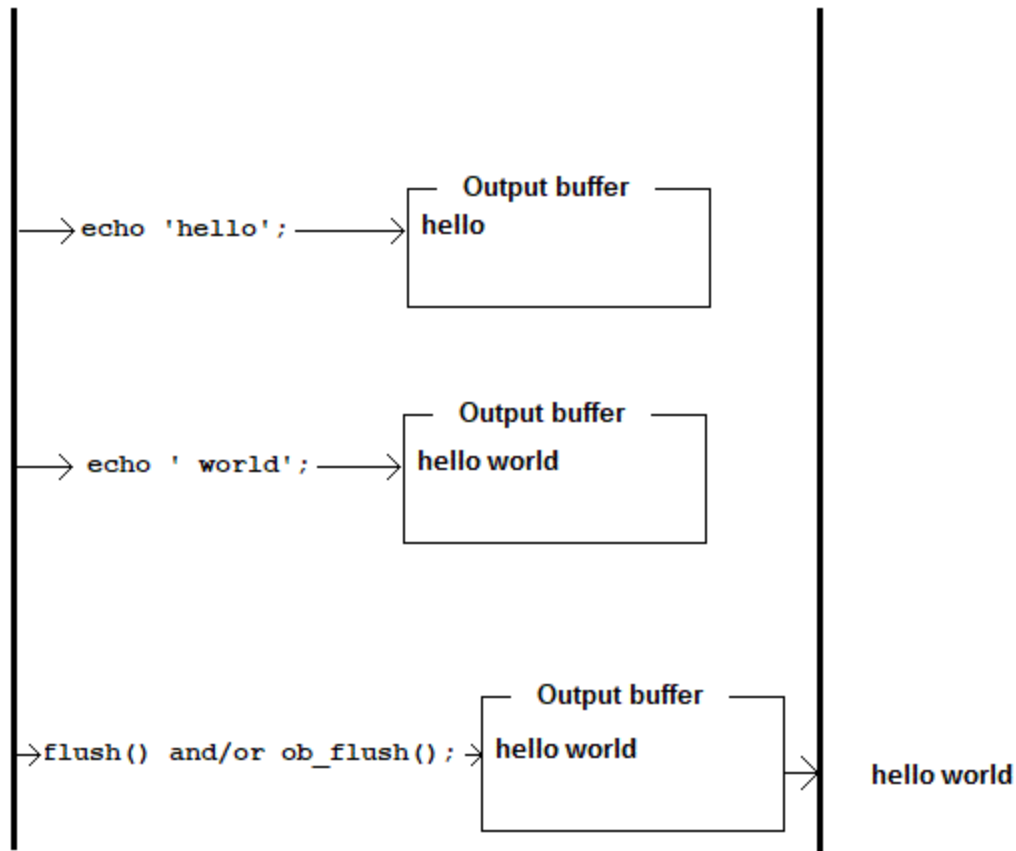


# Buffering

## Output buffering

PHP script

Client Browser

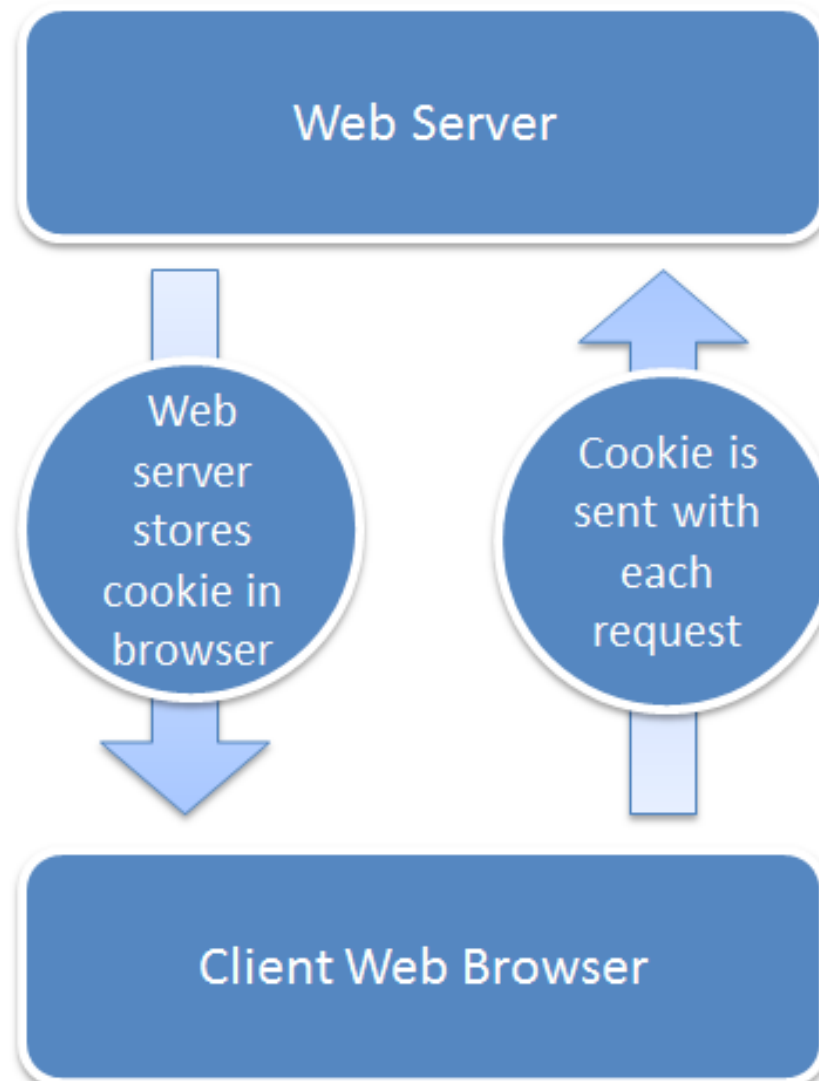


# Cookies

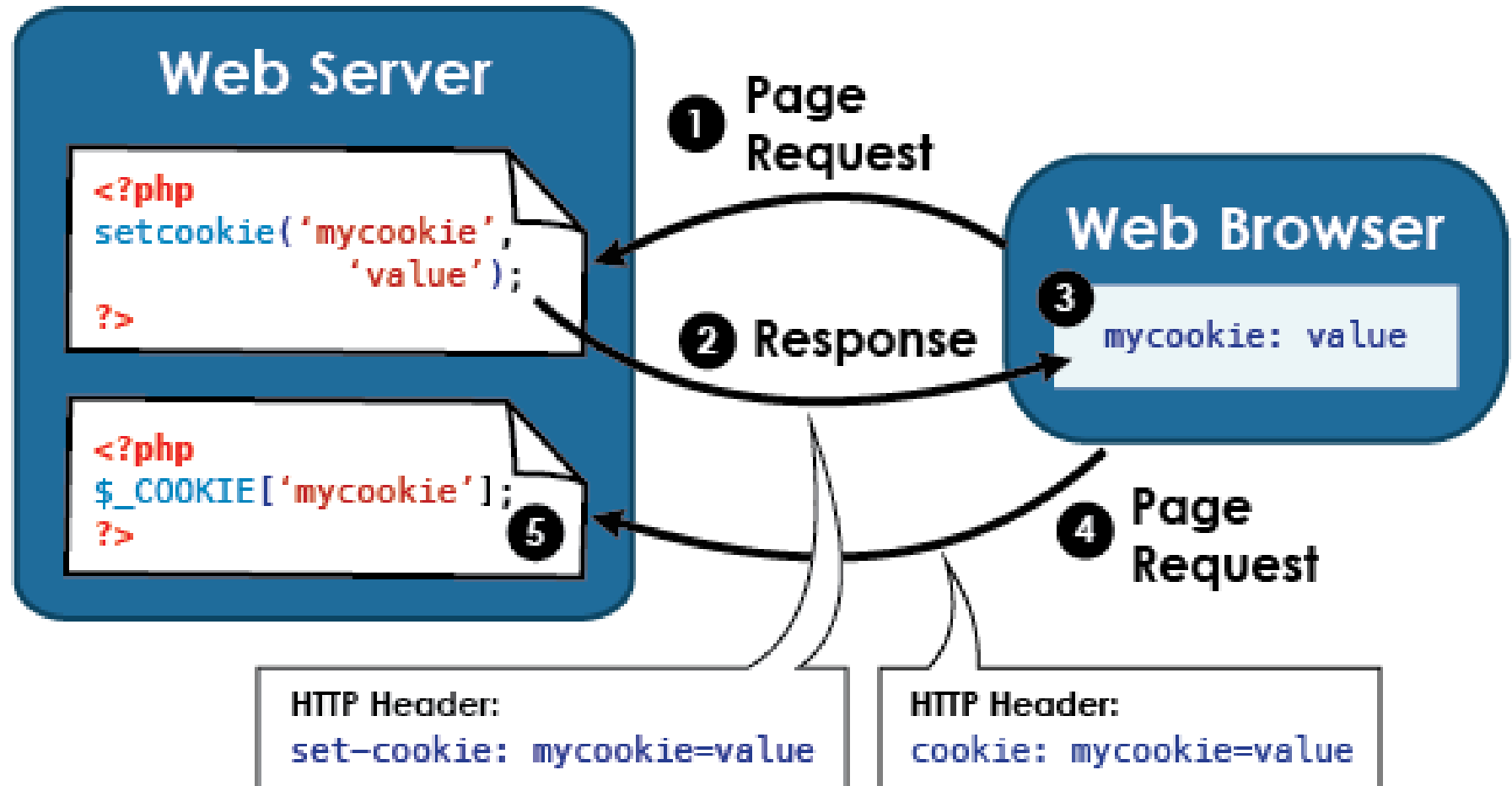
- mici cantitati de date ce se stocheaza pe masina client (de obicei gestionat de browser)
- Circula impreuna cu (**este**) header HTTP
- `setcookie ( string name , string value , int expire , string path , string domain , bool secure , bool httponly )`
  - `nume` (ptr. identificare)
  - `value` (valoarea/datele stocate)



# Cookies



# Cookies



# Cookies

- `setcookie(string $name, string $value , int $expire = 0)`
  - `expire`: UNIX time stamp, nr. sec. din 1970
  - `time()+nr. sec. de viata dorite`
- datele se stocheaza pe client: probleme de securitate
- Se poate obtine valoarea memorata prin variabila globala `$_COOKIE['nume']`
  - **NU** in acelasi script
  - daca un script php trimite un cookie cu header-ele, de-abia **urmatorul** script accesat va primi acele cookie in header-e

# Cookies

```
<?php
$value = 'something from somewhere';

setcookie("TestCookie", $value);
setcookie("TestCookie", $value, time()+3600); /* expire in 1
hour */
setcookie("TestCookie", $value, time()+3600, "/~rasmus/",
"example.com", 1);
?>
```

```
<?php
//Doar pe urmatoarele pagini !!!!

// Print an individual cookie
echo $_COOKIE["TestCookie"];

// Another way to debug/test is to view all cookies
print_r($_COOKIE);
?>
```

# Cookies

```
<?php|
//Cookie arrays
// set the cookies
setcookie("cookie[three]", "cookiethree");
setcookie("cookie[two]", "cookietwo");
setcookie("cookie[one]", "cookieone");

// after the page reloads, print them out
if (isset($_COOKIE['cookie']))
{
    foreach ($_COOKIE['cookie'] as $name => $value)
    {
        $name = htmlspecialchars($name);
        $value = htmlspecialchars($value);
        echo "$name : $value <br />\n";
    }
}

?>
```

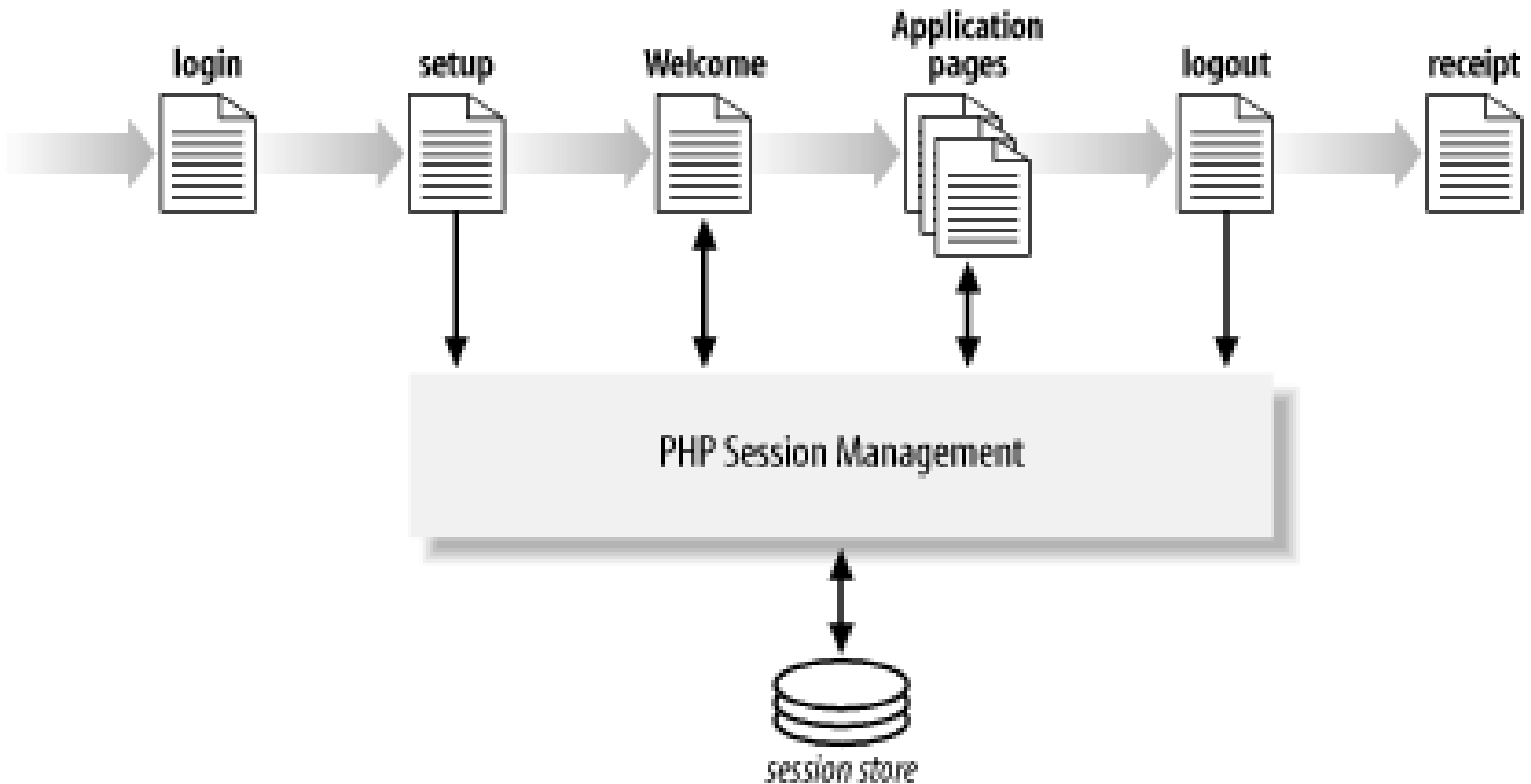
# Sesiune

- cookie poate oferi "memorie" aplicatiilor web
- dezavantaje
  - datele se stocheaza la client, nu sunt in siguranta
  - nu se pot stoca oricate date (max. 20)
  - e posibil clientul sa nu accepte cookie
- Sesiunea pentru evitarea acestor dezavantaje
  - stocare pe server
  - oricat de mult date
  - daca clientul nu accepta cookie, "memoria" se realizeaza prin metoda "get"

# Sesiune

- `session_start();` (session\_ID din GET, POST, COOKIE)
- `session_write_close ( );`
- `session_id ( [string id] );`
- datele se manipuleaza prin variabila globala `$_SESSION` care ofera acces la citirea/scrierea datelor

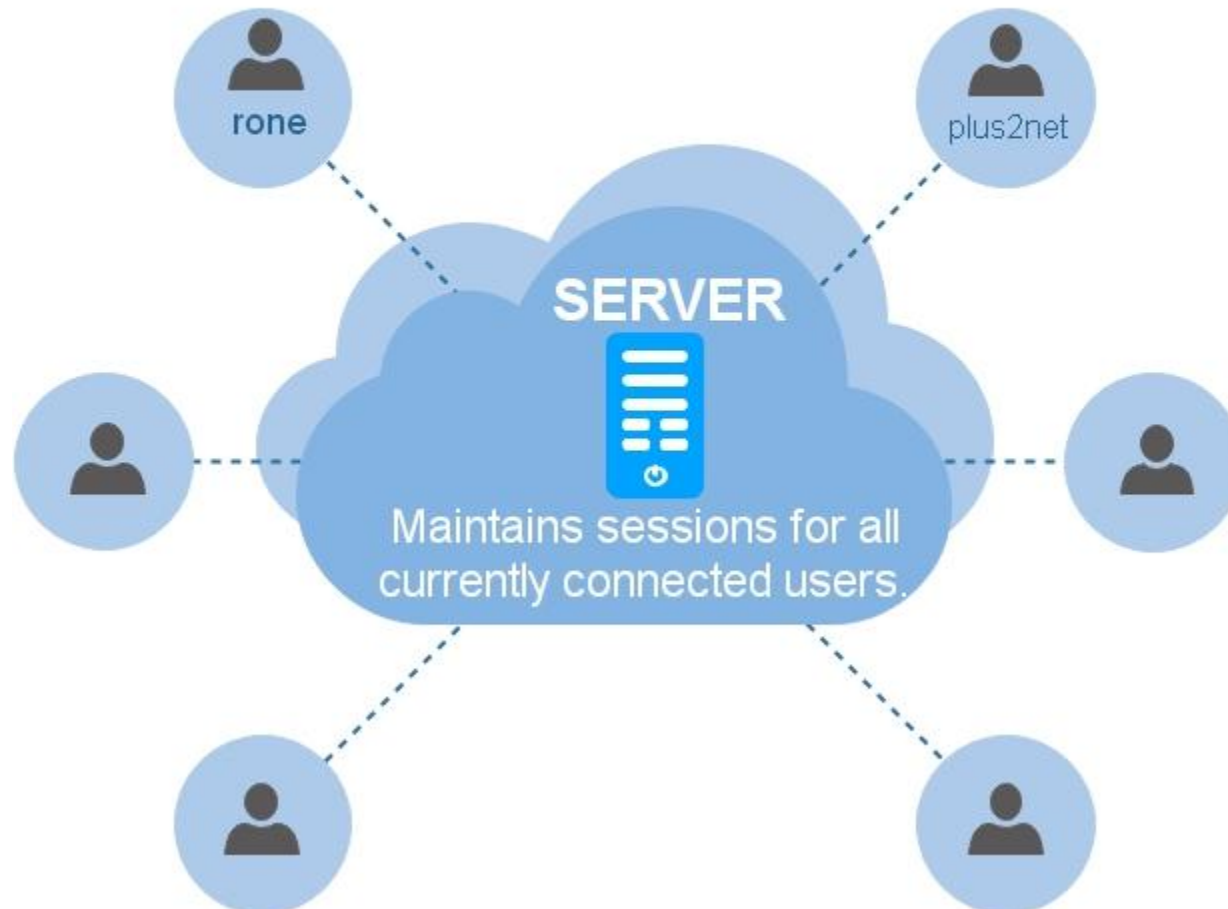
# Sesiune





# Sesiune

## SESSIONS Management



# Sesiune

```
<?php
// Initialize the session.
// If you are using session_name("something"), don't forget it now!
session_start();

// Unset all of the session variables.
$_SESSION = array();

// If it's desired to kill the session, also delete the session cookie.
// Note: This will destroy the session, and not just the session data!
if (isset($_COOKIE[session_name()]))
{
    setcookie(session_name(), '', time()-42000, '/');
}

// Finally, destroy the session.
session_destroy();?>
```

# Sesiune

```
<?php
// page1.php

session_start();

echo 'Welcome to page #1';

$_SESSION['favcolor'] = 'green';
$_SESSION['animal'] = 'cat';
$_SESSION['time'] = time();

// Works if session cookie was accepted
echo '<br /><a href="page2.php">page 2</a>';

// Or maybe pass along the session id, if needed
//echo '<br /><a href="page2.php?" . SID . ">page 2</a>';
echo '<a href="page2.php?" . session_name() . " = ' .
session_id() . "'>page2</a>' ;
?>
```

# Sesiune

```
<?php|
// page2.php

session_start();

echo 'Welcome to page #2<br />';

echo $_SESSION['favcolor']; // green
echo $_SESSION['animal'];   // cat
echo date('Y m d H:i:s', $_SESSION['time']);

// You may want to use SID here, like we did in page1.php
echo '<br /><a href="page1.php">page 1</a>';
?>
```

# Documentatie

- <https://www.php.net/>
- [http://rf-opto.etti.tuiasi.ro/master\\_it.php](http://rf-opto.etti.tuiasi.ro/master_it.php)

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