

Curs 5 (S10)

2021/2022

Programarea aplicațiilor web

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

Program

- An V
 - Saptamana 1
 - Miercuri 15-17 Proiect (Intro)
 - Miercuri 17-20 Curs (HTML/CSS)
 - Saptamanile 2-8
 - Miercuri 16:30-18 Curs
 - Miercuri 18-20 Laborator
 - Saptamanile 9-14
 - Miercuri 16:30-18 Curs
 - Miercuri 18-20 Proiect

Orar

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



FACULTATEA DE ELECTRONICA, TELECOMUNICATII SI TEHNOLOGIA INFORMATIEI

55RC

ETTI

	1 8:00 - 8:50	2 9:00 - 9:50	3 10:00 - 10:50	4 11:00 - 11:50	5 12:00 - 12:50	6 13:00 - 13:50	7 14:00 - 14:50	8 15:00 - 15:50	9 16:00 - 16:50	10 17:00 - 17:50	11 18:00 - 18:50	12 19:00 - 19:50
L								RCALSC (C) Online_SL	Scripcariu L. RCALSC (C)		RCALSC (L) 2.13 TC (R)	
Ma							TEFO (C) Online_TrL	Trifina L.			TEFO (L) 3.25 TTI (L)	
Mi								PAW (L) Online_DaR	Damian R.		PAW (C) Online_DaR	
J								PAW (P) Online_DaR	Damian R.			
V									Sirbu A. POO (C) Online_SA		TEFO (L) 1.08 Practica	
Sa											Online_CBI	Online_CBI

Nota

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

Acces

■ Personalizat



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	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 **Stu**

Note Lista Studenti Examene Fotografii

POPESCU GOPO ION

Fotografia nu exista

Date:

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

[Acceseaza ca acest student](#) | [Iere acces la licente](#)

Note obtinute

Inca nu a fost notat.

Start Didactic Master Colectiv C

Note **Lista Studenti** Examene Fotografii

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](#)

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

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)!**

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 atentia: 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 MDCK 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> ★

Laboratorul de Microunde si Optoelectronica
Facultatea de Electronica, Telecomunicatii si Tehnologia Informatiei
Universitatea Tehnica "Gh. Asachi" Iasi

In atentia: 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 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

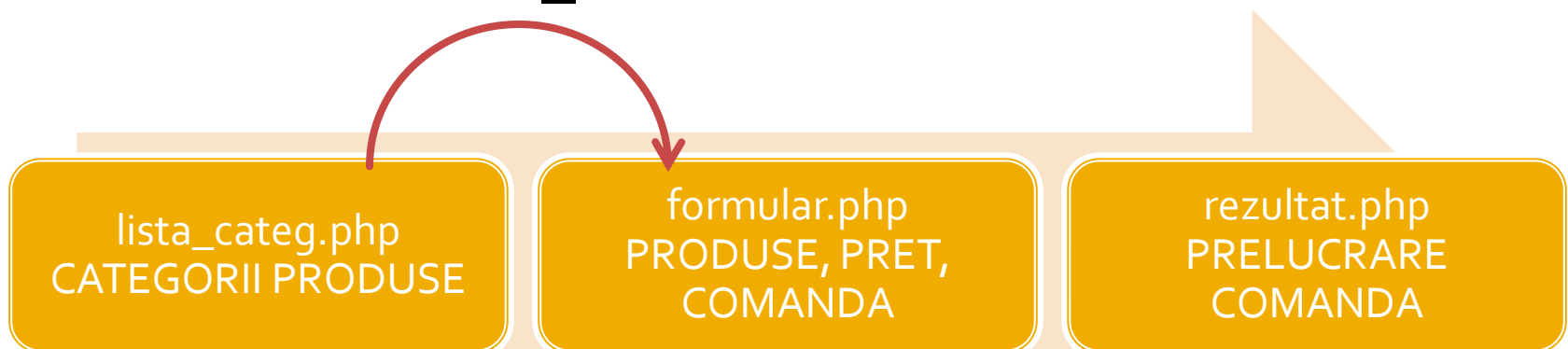
Link-uri active

Forma – Metode de transmitere

- **post** datele sunt transmise in bloc
- **get** datele sunt atasate adresei documentului de procesare : results.php?prob=81&an=2009
- **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 $cat;?> `
- are efect in `formular.php`
 - `$_GET['categ']="valoarea $cat corespunzatoare"`
\$cat – \$_GET



Plan aplicatie

Aplicatie laborator

Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	Papetarie	3
2	Instrumente	3
3	Audio-video	3
4	Calculatoare	3
5	Jucarii	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	modifica
2	Desktop	calculator mare	1000	5	modifica
3	Imprimanta	prn	200	2	modifica
-	Produs nou				adauga

Categorii Produse

Alegeti categoria:

Nr.	Categorie	Total Produse
1	Papetarie	3
2	Instrumente	3
3	Audio-video	3
4	Calculatoare	3
5	Jucarii	2

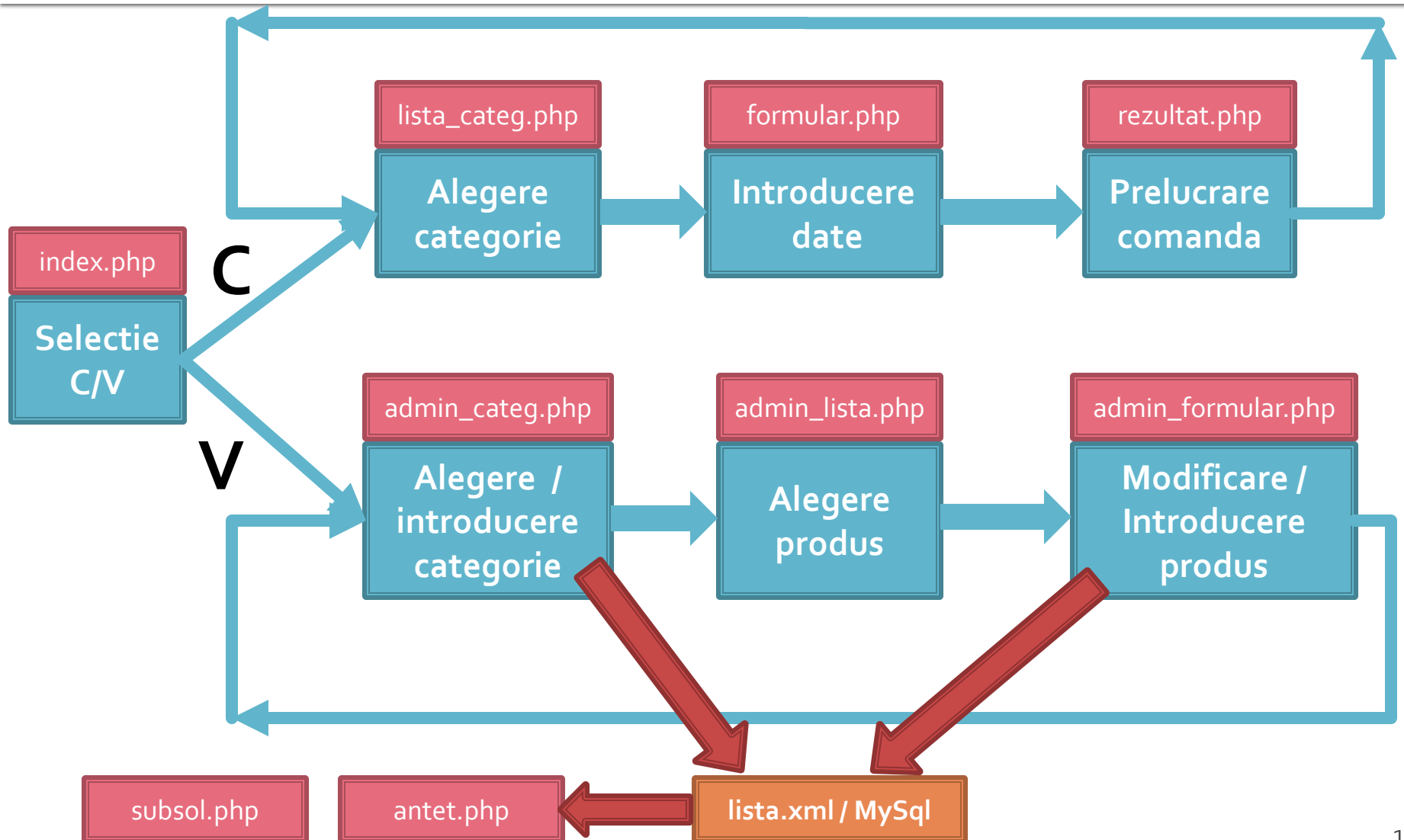
Total produse: 14

Categorie noua de produse:

Produs in categoria Calculatoare

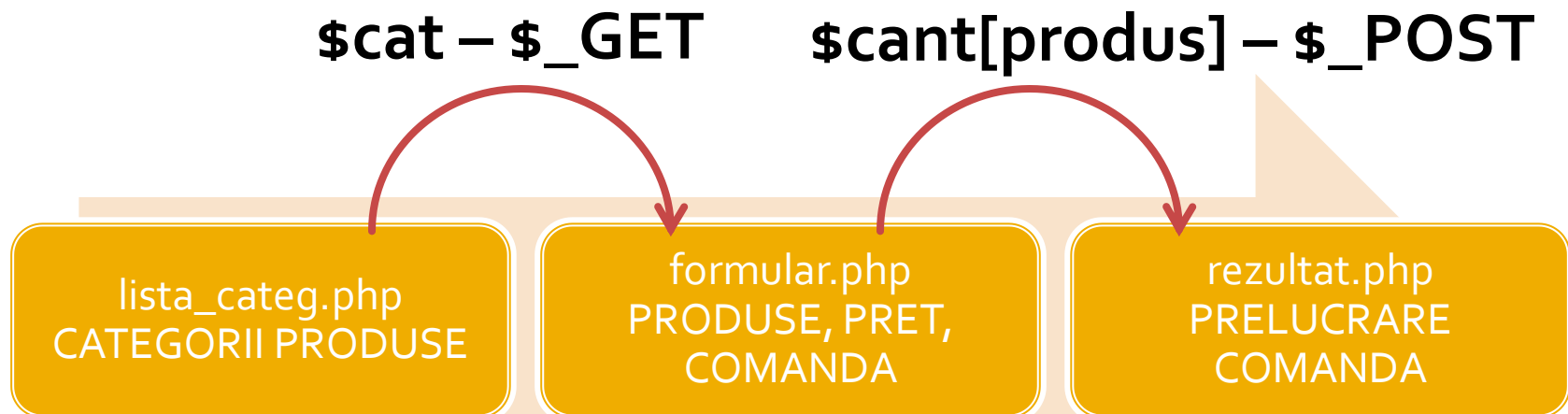
Produs	<input type="text" value="laptop"/>
Descriere	<input type="text" value="calculator mic"/>
Pret	<input type="text" value="2000"/>
Cantitate	<input type="text" value="2"/>
<input type="button" value="Trimite"/>	

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

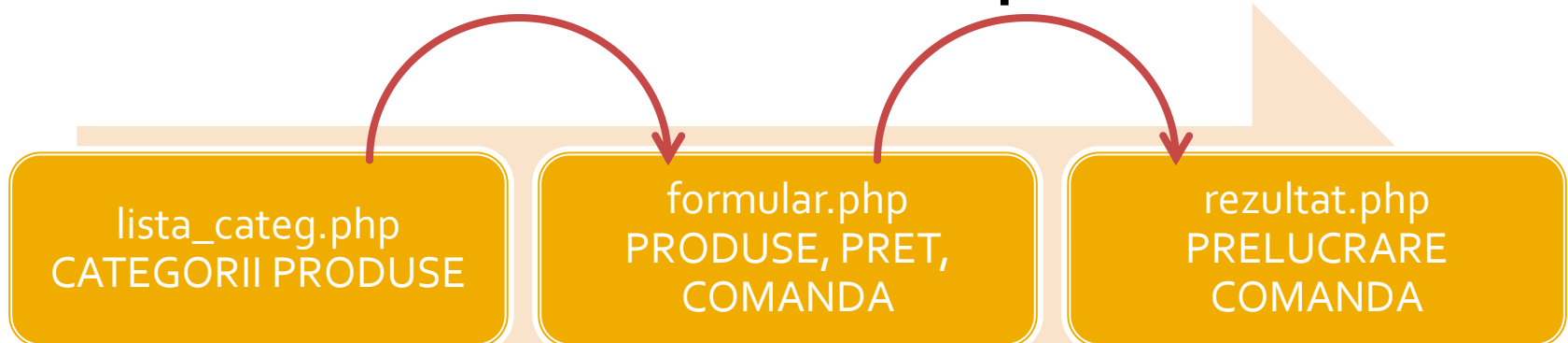


Plan aplicatie

- 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	Papetarie	3
2	Instrumente	3
3	Audio-video	3
4	Calculatoare	3
5	Jucarii	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	Papetarie	3
2	Instrumente	3
3	Audio-video	3
4	Calculatoare	3
5	Jucarii	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	modifica
2	Desktop	calculator mare	1000	5	modifica
3	Imprimanta	prn	200	2	modifica
-	Produs nou				adauga

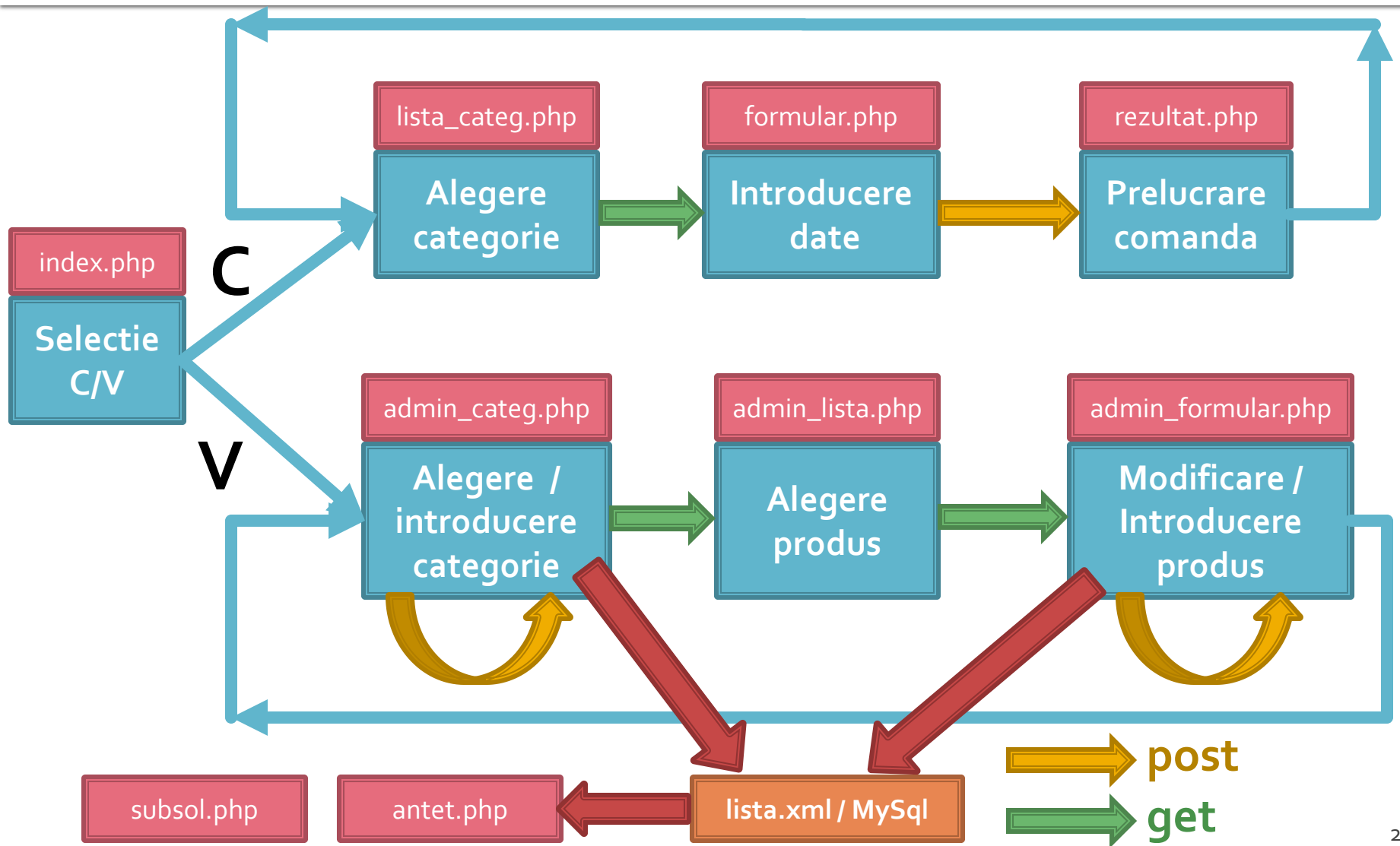
Produs in categoria Calculatoare

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**

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	Papetarie	3
2	Instrumente	3
3	Audio-video	3
4	Calculatoare	3
5	Jucarii	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	modifica
2	Desktop	calculator mare	1000	5	modifica
3	Imprimanta	prn	200	2	modifica
-	Produs nou				adauga

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>
}
```



Includerea / controlul formei in fisierele PHP - Template

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);`

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

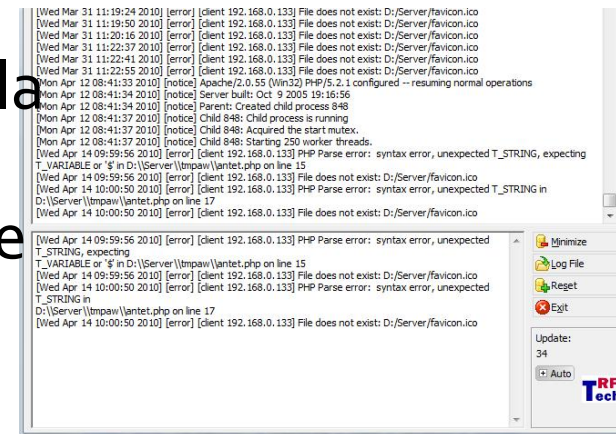
Metode de lucru recomandate 2

- 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

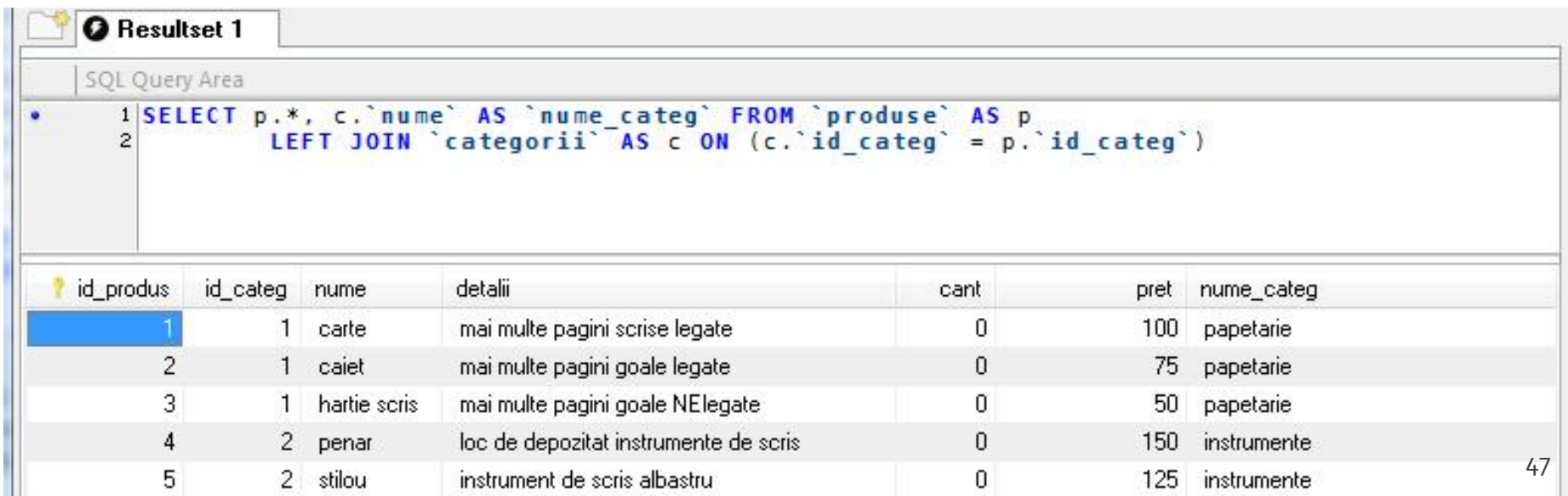
- Centos 7.1:

- 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	stilu	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 5a

- La implementarea unei aplicatii noi (proiect)
 1. Imaginarea planului aplicatiei (ex: S25)
 - "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 5b

- 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 5c

- 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

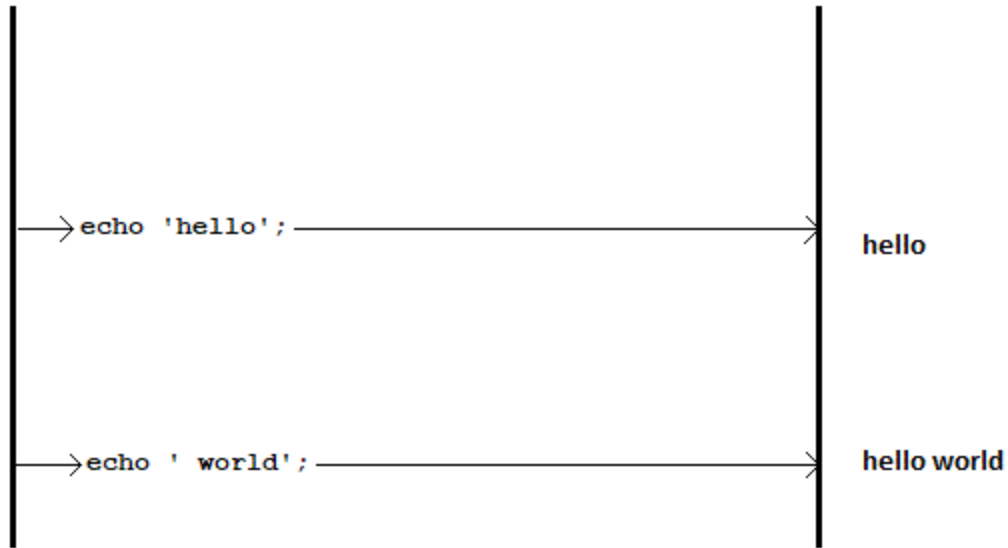
- Copie orice iesire a scriptului PHP intr-un buffer de memorie fara sa transmita nimic clientului
- Utilizat in general pentru conlucrarea cu header-e HTTP, evitarea generarii de HTML inainte de terminarea lucrului cu header-e
- `ob_start();`
- `ob_end_flush ();`
- `ob_end_clean ();`
- `ob_get_contents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

Buffer issue

No output buffering

PHP script

Client Browser

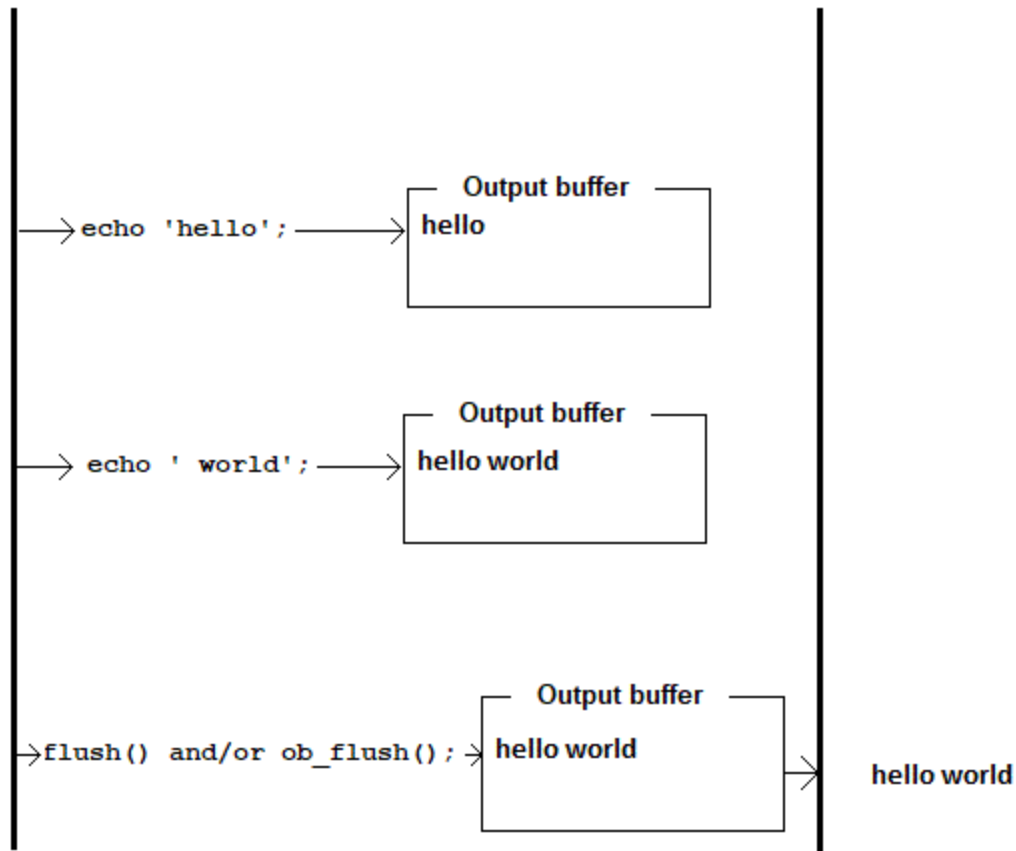


Buffering

Output buffering

PHP script

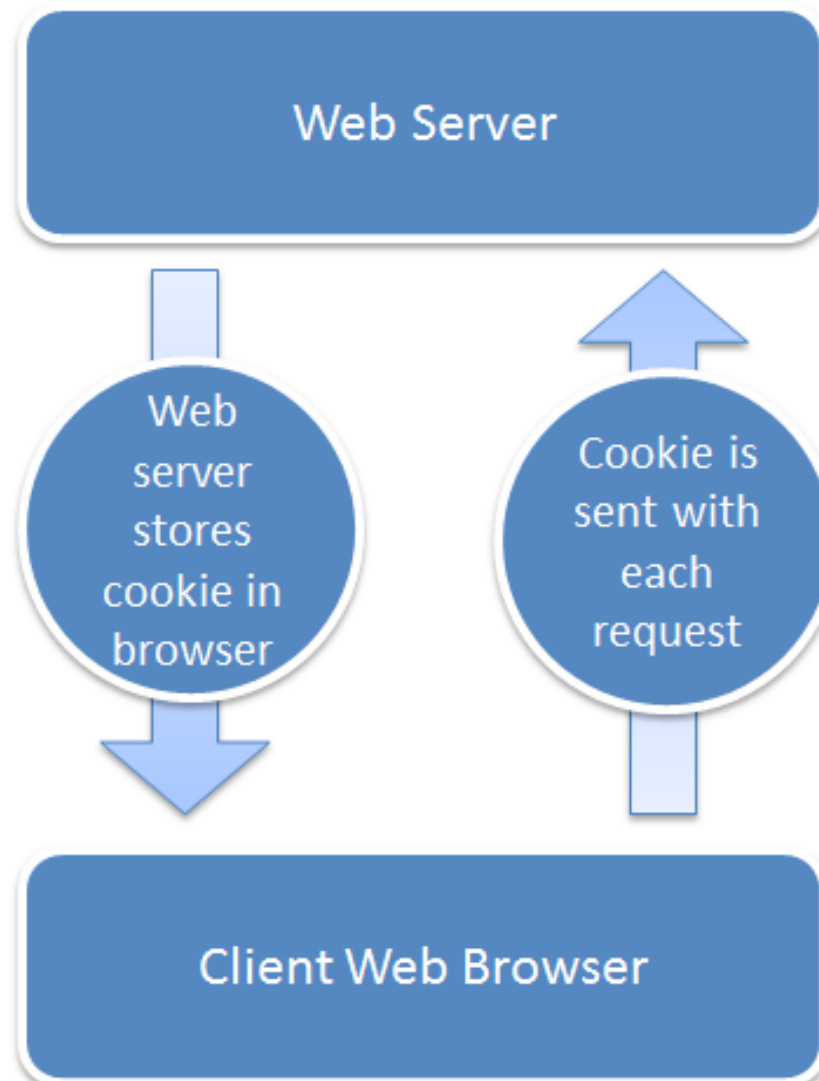
Client Browser



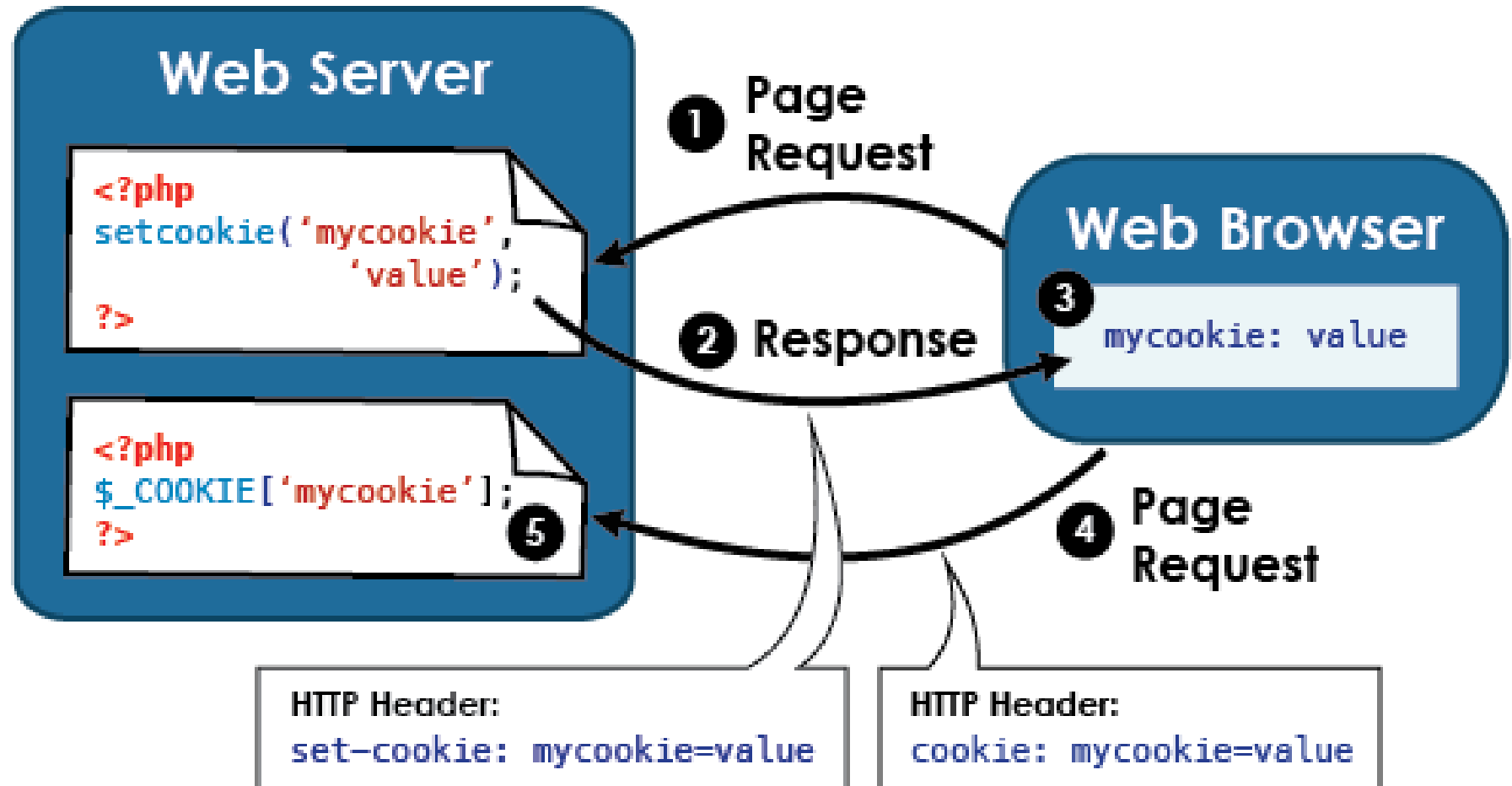
Cookies

- 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";
    }
}

?>
```

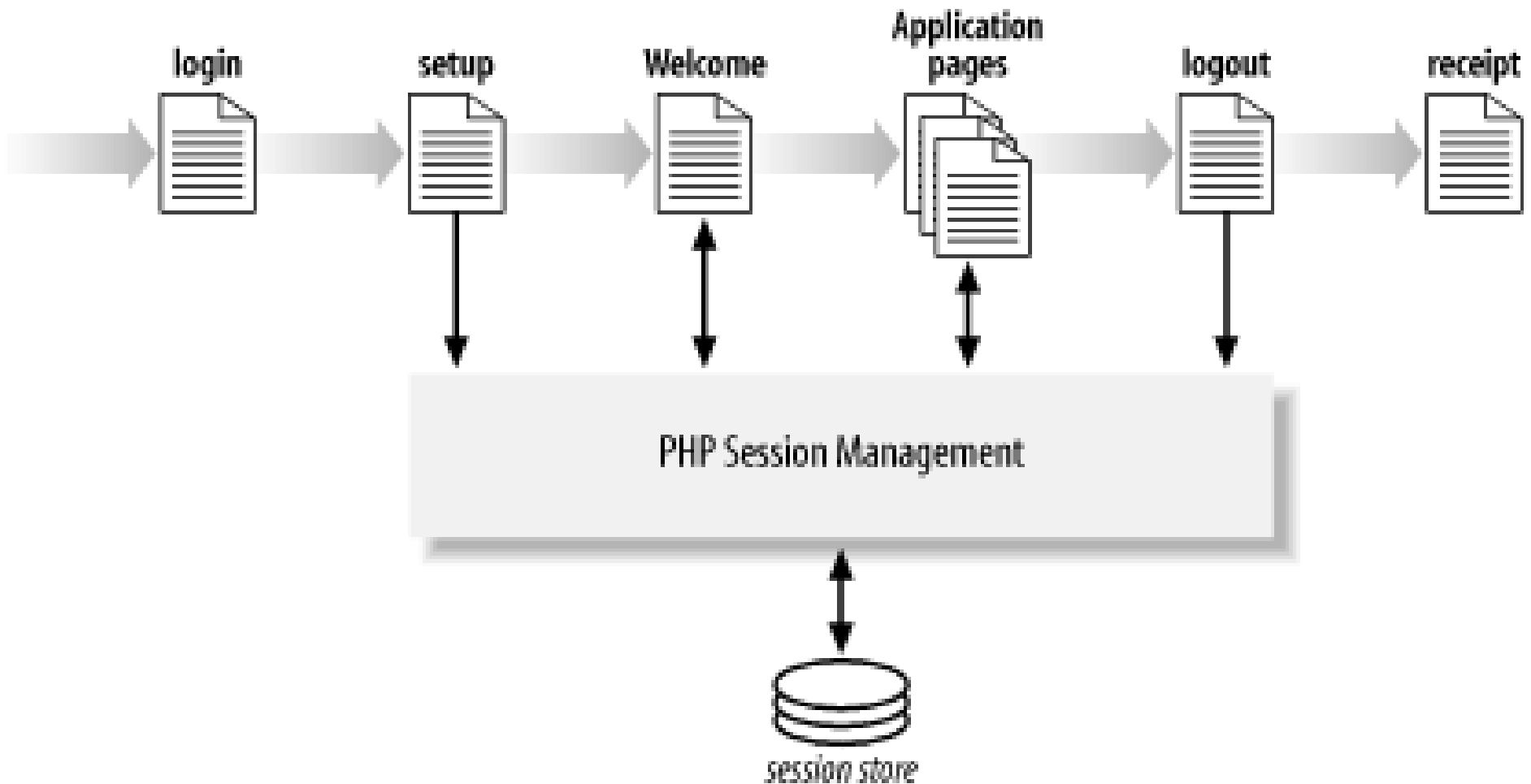
Sesiune

- 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

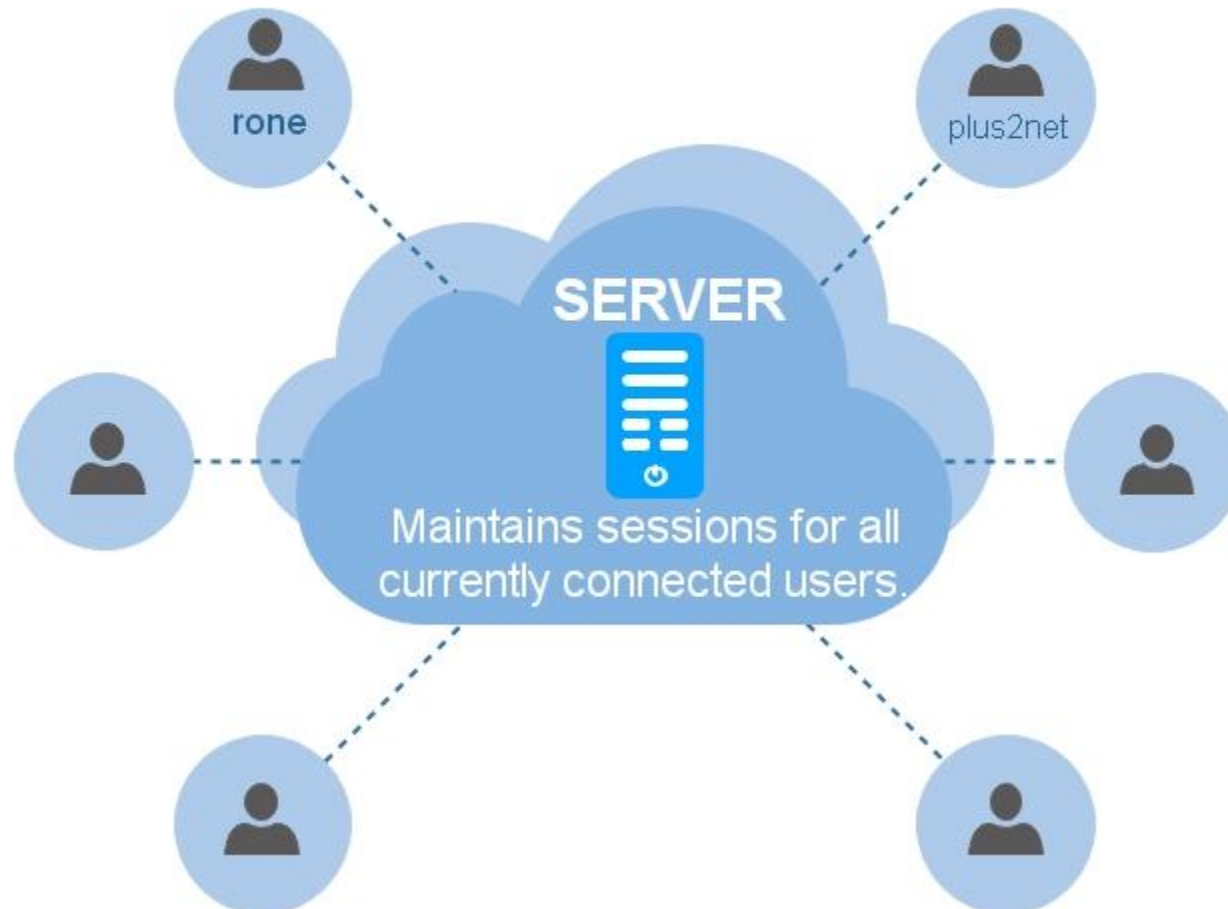
- `session_start();` (session_ID din GET, POST, COOKIE)
- `session_write_close ();`
- `session_id ([string id]);`
- datele se manipuleaza prin variabila globala `$_SESSION` care ofera acces la citirea/scrierea datelor

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>';
?>
```


MySql – Server Windows 2000

Mini – Indrumar practic

Lucru cu bazele de date

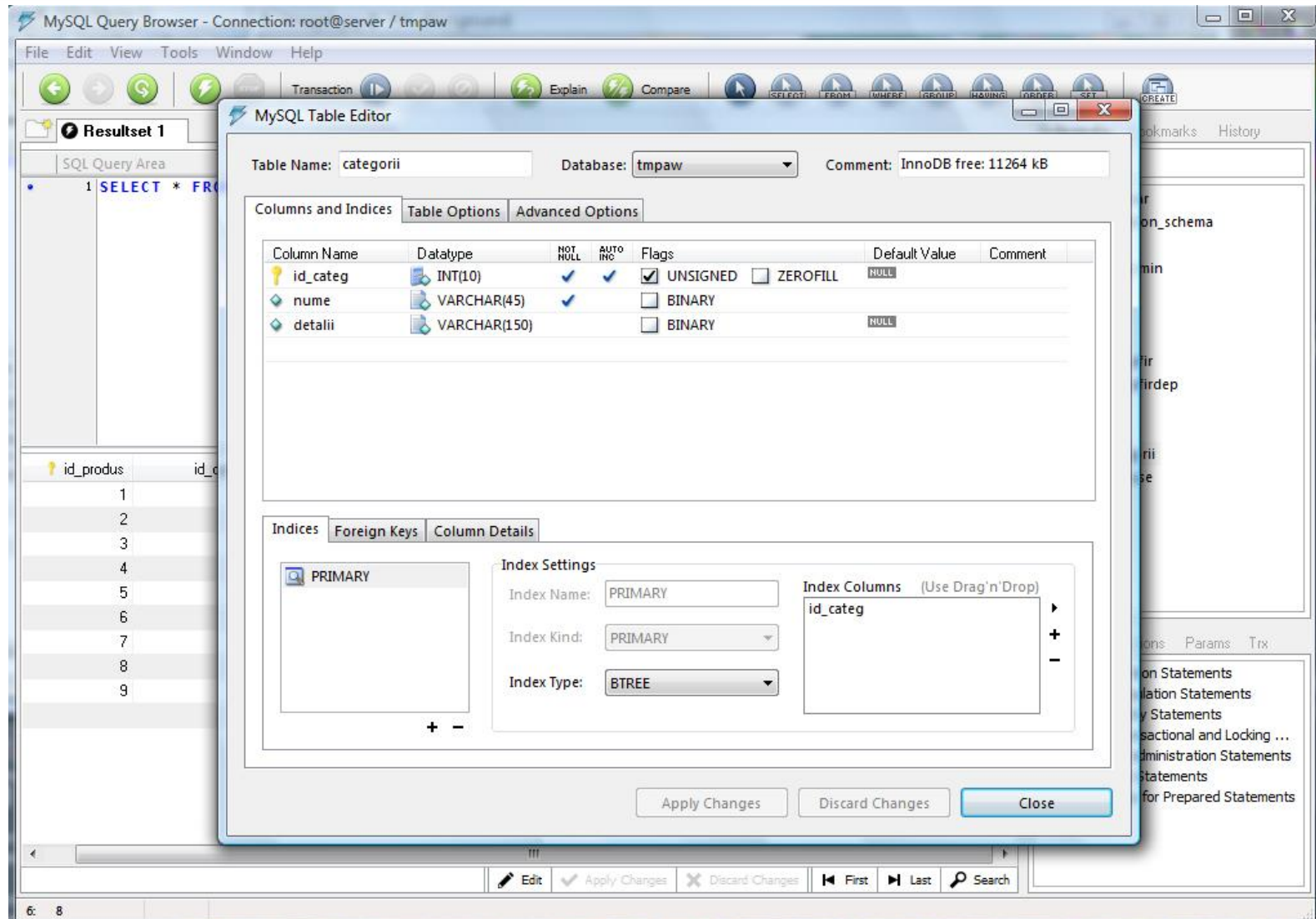
Realizarea bazei de date

- Se recomanda utilizarea utilitarului **MySQL Query Browser** sau un altul echivalent pentru crearea scheletului de baza de date (detalii – laborator 1)
- Se initializeaza aplicatia cu drepturi depline ("root" si parola)
 - se creaza o noua baza de date:
 - in lista "Schemata" – Right click – Create New Schema
 - se activeaza ca baza de date curenta noua "schema" – Dublu click pe numele ales

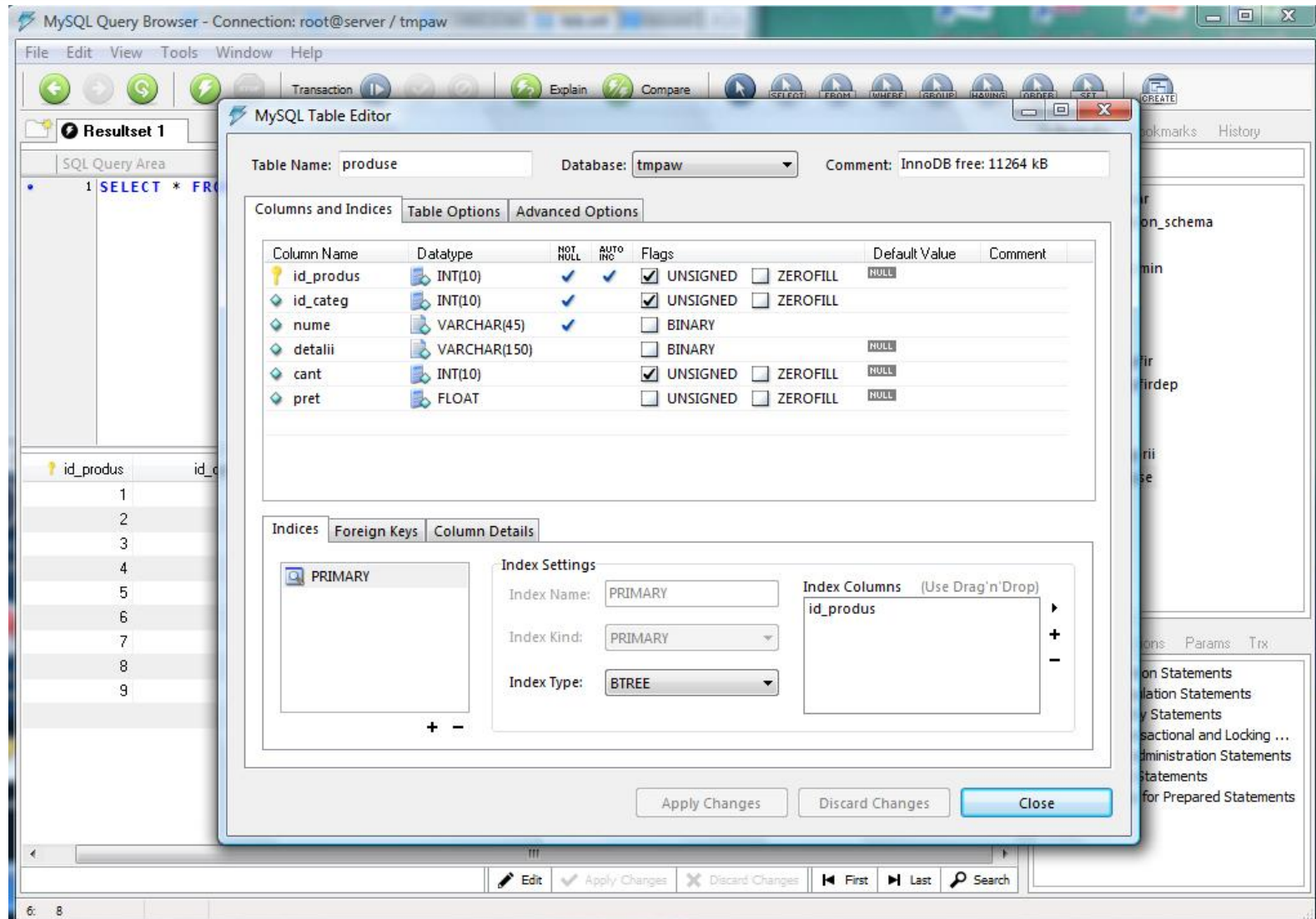
Introducere tabele

- Introducere tabel – Click dreapta pe numele bazei de date aleasa – Create New Table
- se defineste structura tabelului
 - nume coloane
 - tip de date
 - NOT NULL – daca se accepta ca acea coloana sa ramana fara date (NULL) sau nu
 - AUTOINC – daca acea coloana va fi de tip intreg si va fi incrementata automat de server (util pentru crearea cheilor primare)
 - Default value – valoarea implicita care va fi inserata daca la introducerea unei linii noi nu se mentioneaza valoare pentru acea coloana (legat de optiunea NOT NULL)


Tabel Categorii

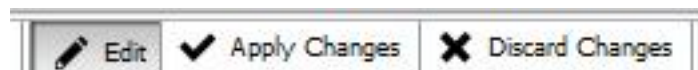


Tabel Prognose



Introducere date initiale

- Dublu click pe tabel → In zona "SQL Query Area" se completeaza interogarea de selectie totala
 - `SELECT * FROM produse p;`
- Executia interogarii SQL
 - Meniu → Query → Execute
 - Bara de butoane 
- Lista rezultata
 - initial vida
 - poate fi editata – butoanele "Edit", "Apply Changes", "Discard Changes" din partea de jos a listei



Introdúcere date initiale

MySQL Query Browser - Connection: root@server / tmpaw

File Edit View Query Script Tools Window Help

Transaction Explain Compare SELECT FROM WHERE GROUP HAVING ORDER SET CREATE

Resultset 1

SQL Query Area

```
1 SELECT * FROM produse p;
```

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

Schemata Bookmarks History

tmpaw

- categoriai
- produse
- world

Syntax Functions Params Trx

- Data Definition Statements
- Data Manipulation Statements
- MySQL Utility Statements
- MySQL Transactional and Locking ...
- Database Administration Statements
- Replication Statements
- SQL Syntax for Prepared Statements

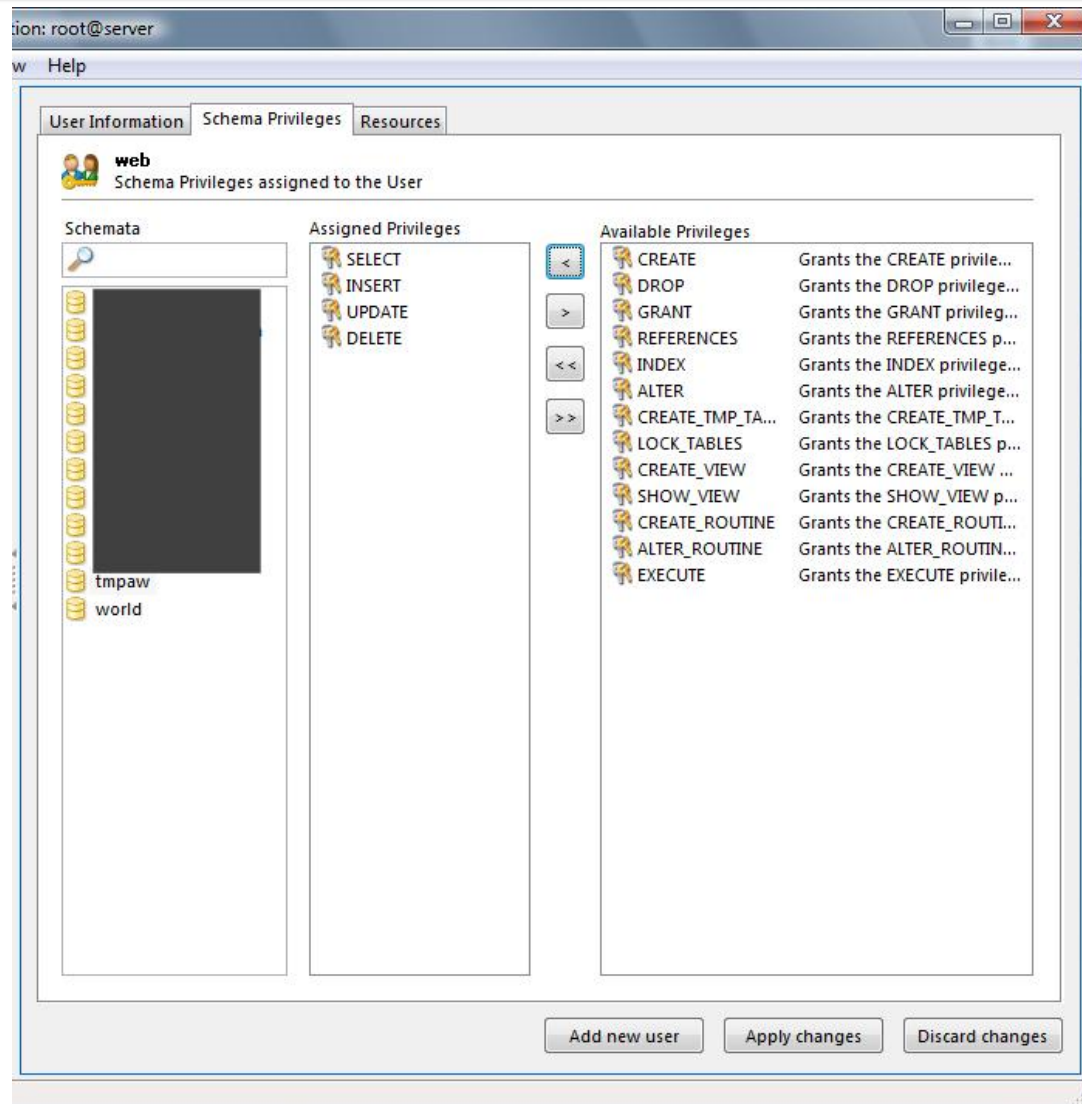
Edit Apply Changes Discard Changes First Last Search

6: 8

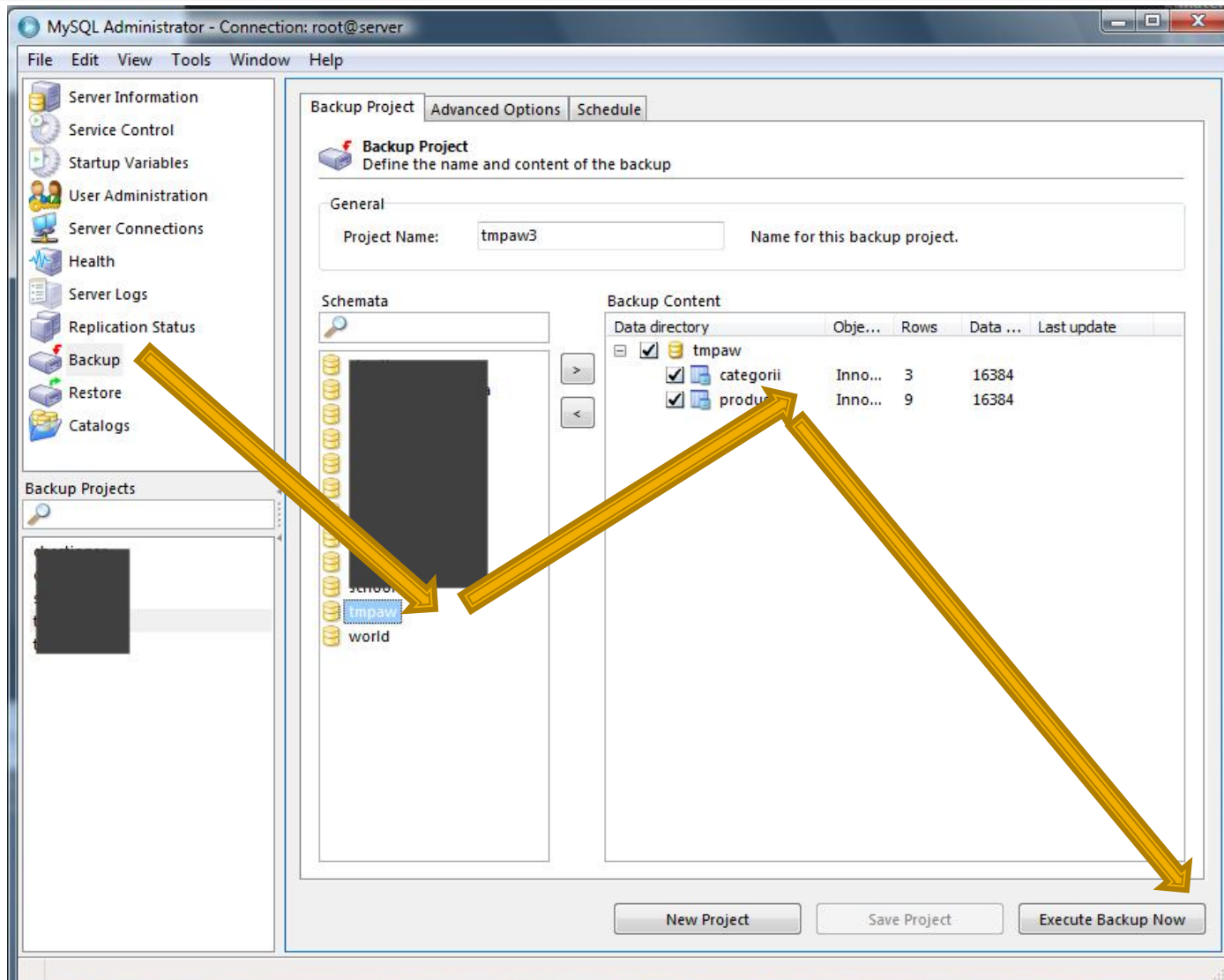
Backup, Restore, drepturi de acces

- Se recomanda utilizarea utilitarului **MySQL Administrator** sau un altul echivalent (detalii – laborator 1)
- Se initializeaza aplicatia cu drepturi depline ("root" si parola)
- Se creaza un utilizator limitat (detalii – laborator 1)
- Se alocă drepturile "SELECT" + "INSERT" + "UPDATE" asupra bazei de date create (sau mai multe daca aplicatia o cere)


Drepturi de acces



Backup



Restaurarea bazei de date

- Din **MySql Administrator**
 - Sectiunea Restore → “Open Backup File”
- Din **MySql Query Browser**
 - Meniu → File → Open Script
 - Executie script SQL
 - Meniu → Script → Execute
 - Bara de butoane 
- Scriptul SQL rezultat contine comenzile/interogariile SQL necesare pentru crearea bazei de date si popularea ei cu date

Script SQL Backup - utilitate

- Poate fi folosit ca un model extrem de bun pentru comenzile necesare pentru crearea programatica (din PHP de exemplu) a bazei de date

```
CREATE DATABASE IF NOT EXISTS tmpaw;  
USE tmpaw;  
  
DROP TABLE IF EXISTS `categorii`;  
CREATE TABLE `categorii` (  
  `id_categ` int(10) unsigned NOT NULL auto_increment,  
  `nume` varchar(45) NOT NULL,  
  `detalii` varchar(150) default NULL,  
  PRIMARY KEY (`id_categ`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;  
  
INSERT INTO `categorii` (`id_categ`,`nume`,`detalii`) VALUES  
(1,'papetarie',NULL),  
(2,'instrumente',NULL),  
(3,'audio-video',NULL);
```

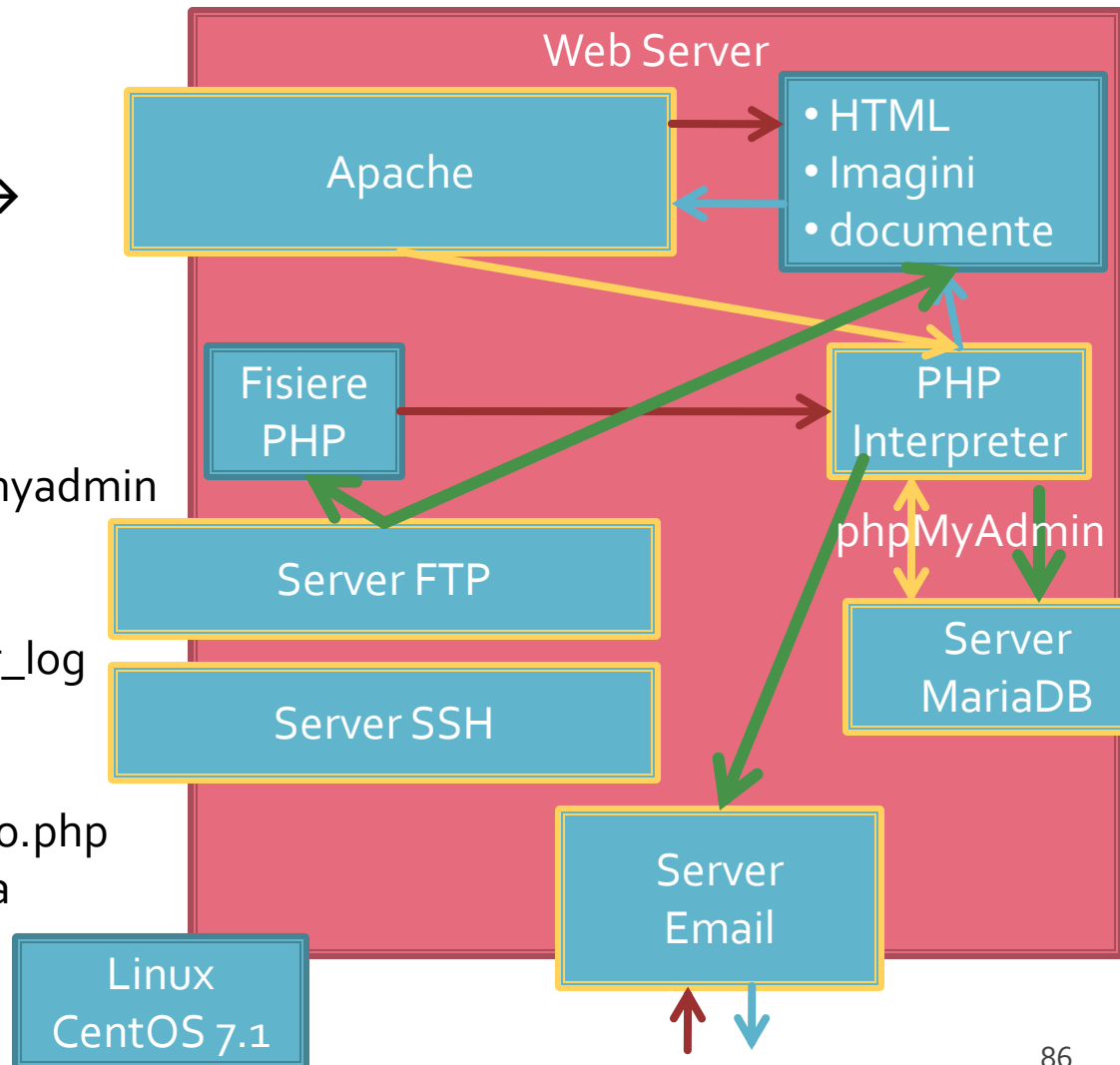
MySQL – Server Centos 7.1

Mini – Indrumar practic

Lucru cu bazele de date

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



PhpMyAdmin

- <http://192.168.30.5/phpmyadmin>
 - root
 - parola administrator **MySQL/MariaDB** (masterrc)



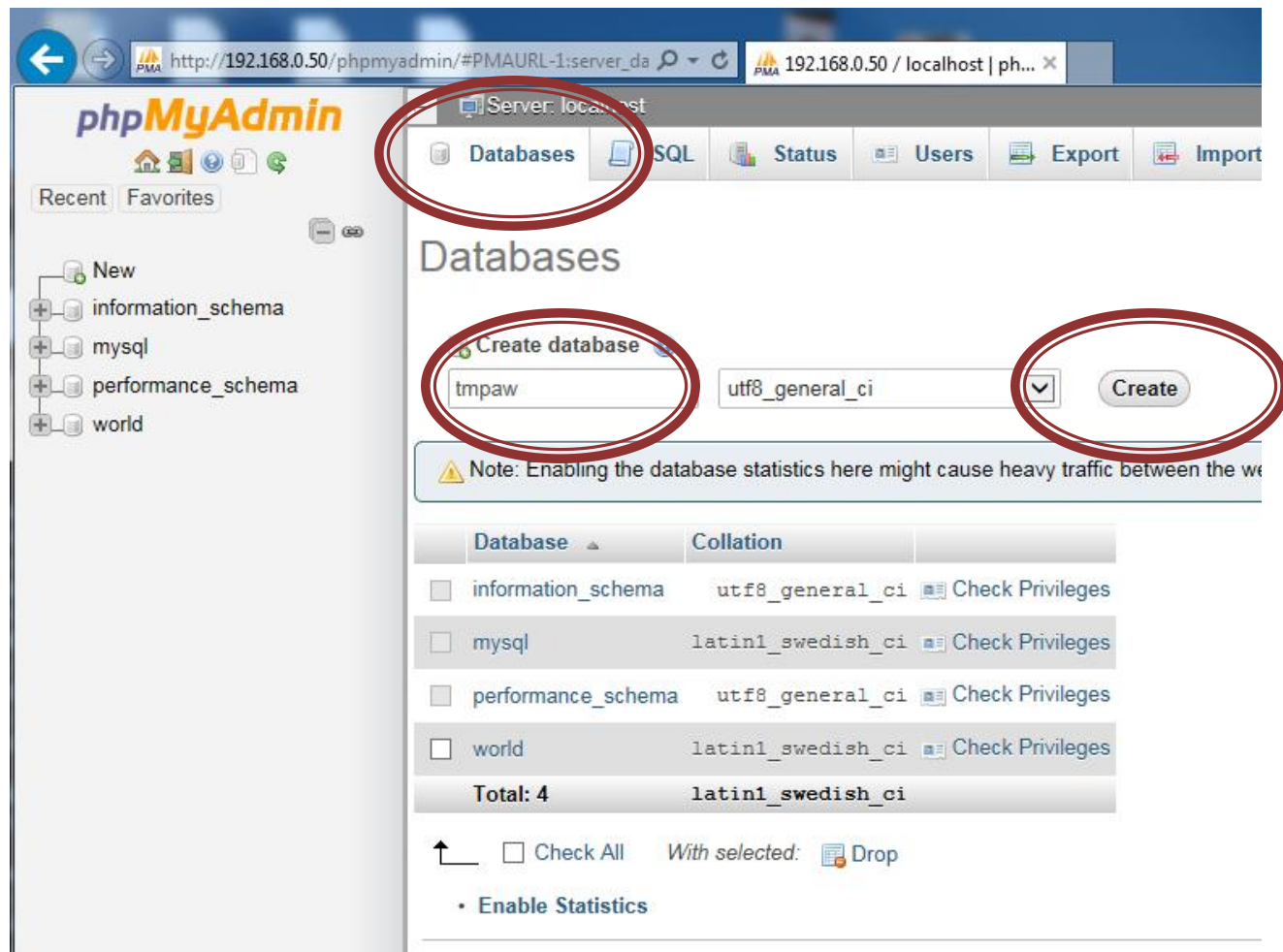
PhpMyAdmin

The screenshot displays the PhpMyAdmin web interface in a browser window. The address bar shows the URL `http://192.168.0.50/phpmyadmin/#PMAURL-0:index.php`. The interface includes a top navigation bar with tabs for Databases, SQL, Status, Users, Export, Import, Settings, Replication, Variables, Charsets, and Engines. The left sidebar shows a tree view of databases: information_schema, mysql, performance_schema, and world. The main content area is divided into several panels:

- General Settings**: Includes a "Change password" link and a "Server connection collation" dropdown set to `utf8mb4_unicode_ci`.
- Appearance Settings**: Includes a "Language" dropdown set to `English`, a "Theme" dropdown set to `pmahomme`, and a "Font size" dropdown set to `82%`. A "More settings" link is also present.
- Database server**: Lists server details:
 - Server: Localhost via UNIX socket
 - Server type: MariaDB
 - Server version: 5.5.44-MariaDB - MariaDB Server
 - Protocol version: 10
 - User: root@localhost
 - Server charset: UTF-8 Unicode (utf8)
- Web server**: Lists web server details:
 - Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips mod_fcgid/2.3.9 PHP/5.4.16 mod_python/3.5.0- Python/2.7.5
 - Database client version: libmysql - 5.5.44-MariaDB
 - PHP extension: mysqli
 - PHP version: 5.4.16
- phpMyAdmin**: Lists version information and links:
 - Version information: 4.4.15.1
 - Documentation
 - Wiki
 - Official Homepage
 - Contribute
 - Get support
 - List of changes

Creare Baza de Date

- Databases → "nume" → Create



The screenshot shows the phpMyAdmin web interface. The 'Databases' tab is selected and highlighted with a red circle. Below the tab, the 'Create database' section is visible, with the database name 'tmpaw' entered in the text field, 'utf8_general_ci' selected in the collation dropdown, and the 'Create' button highlighted with a red circle. A red circle also highlights the 'Create database' link. The left sidebar shows a tree view of databases: 'New', 'information_schema', 'mysql', 'performance_schema', and 'world'. Below the 'Create database' form, a table lists existing databases and their collations.

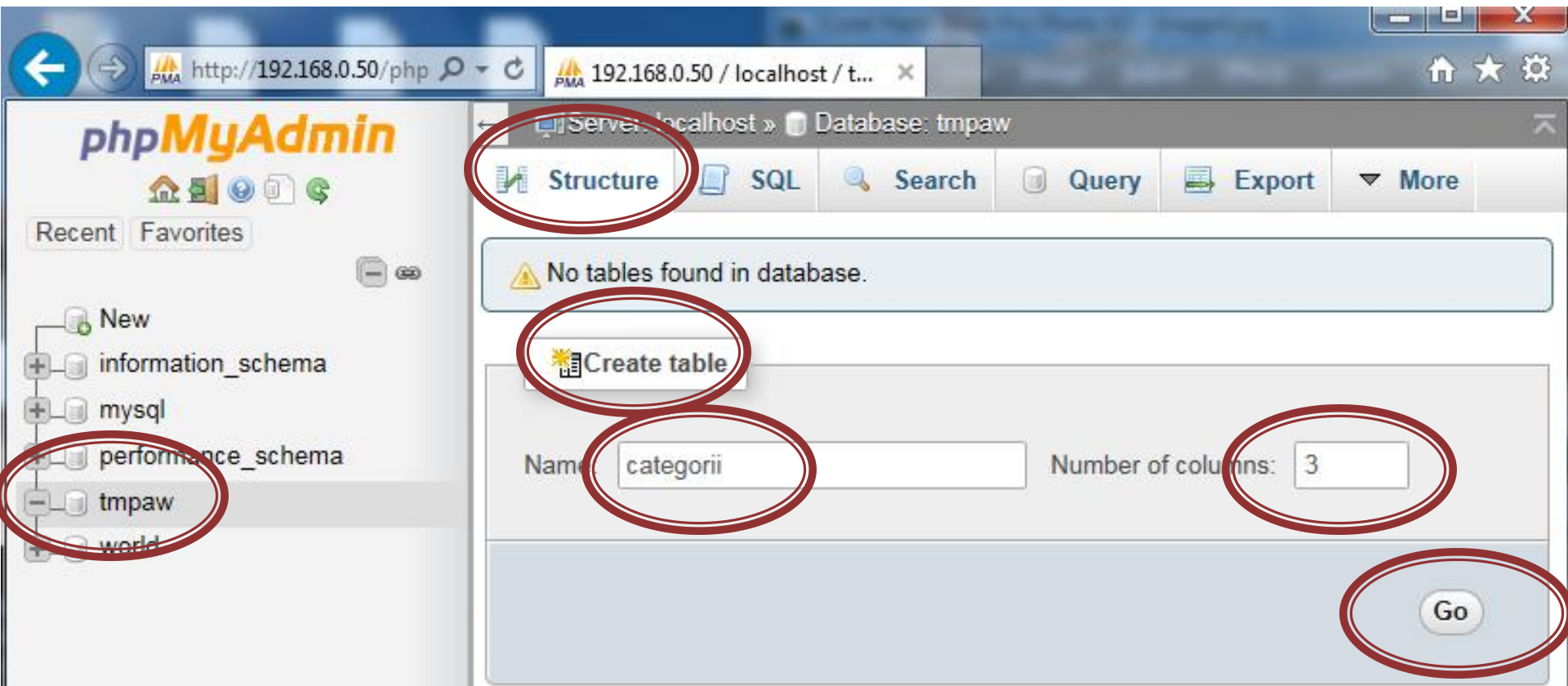
Database	Collation	
<input type="checkbox"/> information_schema	utf8_general_ci	Check Privileges
<input type="checkbox"/> mysql	latin1_swedish_ci	Check Privileges
<input type="checkbox"/> performance_schema	utf8_general_ci	Check Privileges
<input type="checkbox"/> world	latin1_swedish_ci	Check Privileges
Total: 4	latin1_swedish_ci	

↑ ☐ Check All With selected: [Drop](#)

• [Enable Statistics](#)

Creare tabelle in baza de date

- Baza de date (in lista) → Structure → div Create Table → nume/coloane → Go



Introducere coloane, tabel categorii

- (eventual) Adaugare coloane / Stabilire nume
- Name / Type / Length / Default

The screenshot shows the phpMyAdmin interface for a table named 'categorii' in the 'tmpaw' database. The table structure is displayed with the following columns:

Name	Type	Length/Values	Default	Collation
id_categ	INT		None	
nume	VARCHAR	45	None	
detalii	VARCHAR	150	None	

The interface also includes a 'Table comments:' field and a 'Collation:' dropdown menu. The 'Storage Engine' is set to 'InnoDB'.

Introducere coloane

- (eventual) NOT NULL / Index / Auto Increment
 - in functie de “necesitatile” coloanei respective

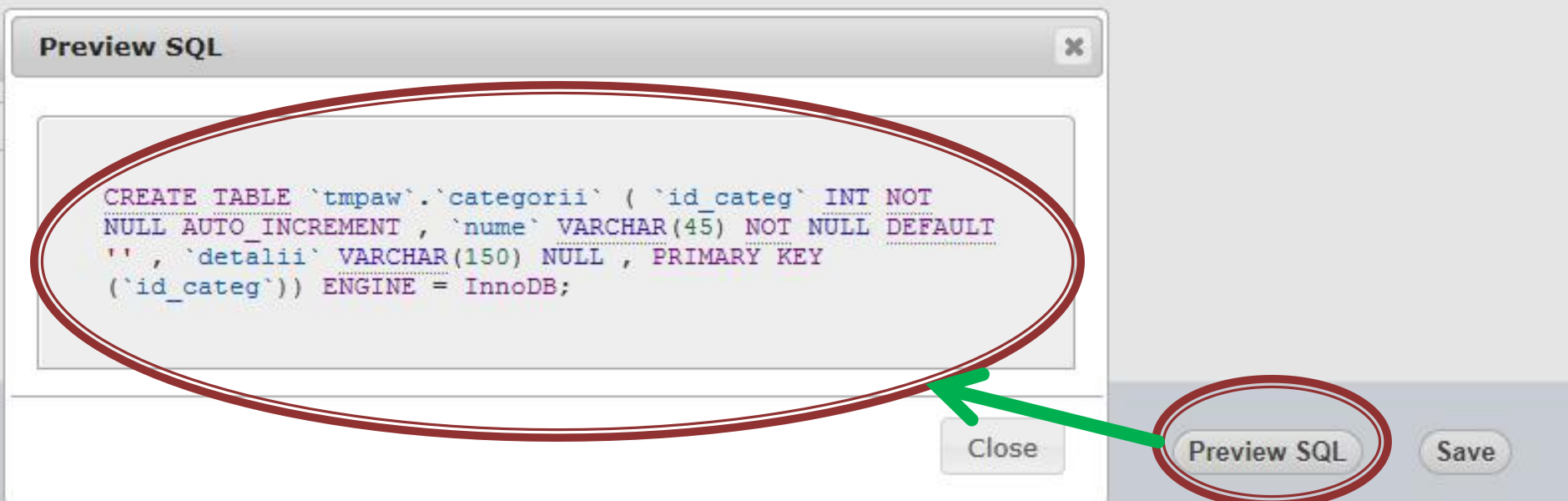
Table name: Add column(s)

Structure

Name	Type	Length/Values	Default	Collation	Attributes	Null	Index	A_I	Comments
id_categ	INT		None			<input type="checkbox"/>	PRIMARY	<input checked="" type="checkbox"/>	
nume	VARCHAR	45	As defined:			<input type="checkbox"/>	---	<input type="checkbox"/>	
detalii	VARCHAR	150	None			<input checked="" type="checkbox"/>	---	<input type="checkbox"/>	

Preview SQL

- in aproape toate etapele in PhpMyAdmin
 - exemplu de cod SQL/schelet utilizabil (copy/paste) in aplicatia PHP
 - modificari de finete absente din interfata
 - copy → Sectiune "SQL" in interfata → paste → modificare



Introducere coloane, tabel produse

- New → Nume → Add Columns → ...

The screenshot shows the phpMyAdmin interface. On the left, the 'Database: tmpaw' is selected in the sidebar. The main area displays the 'Add Columns' form for the table 'produse'. The 'Add' button and the '1' in the 'column(s)' field are circled in red. Below the form, the table structure is shown with columns: id_produs, id_categ, nume, detalii, cant, and pret. The 'Type' column for 'pret' is highlighted in blue.

Name	Type	Length/Values	Default	Collation	Attributes	Null	Index	A_I	C
id_produs	INT		None			<input type="checkbox"/>	PRIMARY	<input checked="" type="checkbox"/>	
id_categ	INT		None			<input type="checkbox"/>	---	<input type="checkbox"/>	
nume	VARCHAR	45	As defined:			<input type="checkbox"/>	---	<input type="checkbox"/>	
detalii	VARCHAR	150	None			<input checked="" type="checkbox"/>	---	<input type="checkbox"/>	
cant	INT		None			<input checked="" type="checkbox"/>	---	<input type="checkbox"/>	
pret	FLOAT		None			<input checked="" type="checkbox"/>	---	<input type="checkbox"/>	

Introducere date initiale (interfata)

- Tabel → Insert → Completare → Go

The screenshot shows the phpMyAdmin interface for a database named 'tmpaw'. The left sidebar shows the database structure, with 'categorii' selected under 'tmpaw'. The main area displays the 'Insert' form for the 'categorii' table. The form has columns: 'id_categ' (int(11)), 'nume' (varchar(45)), and 'detalii' (varchar(150)). The 'nume' field contains the value 'papetarie'. The 'Go' button is at the bottom right. Below the form, there are options to 'insert as new row' and 'Go back to previous page'. At the bottom, it says 'Continue insertion with 1 row'.

Column	Type	Function	Null	Value
id_categ	int(11)			
nume	varchar(45)			papetarie
detalii	varchar(150)		<input checked="" type="checkbox"/>	

Insert as new row and then Go back to previous page

Continue insertion with 1 row

Vizualizare date existente

- Tabel → Browse → salt la pagina (numar de linii pe pagina)

The screenshot shows the phpMyAdmin interface. The left sidebar shows the database structure with 'tmpaw' selected. The 'categorii' table is highlighted. The main area shows the 'Browse' tab for the 'categorii' table. The table structure is displayed, showing columns: id_categ, nume, and detalii. The table contains 3 rows of data. The 'id_categ' column is highlighted with a red circle.

id_categ	nume	detalii
1	papetarie	NULL
2	instrumente	NULL
3	audio-video	NULL

Introducere date initiale (SQL)

- Tabel → SQL → completare → Go

The screenshot shows the phpMyAdmin web interface. In the left sidebar, the 'produse' table under the 'tmpaw' database is selected. The top toolbar has the 'SQL' tab highlighted. The main area displays a SQL query to insert initial data into the 'produse' table. Below the query are buttons for 'SELECT *', 'SELECT', 'INSERT', 'UPDATE', 'DELETE', 'Clear', and 'Format'. At the bottom right, the 'Go' button is visible.

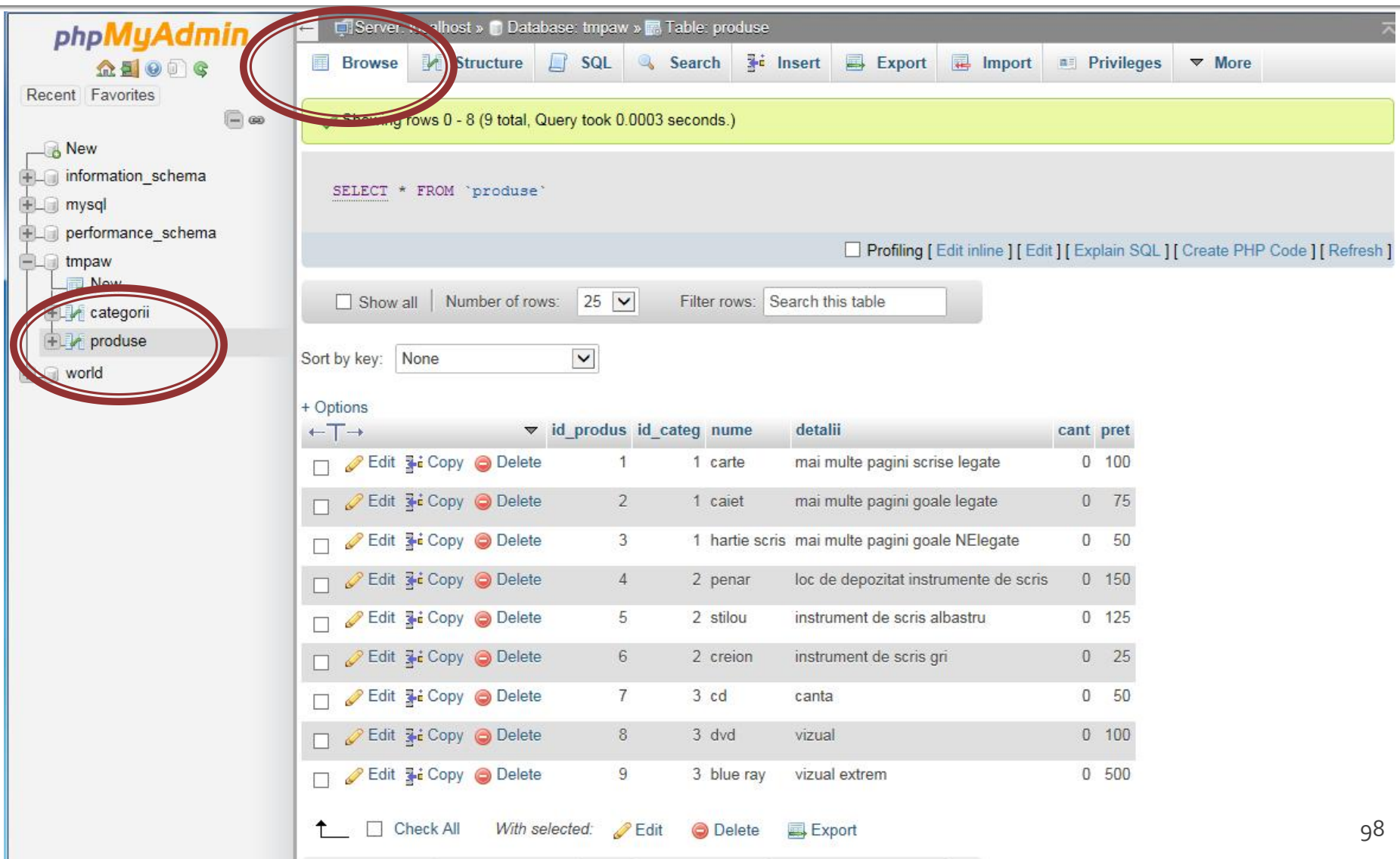
```
1 INSERT INTO `produse` (`id_produș`, `id_categ`, `nume`, `detalii`, `cant`, `pret`)
2 VALUES
3 (1,1,'carte','mai multe pagini scrise legate',0,100),
4 (2,1,'caiet','mai multe pagini goale legate',0,75),
5 (3,1,'hartie scris','mai multe pagini goale NElegate',0,50),
6 (4,2,'penar','loc de depozitat instrumente de scris',0,150),
7 (5,2,'stilou','instrument de scris albastru',0,125),
8 (6,2,'creion','instrument de scris gri',0,25),
9 (7,3,'cd','canta',0,50),
10 (8,3,'dvd','vizual',0,100),
11 (9,3,'blue ray','vizual extrem',0,500);|
```

Columns

id_produș
id_categ
nume
detalii
cant
pret

[Delimiter :] ☒ Show this query here again ☐ Retain query box ☐ Rollback when finished

Tabel produse



phpMyAdmin

Server: localhost » Database: tmpaw » Table: produse

Recent Favorites

Structure

Showing rows 0 - 8 (9 total, Query took 0.0003 seconds.)

```
SELECT * FROM `produse`
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP Code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Sort by key: None

+ Options

				id_produc	id_categ	nume	detalii	cant	pret
<input type="checkbox"/>	Edit	Copy	Delete	1	1	carte	mai multe pagini scrise legate	0	100
<input type="checkbox"/>	Edit	Copy	Delete	2	1	caiet	mai multe pagini goale legate	0	75
<input type="checkbox"/>	Edit	Copy	Delete	3	1	hartie scris	mai multe pagini goale NElegate	0	50
<input type="checkbox"/>	Edit	Copy	Delete	4	2	penar	loc de depozitat instrumente de scris	0	150
<input type="checkbox"/>	Edit	Copy	Delete	5	2	stilou	instrument de scris albastru	0	125
<input type="checkbox"/>	Edit	Copy	Delete	6	2	creion	instrument de scris gri	0	25
<input type="checkbox"/>	Edit	Copy	Delete	7	3	cd	canta	0	50
<input type="checkbox"/>	Edit	Copy	Delete	8	3	dvd	vizual	0	100
<input type="checkbox"/>	Edit	Copy	Delete	9	3	blue ray	vizual extrem	0	500

☐ Check All With selected: Edit Delete Export

Adaugare utilizator

- Server → Users → Add user

The screenshot shows the phpMyAdmin interface. The top navigation bar includes 'Server: localhost', 'Database: tmpaw', and 'Table: produse'. The 'Server: localhost' tab is circled in red. Below the navigation bar, the 'Users' tab is also circled in red. The main content area displays the 'Users overview' table, which lists existing users. At the bottom, the 'New' button is circled in red, and the 'Add user' link is highlighted.

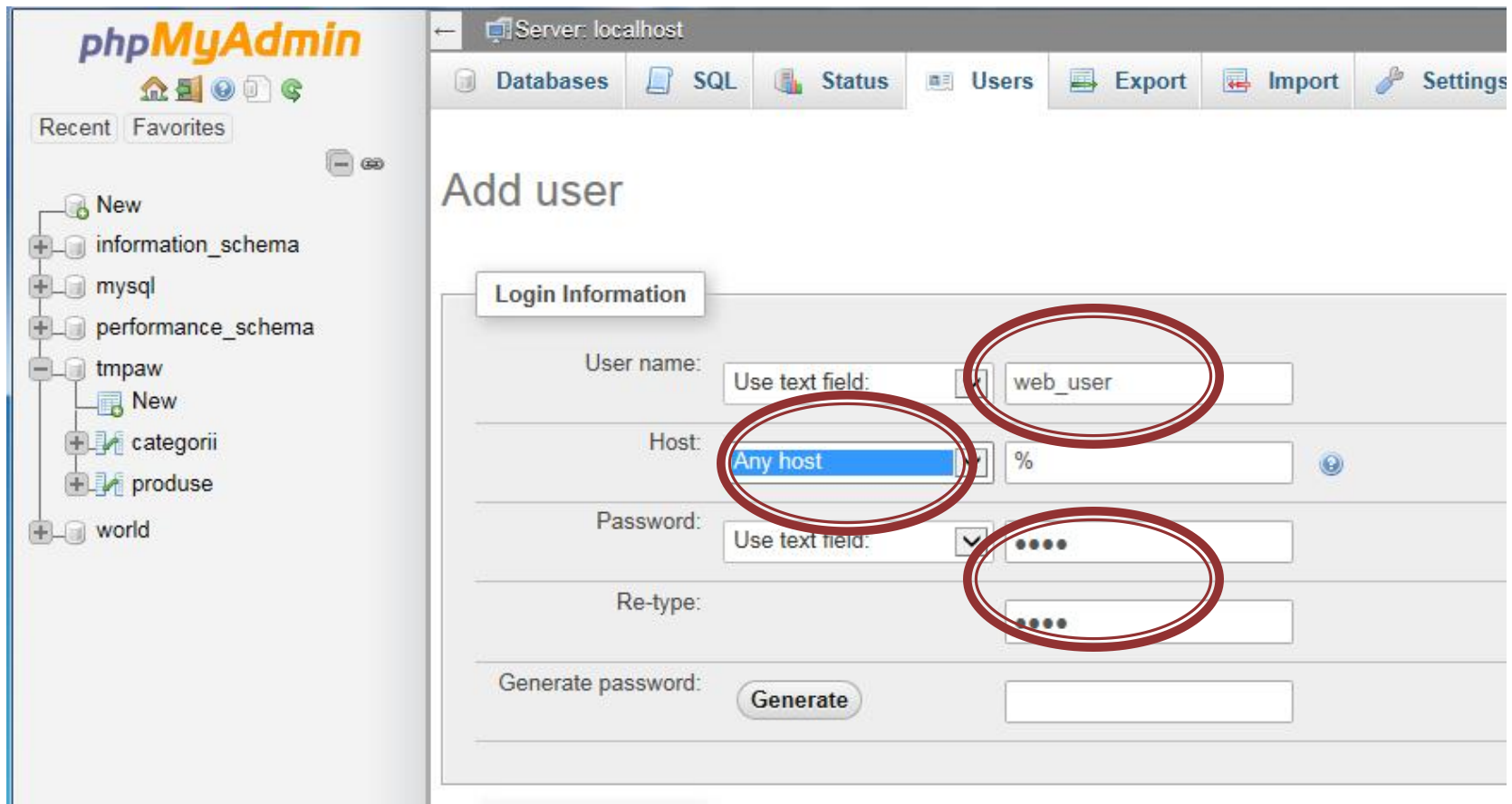
User name	Host	Password	Global privileges	Grant	Action
<input type="checkbox"/> root	127.0.0.1	Yes	ALL PRIVILEGES	Yes	
<input type="checkbox"/> root	::1	Yes	ALL PRIVILEGES	Yes	
<input type="checkbox"/> root	localhost	Yes	ALL PRIVILEGES	Yes	
<input type="checkbox"/> root	tmpaw.etti	Yes	ALL PRIVILEGES	Yes	
<input type="checkbox"/> web	%	Yes	USAGE	No	

↑ ☐ Check All With selected:

New
 Add user

Adaugare utilizator

- Nu e recomandabil/**posibil** sa se utilizeze user-ul MySql "root" pentru aplicatii



The screenshot shows the phpMyAdmin interface for adding a new user. The left sidebar displays a tree view of databases, including 'information_schema', 'mysql', 'performance_schema', 'tmpaw', 'categorii', 'produse', and 'world'. The main panel is titled 'Add user' and contains a 'Login Information' section. This section has four rows of input fields: 'User name' (containing 'web_user'), 'Host' (containing 'Any host'), 'Password' (masked with dots), and 'Re-type' (also masked with dots). Each of these four input fields is circled in red. Below these fields is a 'Generate password' section with a 'Generate' button and an empty text box. The top navigation bar includes tabs for 'Databases', 'SQL', 'Status', 'Users', 'Export', 'Import', and 'Settings'.

Drepturi de acces

- Server → Users → Edit Privileges

The screenshot shows the phpMyAdmin interface. The top navigation bar includes links for Databases, SQL, Status, Users, Export, Import, and Settings. The 'Users' link is circled in red. Below the navigation bar, the 'Users overview' table is displayed. The table has columns for User name, Host, Password, Global privileges, Grant, and Action. The 'Action' column contains links for 'Edit Privileges' and 'Export'. The 'Edit Privileges' link for the 'web_user' row is circled in red. The left sidebar shows the database structure with a tree view.

Server: localhost

Users overview

	User name	Host	Password	Global privileges	Grant	Action
<input type="checkbox"/>	root	127.0.0.1	Yes	ALL PRIVILEGES	Yes	Edit Privileges Export
<input type="checkbox"/>	root	::1	Yes	ALL PRIVILEGES	Yes	Edit Privileges Export
<input type="checkbox"/>	root	localhost	Yes	ALL PRIVILEGES	Yes	Edit Privileges Export
<input type="checkbox"/>	root	tmpaw.etti	Yes	ALL PRIVILEGES	Yes	Edit Privileges Export
<input type="checkbox"/>	web	%	Yes	USAGE	No	Edit Privileges Export
<input type="checkbox"/>	web_user	%	Yes	USAGE	No	Edit Privileges Export

Drepturi de acces

- Database → nume → Go

The screenshot shows the phpMyAdmin interface for a MySQL server on localhost. The left sidebar displays a tree of databases, including 'information_schema', 'mysql', 'performance_schema', 'tmpaw', and 'world'. The main panel is titled 'Edit Privileges: User 'web_user'@'%''. The 'Database' tab is selected and circled in red. Below the title, there is a section for 'Database-specific privileges' with a table showing no privileges. At the bottom, a list of databases is provided for selection, with 'mysql', 'tmpaw', and 'world' circled in red. The 'Add privileges on the following database(s):' label is also visible.

Server: localhost

Databases SQL Status Users Export Import Settings

Global Database Change password Login Information

Edit Privileges: User 'web_user'@'%'

Database-specific privileges

Database	Privileges	Grant	Table-specific privileges	Action
None				

mysql
tmpaw
world

Add privileges on the following database(s):

Drepturi de acces

- Se alocă drepturile SELECT + INSERT + UPDATE + DELETE asupra bazei de date create

The screenshot shows the phpMyAdmin interface for a MySQL server on localhost. The left sidebar displays a tree of databases, including 'tmpaw' which is expanded to show tables 'categorii' and 'produse'. The main panel is titled 'Edit Privileges: User 'web_user'@'%' - Database tmpaw'. Below the title, there is a section for 'Database-specific privileges' with a 'Check All' button. A note states: 'Note: MySQL privilege names are expressed in English.' There are three columns of checkboxes: 'Data', 'Structure', and 'Administration'. The 'Data' column has four checked items: SELECT, INSERT, UPDATE, and DELETE. The 'Structure' column has several unchecked items: CREATE, ALTER, INDEX, DROP, CREATE TEMPORARY TABLES, and SHOW VIEW. The 'Administration' column has three unchecked items: GRANT, LOCK TABLES, and REFERENCES. Red circles are drawn around the 'Data' column and the user/database text in the title.

phpMyAdmin

Recent Favorites

Server: localhost

Databases SQL Status Users Export Import Settings Replication

Database Table

Edit Privileges: User 'web_user'@'%' - Database tmpaw

Database-specific privileges ☒ Check All

Note: MySQL privilege names are expressed in English.

Data	Structure	Administration
<input checked="" type="checkbox"/> SELECT	<input type="checkbox"/> CREATE	<input type="checkbox"/> GRANT
<input checked="" type="checkbox"/> INSERT	<input type="checkbox"/> ALTER	<input type="checkbox"/> LOCK TABLES
<input checked="" type="checkbox"/> UPDATE	<input type="checkbox"/> INDEX	<input type="checkbox"/> REFERENCES
<input checked="" type="checkbox"/> DELETE	<input type="checkbox"/> DROP	
	<input type="checkbox"/> CREATE TEMPORARY TABLES	
	<input type="checkbox"/> SHOW VIEW	

Drepturi de acces, verificare

- Nume → Privileges
- Marea majoritate a aplicatiilor **nu** au nevoie de drepturi de acces la structura/administrare

The screenshot shows the phpMyAdmin interface. On the left, the database 'tmpaw' is selected in the sidebar. The main panel displays the 'Privileges' tab for the 'tmpaw' database. The table lists users and their privileges. The 'tmpaw.etti' user is highlighted with a red circle, showing 'ALL PRIVILEGES'. The 'web_user %' user is also highlighted with a red circle, showing 'SELECT, INSERT, UPDATE, DELETE' privileges. The 'Privileges' tab in the top navigation bar is also circled in red.

User	Host	Type	Privileges	Grant	Action
<input type="checkbox"/> root	127.0.0.1	global	ALL PRIVILEGES	Yes	Edit Privileges
<input type="checkbox"/> root	:::1	global	ALL PRIVILEGES	Yes	Edit Privileges
<input type="checkbox"/> root	localhost	global	ALL PRIVILEGES	Yes	Edit Privileges
<input type="checkbox"/> root	tmpaw.etti	global	ALL PRIVILEGES	Yes	Edit Privileges
<input type="checkbox"/> web_user %	%	database-specific	SELECT, INSERT, UPDATE, DELETE	No	Edit Privileges

↑ ☐ Check All With selected: Export

Index

- Adaugare index e esentiala pentru viteza
 - exemplu, produse grupate pe categorii, selectia produselor dintr-o categorie se face cu :
 - `SELECT * FROM `produse` WHERE `id_categ` = 1`
- Tabel → Structure → Index / Selectare + Index

The screenshot shows the phpMyAdmin interface. On the left, the database structure tree is visible, with 'produse' selected under the 'categorieii' database. The main panel shows the 'Table structure' view for the 'produse' table. The table has the following columns:

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	id_produs	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext Distinct values
2	id_categ	int(11)			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
3	nume	varchar(45)	utf8_general_ci		No			Change Drop Primary Unique Index Spatial Fulltext Distinct values
4	detalii	varchar(150)	utf8_general_ci		Yes	NULL		Change Drop Primary Unique Index Spatial Fulltext Distinct values
5	cant	int(11)			Yes	NULL		Change Drop Primary Unique Index Spatial Fulltext Distinct values
6	pret	float			Yes	NULL		Change Drop Primary Unique Index Spatial Fulltext Distinct values

The 'Index' tab is selected, showing the following index:

Index name	Index type	Index columns	Index options
PRIMARY	PRIMARY	id_produs	





The 'Index' tab is also selected in the bottom right corner of the interface.

Verificare/Stergere index

- Apasare +Indexes, se deschide lista de indecsi
- Apasare -Indexes, se inchide lista de indecsi

- Indexes

Indexes ?

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
 Edit  Drop PRIMARY		BTREE	Yes	No	id_produ	9	A	No	
 Edit  Drop id_categ		BTREE	No	No	id_categ	9	A	No	

Create an index on columns

Backup, Restore

- Ca si in cazul Windows 2000 facilitatea de Backup realizeaza un script SQL care contine structura si datele exprimate sub forma de interogari SQL
- O deosebire intre PhpMyAdmin si aplicatiile specifice MySql (aceleasi de pe Windows 2000 sau MySql Workbench) este absenta liniilor de creare a bazei de date
 - CREATE DATABASE IF NOT EXISTS tmpaw;
 - USE tmpaw;
- La utilizarea PhpMyAdmin trebuie sa se creeze manual inaintea restaurarii baza de date

Backup

- Nume (tabel sau baza de date) → Export

The screenshot displays the phpMyAdmin web interface. On the left sidebar, the database 'tmpaw' is selected and circled in red. The main panel shows the 'Export' tab, also circled in red. The title of the panel is 'Exporting tables from "tmpaw" database'. Under 'Export Method', the 'Quick' option is selected. Under 'Output', the 'Save on server' checkbox is checked. Under 'Format', 'SQL' is selected in the dropdown menu. A 'Go' button is at the bottom.

Server: localhost » Database: tmpaw

Structure SQL Search Query **Export** Import Operations

Exporting tables from "tmpaw" database

Export Method:

- ☒ Quick - display only the minimal options
- ☐ Custom - display all possible options

Output:

- ☒ Save on server in the directory `/var/lib/phpMyAdmin/save/`
- ☐ Overwrite existing file(s)

Format:

SQL

Go

Restore

- Se creaza in avans baza de date
- Nume → Import → Browse (alegere fisier backup)
- fisierele SQL pot fi compresate gzip, bzip2, zip

The screenshot shows the phpMyAdmin interface. On the left sidebar, the database 'tmpaw' is selected and circled in red. The main panel shows the 'Import' tab, also circled in red. The title is 'Importing into the database "tmpaw"'. Under 'File to Import:', there is a text area for the file name and a 'Browse...' button, both circled in red. Below this, there are radio buttons for 'Browse your computer' and 'Select from the web server upload directory'. The 'Character set of the file:' is set to 'utf-8'. Under 'Partial Import:', there is a checked checkbox for 'Allow the interruption of an import...' and a text input for 'Skip this number of queries...' set to '0'.

phpMyAdmin

Server: localhost » Database: tmpaw

Structure SQL Search Query Export Import Operations Privileges Routines

Importing into the database "tmpaw"

File to Import:

File may be compressed (gzip, bzip2, zip) or uncompressed.
A compressed file's name must end in `.[format].[compression]`. Example: `example.sql.gz`

☐ Browse your computer: **Browse...** (Max: 2048KiB)

You may also drag and drop a file on any page.

☐ Select from the web server upload directory `/var/lib/phpMyAdmin/upload/`: There are no files to upload!

Character set of the file:

Partial Import:

☒ Allow the interruption of an import in case the script detects it is close to the PHP timeout limit. (This might be a good way to import large file)

Skip this number of queries (for SQL) or lines (for other formats), starting from the first one:

Examen

Examen

- probleme
- fiecare student are subiect propriu
- toate materialele permise
- tehnica de calcul **nu** este necesara dar este permisa

Examen

- Oricare din temele de proiect (sau asemenea) poate constitui una din problemele de examen
 - se va cere realizarea planului / structurii logice a aplicatiei (S5)
- Se poate cere scrierea unui cod pentru realizarea anumitor operatii, fara necesitatea corectitudinii tehnice absolute (";", nume corect al functiilor, parametri functie etc.)
- Se poate cere interpretarea unui cod php/MySql cu identificarea efectului

Contact

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