Universitatea Tehnică din Cluj-Napoca
Facultatea de Inginerie Electrică

# Cap.7

# IMPLEMENTARE INTERFETE GRAFICE CU BAZE DE DATE. LIMBAJUL PHP

## SBD cu arhitectura client–server

Arhitectura client-server a SBD: model cu 2 componente distincte:

❑ Server (backend): are instalate SGBD-ul si BD; proceseaza si returneaza rezultatul cererilor de la clienti

❑ Client (frontend): are instalate programe de aplicatie:

▪ un program „dedicat" (specific BD) sau

▪ un browser (Chrome, Internet Explorer, etc): interacţionează cu BD printr-o interfaţa software (HTML + PHP, ASP, Java, JavaScript, VBScript, etc...)

Configuraţii client – server

a) un singur client şi un singur server

b) mai mulţi clienţi şi un singur server
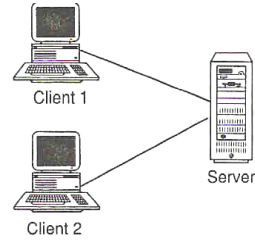
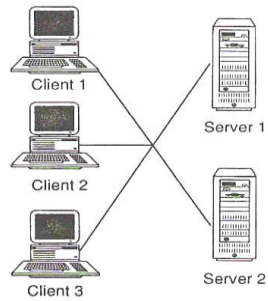c) mai mulţi clienţi şi mai multe servere

# Configuraţii Client – Server
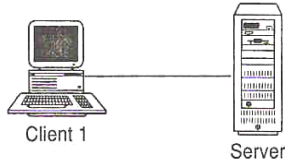


a) un singur client şi un singur server

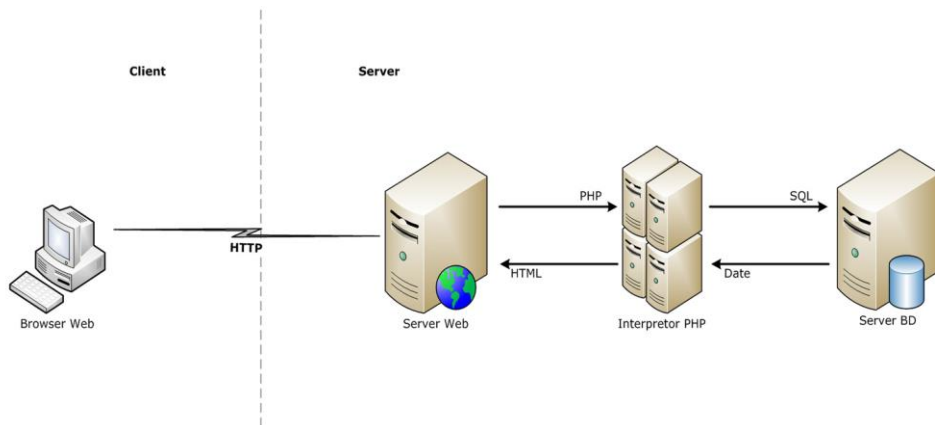

b) mai mulţi clienţi un singur server



c) mai mulţi clienţi mai multe servere

## Arhitectura client-server & aplicatii web

## FUNCTII CLIENT - SERVER

| Client | Server |
|---|---|
| Administrează interfața cu utilizatorul | Primește și procesează cerințele clienților pentru baza de date |
| Acceptă și verifică sintaxa intrărilor utilizatorilor | Verifică autorizarea |
| Procesează aplicațiile | Asigură respectarea contrângerilor de integritate |
| Generează cerințele pentru baza de date și le transmite serverului | Efectuează procesarea interogare/reactualizare și transmite clientului răspunsul |
| Transmite răspunsul înapoi la utilizator | Întreține catalogul de sistem |
| | Oferă acces simultan la baza de date |
| | Oferă controlul reconstituirii |

## AVANTAJE

❑ acces mai eficient la BD existente;

❑ **performanţe ridicate:** dacă clienţii şi serverul se află pe calculatoare diferite, atunci diferite calculatoare pot procesa aplicaţii în paralel;

❑ **costuri reduse ale dispozitivelor hardware:** numai serverul necesită o capacitate de stocare şi o putere de prelucrare suficiente pentru a stoca şi gestiona BD;

❑ **costuri reduse de comunicaţie :** aplicaţiile execută o parte din operaţii la client, care trimite prin reţea numai cererea de acces la BD, ceea ce face ca pe reţea să circule mai putine date;

❑ **cresterea coerenţei** - serverul poate trata verificările de integritate, deoarece constrângerile trebuie definite şi validate într-un singur loc, fără să fie necesar ca fiecare program aplicaţie să execute propriile verificări;

## SGBD cu arhitectura client–server

Clasificare SGBD dupa accesul la BD:

❑ BD „monolitice": motorul BD şi interfaţa se află pe acelaşi calculator, sunt  BD de talie şi performanţe reduse.
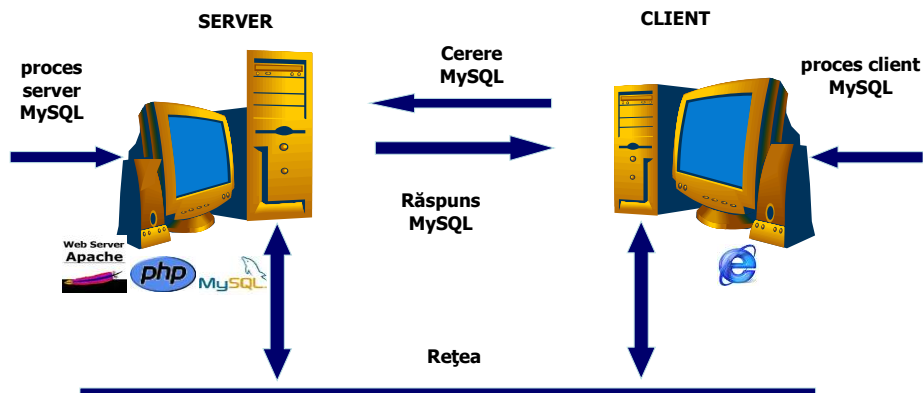
   Ex. Windows: Microsoft Access, Fox Pro, etc.

      Linux: (în general, Open Source)  PostgreSQL, etc.

❑ BD „client – server": motorul BD şi interfaţa se află pe calculatoare diferite , sunt  BD de talie şi performanţe considerabile.

   Ex. MySQL ,ORACLE, Microsoft SQL SERVER, IBM DB2, INFORMIX, etc

## ARHITECTURĂ CLIENT – SERVER

## Proiectarea paginilor web dinamice

Pagini web dinamice: conţinut dinamic , poate diferi la accesări diferite asigura interactivitatea si interactiunea intre clienti si server

Ex: la acelaşi URL conţinutul paginii poate varia în funcţie de anumiţi parametri cum ar fi locaţia geografică a utilizatorului, ora, paginile vizitate anterior, profilul utilizatorului;

Clasificare pagini web dinamice:

- ❑ pagini dinamice pe parte de client ("Client Side")
- ❑ pagini dinamice pe partea de server("Server Side").

## PAGINI WEB DINAMICE "CLIENT SIDE"

Tehnologii pentru realizarea paginilor dinamice pe partea de client:
- ❑ **scripturi pe partea de client** ("client side scripts "): asigurara interactivitate : meniuri, formulare, creearea de efecte speciale, efectuarea de calcule, animaţie, etc. Limbaje utilizate: JavaScript, Jscript şi VBScript.
- ❑ **DHTML (" Dynamic HTML "):** tehnologie dezvoltată de Microsoft care combină HTML, foi de stiluri (CSS) şi script-uri pentru realizarea paginilor web dinamice sau interactive.
- ❑ **applet-uri Java:** aplicaţii de dimensiune redusă, in limbajul Java (instalare masina virtuala Java).
- ❑ **controale ActiveX:** componente binare incluse în paginile Web pentru a oferi interactivitate, rulează pe platforma Windows
- ❑ **elemente multimedia:** realizate in general cu Adobe Flash (instalare plug-in) pentru meniuri, jocuri, animatie

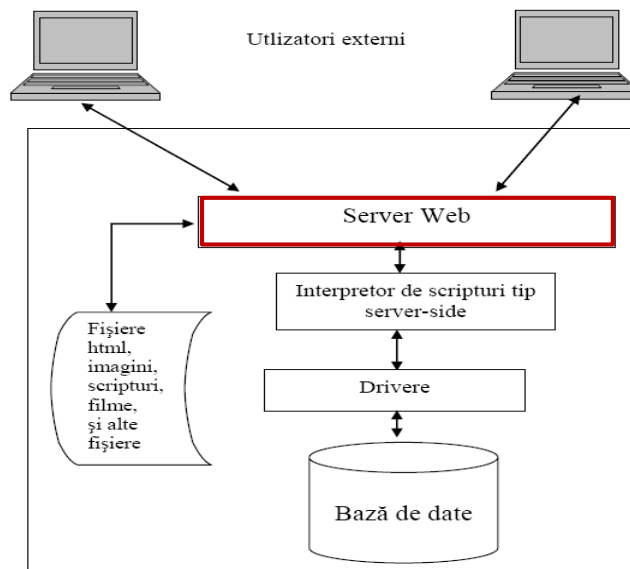## PAGINI WEB DINAMICE "SERVER SIDE"

Arhitectura server :

❑ serverul Web,

❑ interpretorul de scripturi tip server-side,

❑ driverele de acces la baza de date,

❑ baza de date şi colecţiile de fişiere.

### Arhitectura server Web cu suport de scripting

Utlizatori externi

Server Web

Interpretor de scripturi tip
server-side

Fişiere
html,
imagini,
scripturi,
filme,
şi alte
fişiere

Drivere

Bază de date

## PAGINI WEB DINAMICE "SERVER SIDE"
### Server web

Server web: aplicaţie complexă responsabilă pentru comunicarea cu browserele externe.

Informaţiile solicitate de la server = fişiere:
- ❑ **Fisiere statice**: se transmit mai departe către browsere fără nici o modificare. Ex: imagini, fişiere HTML, filme, fisiere pentru download, animaţii Flash etc.
- ❑ **Fisiere script:** programe simple executate de către un intepretor, trimiţându-se spre server-ul de Web doar rezultatul execuţiei lor. Tehnica generării dinamice a documentelor de tip HTML face posibilă accesarea bazelor de date pe Internet.

### Arhitectura server Web cu suport de scripting
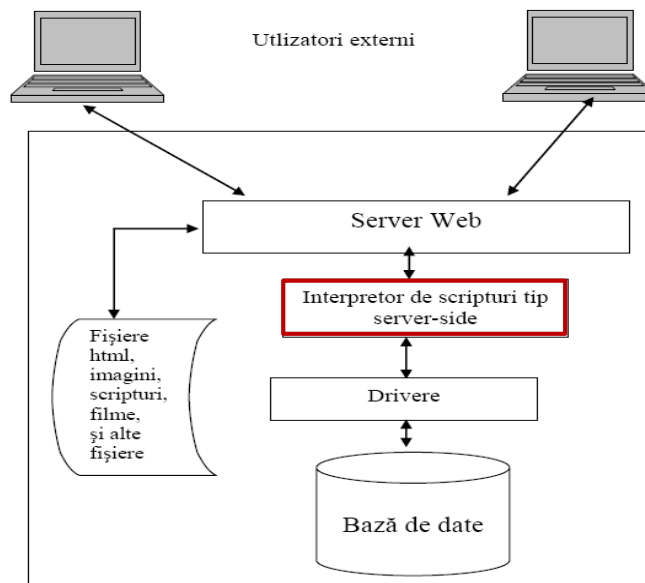
## PAGINI WEB DINAMICE "SERVER SIDE"

### Interpretor de scripturi tip server-side

Interpretor de scripturi tip server-side: executa scripturi la cererea serverului de Web, preia rezultatul unor interogări la nivelul BD şi trimite spre serverul Web rezultatul execuţiei scripturilor = conţinut HTML pentru afisare in browser.
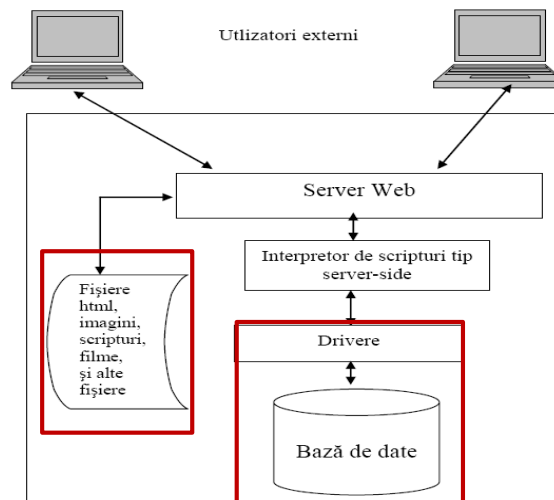
Identificare script: extensia fişierului .

Limbaje server-side scripting:
❑ PHP (Hypertext Preprocessor),
❑ ASP (Active Server Pages), ASP.NET,
❑ JSP (Java Server Pages),
❑ Ruby.

### Arhitectura server Web cu suport de scripting

## PAGINI WEB DINAMICE "SERVER SIDE"
### Drivere. Baza de date

Drivere de acces la BD: intermediaza interacţiunea dintre interpretorul de scripturi şi BD; sunt instrumente software specializate care nu sunt vizibile nici programatorului nici utilizatorului.

Baza de date: constă dintr-un SGBDR instalat fie pe acelasi calculator cu serverul Web, fie este accesibil prin reţea sau Internet.

Ex:
- ❑ MySQL, SQL Server ,Oracle
- ❑ Fox Pro si Access nu se pretează pentru BD web folosite intens.

Fişiere: informaţii cu caracter static trimise utilizatorilor la cerere

## LIMBAJUL PHP

Limbajul PHP (Hypertext Preprocessor): cel mai popular limbaj de script pentru generarea de pagini HTML dinamice. Poate fi integrat în HTML.

Istoric PHP:

- ❑ conceput in 1994 de Rasmus Lerdorf.

- ❑ in prezent utilizat de peste 244M domenii (http://www.php.net/usage.php )

Site oficial: http://www.php.net

## LIMBAJUL PHP

**General**: download, documentatie

- http://www.php.net/

**Documentatii**: manual

- http://www.php.net/manual/en/
- http://us2.php.net/manual/en/index.php

**Tutoriale**:

- PHP.net tutorial: http://php.net/manual/en/tutorial.php
- W3schools tutorial:

   http://www.w3schools.com/php/default.asp

## LIMBAJUL PHP

**Avantaje**:

- ❑ **simplicitate**: simplu de folosit, accesibil ne-programatorilor. Sintaxa asemanatoare limbajului C
- ❑ **eficienta**: un programator PHP poate folosi module scrise de un alt programator fara sa fie nevoit sa cunoasca detalii specifice de implementare a codului.
- ❑ **cross-platform** : exista implementari ale limbajului pe mai multe sisteme de operare, cele mai populare fiind cele de pe Linux si Windows. Un cod PHP care ruleaza pe Linux, poate fi ulterior folosit pe un server Windows .
- ❑ **gratis** : PHP reprezinta un program Open Source, oricine poate folosi acest limbaj gratis. Utilizatorii au access la sursele PHP (scrise in limbajul C).

## LIMBAJUL PHP

**Sintaxa**:

- scripturile scrise in limbajul PHP pot fi editate cu orice editor de text

- terminarea unei instructiuni se face obligatoriu cu caracterul ;

- numele functiilor NU SUNT «case Sensitive» (nu se face diferenta intre litere mari/mici)

- numele variabilelor SUNT Case Sensitive

- ghilimelele se folosesc pereche "..." sau '...'

- variabilele sunt precedate de $

## LIMBAJUL PHP

**Sintaxa** :

- Codul PHP poate aparea oriunde in fisierul HTML si este delimitat de 2 seturi de etichete de deschidere si inchidere:

```
<?php          sau      <script language="php"?>
. . .                    . . .
?>                       </script>
```

**Ex**.

```
<?php
echo 'Salut, acesta este primul meu
// comentariu PHP
# comentariu PHP
?>
```

**http://www.w3schools.com/php/**



Salut, acesta este primul meu script PHP

PHP limbaj foarte puternic:
- cel mai mare sistem de blogging web (WordPress) bazat pe PHP
- cea mai mare retea sociala (Facebook) bazata pe PHP

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

| PHP Variables | -se definesc cu $ |
| --- | --- |
| PHP Echo / Print | |
| PHP Data Types | |
| PHP Strings | |
| PHP Constants | |
| PHP Operators | |
| PHP If...Else...Elseif | |
| PHP Switch | |
| PHP While Loops | |
| PHP For Loops | |
| PHP Functions | |
| PHP Arrays | |

**Exemplu: variabile**

```php
<?php
$txt = "Hello world!";
$x = 5;
$y = 10.5;
?>
```

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:

| PHP Variables | |
| --- | --- |
| PHP Echo / Print | -afisare date: variabile, constante, expresii |
| PHP Data Types | |
| PHP Strings | |
| PHP Constants | |
| PHP Operators | |
| PHP If...Else...Elseif | |
| PHP Switch | |
| PHP While Loops | |
| PHP For Loops | |
| PHP Functions | |
| PHP Arrays | |

**Exemplu : afisare variabile**

```php
<?php
$txt1 = "Limbajul PHP";
$txt2 = "Variabile";
$x = 5;
$y = 4;
echo "<h2>". $txt1."</h2>";
echo "Tipuri de date PHP:". $txt2 . "<br>";
echo "x=5, y=4, x+y=";
echo $x + $y;
?>
```

**Limbajul PHP**

Tipuri de date PHP:Variabile
x=5, y=4, x+y=9

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types    -Tipuri de date definite in PHP:
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

- String
- Integer
- Float (floating point numbers - also called double)
- Boolean
- Array
- Object
- NULL   -valoare implicita de initializare a variabilelor
- Resource   -apelare baza de date

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings    -siruri
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

**Exemplu : afisare variabile tip sir de caractere concatenate**

```php
<?php
$txt1 = "Limbajul  PHP";
$txt2 = "Siruri";
echo "<h2>" . $txt1 . "</h2>";
echo "Invata " .$txt1 ." despre ". $txt2 . "<br>";
?>
```

## Limbajul PHP

Invata Limbajul PHP despre Siruri

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple : functii pentru siruri de caractere**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings — -siruri
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

-functie lungime sir

```php
<?php
echo strlen("Hello world!"); // outputs 12
?>
```

-functie nr cuvinte din sir

```php
<?php
echo str_word_count("Hello world!"); // outputs 2
?>
```

-functie inversare sir

```php
<?php
echo strrev("Hello world!"); // outputs !dlrow olleH
?>
```

Lista completa functii siruri: PHP String Reference.

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## LIMBAJUL PHP

Elemente ale limbajului PHP: **Exemple : definire constante**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants — -constante
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

Sintaxa:

define(*name, value, case-insensitive*)

unde: *name*: nume constanta
*value*: valoarea constantei
*case-insensitive*: nume constanta
este case-insensitive sau nu.
Implicit = false

```php
<?php
define("SALUT", "Buna seara", true);
echo salut;
?>
```

```php
<?php
define("SALUT", "Buna seara");
echo SALUT;
?>
```

Acelasi efect

Buna seara

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
**PHP Operators** -operatori
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

| | Name | Example |
|---|---|---|
| + | Addition | $x + $y |
| - | Subtraction | $x - $y |
| * | Multiplication | $x * $y |
| / | Division | $x / $y |
| % | Modulus | $x % $y |
| ** | Exponentiation | $x ** $y |

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
**PHP Operators** -operatori
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

**Exemple : operatori adunare, ridicare la putere**
Operatorul + (adunare)

```php
<?php
$x = 10;
$y = 6;
//echo $x + $y;
echo "x=10,y=6, x+y=";
echo  $x + $y ;
?>
```

x=10,y=6, x+y=16

Operatorul ** (ridicare la putere)

```php
<?php
$x = 10;
$y = 3;
echo "x=10, y=3, x^3=";
echo $x ** $y;
```

x=10, y=3, x^3=1000

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators    -operatori
PHP If...Else...Elseif
PHP Switch
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PHP For Loops
PHP Functions
PHP Arrays

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

| Assignment | Same as... | Description |
|---|---|---|
| x = y | x = y | The left operand gets set to the value of the expression on the right |
| x += y | x = x + y | Addition |
| x -= y | x = x - y | Subtraction |
| x *= y | x = x * y | Multiplication |
| x /= y | x = x / y | Division |
| x %= y | x = x % y | Modulus |

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators    -operatori
PHP If...Else...Elseif
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PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

**Exemple : operatori +=, %=**

Operatorul + =

```php
<?php
$x = 20;
$x += 100;
echo "x=20, x+=100=";
echo $x;
?>
```

x=20, x+=100=120

Operatorul % =

```php
<?php
$x = 15;
$x %= 4;
echo "x=15,x%=4<=>x=x%4=";
echo $x;
?>
```

x=15,x%=4<=>x=x%4=3

# LIMBAJUL PHP

Elemente ale limbajului PHP:

- Arithmetic operators
- Assignment operators
- Comparison operators

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators  -operatori
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PHP For Loops
PHP Functions
PHP Arrays

| Operator | Name | Example | Result |
|---|---|---|---|
| == | Equal | $x == $y | Returns true if $x is equal to $y |
| === | Identical | $x === $y | Returns true if $x is equal to $y, and they are of the same type |
| != | Not equal | $x != $y | Returns true if $x is not equal to $y |
| <> | Not equal | $x <> $y | Returns true if $x is not equal to $y |
| !== | Not identical | $x !== $y | Returns true if $x is not equal to $y, or they are not of the same type |
| > | Greater than | $x > $y | Returns true if $x is greater than $y |
| < | Less than | $x < $y | Returns true if $x is less than $y |
| >= | Greater than or equal to | $x >= $y | Returns true if $x is greater than or equal to $y |
| <= | Less than or equal to | $x <= $y | Returns true if $x is less than or equal to $y |

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# LIMBAJUL PHP

Elemente ale limbajului PHP:

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators  -operatori
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

| Operator | Name | Description |
|---|---|---|
| ++$x | Pre-increment | Increments $x by one, then returns $x |
| $x++ | Post-increment | Returns $x, then increments $x by one |
| --$x | Pre-decrement | Decrements $x by one, then returns $x |
| $x-- | Post-decrement | Returns $x, then decrements $x by one |

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemplu : operator incrementare**

Operatorul + +

```php
<?php
$x = 10;
echo "x++ afiseaza x apoi incrementeaza:". $x++."<br>";
echo "++x incrementeaza x apoi afiseaza:" .++$x;
?>
```

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators   -operatori
PHP If...Else...Elseif
PHP Switch
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PHP For Loops
PHP Functions
PHP Arrays

x++ afiseaza x apoi incrementeaza:10
++x incrementeaza x apoi afiseaza:12

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
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PHP For Loops
PHP Functions
PHP Arrays

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

| Operator | Name | Example | Result |
|---|---|---|---|
| and | And | $x and $y | True if both $x and $y are true |
| or | Or | $x or $y | True if either $x or $y is true |
| xor | Xor | $x xor $y | True if either $x or $y is true, but not both |
| && | And | $x && $y | True if both $x and $y are true |
| \|\| | Or | $x \|\| $y | True if either $x or $y is true |
| ! | Not | !$x | True if $x is not true |

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
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PHP Strings
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PHP Functions
PHP Arrays

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

| Operator | Name | Example | Result |
|----------|------|---------|--------|
| . | Concatenation | $txt1 . $txt2 | Concatenation of $txt1 and $txt2 |
| .= | Concatenation assignment | $txt1 .= $txt2 | Appends $txt2 to $txt1 |

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## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple : operatori concatenare**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators    -operatori
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

Operatorul . (concatenare siruri caractere)

```php
<?php
$txt1 = "Hello";
$txt2 = " world!";
echo $txt1 . $txt2;
?>
```

Hello world!

Operatorul .= (concatenare siruri caractere)

```php
<?php
$txt1 = "Hello";
$txt2 = " world!";
$txt1 .= $txt2;
echo $txt1;
?>
```

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemplu : operator conditional**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators   -operatori
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

$x = expr1 ? expr2 : expr3
Returneaza valoarea variabilei x :
daca expr1 = true , x= expr2
daca expr2 = false , x= expr3

```php
<?php
$x = 5;
$x>1?$x=10:$x=0;
echo "x=$x";
?>
```

x=10

---

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

| Operator | Name | Example | Result |
|----------|------|---------|--------|
| + | Union | $x + $y | Union of $x and $y |
| == | Equality | $x == $y | Returns true if $x and $y have the same key/value pairs |
| === | Identity | $x === $y | Returns true if $x and $y have the same key/value pairs in the same order and of the same types |
| != | Inequality | $x != $y | Returns true if $x is not equal to $y |
| <> | Inequality | $x <> $y | Returns true if $x is not equal to $y |
| !== | Non-identity | $x !== $y | Returns true if $x is not identical to $y |

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```
if (condition) {
    code to be executed if condition is true;
}
```

```
if (condition) {
    code to be executed if condition is true;
} else {
    code to be executed if condition is false;
}
```

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple : if**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```php
<?php
$x = 10;
$y = 50;
if ($x < $y)
{echo "x=10 < y=50";}
?>
```

x=10 < y=50

```php
<?php
$x = 100;
$y = 50;
if ($x <> $y)
{echo "x=100 diferit de y=50";}
?>
```

x=100 diferit de y=50

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

**Exemple : if else**

```php
<?php
$a=20;
$b=40;
$x=25;
if (($x >$a) AND ($x < $b ))
{echo "x=25 este in intervalul (20,40)";}
else {echo "x nu este in intervalul (20,40)";}
?>
```

x=25 este in intervalul (20,40)

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```php
switch (n) {
    case label1:
        code to be executed if n=label1;
        break;
    case label2:
        code to be executed if n=label2;
        break;
    case label3:
        code to be executed if n=label3;
        break;
    ...
    default:
        code to be executed if n is different from all labels;
}
```

# LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple : switch**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```php
<?php
$favcolor = "red";

switch ($favcolor) {
    case "red":
        echo "Your favorite color is red!";
        break;
    case "blue":
        echo "Your favorite color is blue!";
        break;
    case "green":
        echo "Your favorite color is green!";
        break;
    default:
        echo "Your favorite color is neither red, blue, nor green!";
}
?>
```

Your favorite color is red!

---

# LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```php
while (condition is true) {
    code to be executed;
}
```

```php
do {
    code to be executed;
} while (condition is true);
```

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple: while, do while**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```php
<?php
$x = 1;

while($x <= 5) {
    echo "The number is: $x <br>";
    $x++;
}
?>
```

```php
<?php
$x = 1;

do {
    echo "The number is: $x <br>";
    $x++;
} while ($x <= 5);
?>
```

The number is: 1
The number is: 2
The number is: 3
The number is: 4
The number is: 5

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays

```php
for (init counter; test counter; increment counter) {
    code to be executed;
}
```

```php
foreach ($array as $value) {
    code to be executed;
}
```

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple: for, foreach**

- PHP Variables
- PHP Echo / Print
- PHP Data Types
- PHP Strings
- PHP Constants
- PHP Operators
- PHP If...Else...Elseif
- PHP Switch
- PHP While Loops
- **PHP For Loops**
- PHP Functions
- PHP Arrays

```php
<?php
for ($x = 0; $x <= 10; $x++) {
    echo "The number is: $x <br>";
}
?>
```

```
The number is: 0
The number is: 1
The number is: 2
The number is: 3
The number is: 4
The number is: 5
The number is: 6
The number is: 7
The number is: 8
The number is: 9
The number is: 10
```

```php
<?php
$colors = array("red", "green", "blue", "yellow");

foreach ($colors as $value) {
    echo "$value <br>";
}
?>
```

```
red
green
blue
yellow
```

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Exemple : functii utilizator**

- PHP Variables
- PHP Echo / Print
- PHP Data Types
- PHP Strings
- PHP Constants
- PHP Operators
- PHP If...Else...Elseif
- PHP Switch
- PHP While Loops
- PHP For Loops
- **PHP Functions**  -functii utilizator
- PHP Arrays

```php
function functionName() {
    code to be executed;
}
```

```php
<?php
function writeMsg() {
    echo "Hello world!";
}

writeMsg(); // call the function
?>
```

```
Hello world!
```

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables

PHP Echo / Print

PHP Data Types

PHP Strings

PHP Constants

PHP Operators

PHP If...Else...Elseif

PHP Switch

PHP While Loops

PHP For Loops

PHP Functions

PHP Arrays        -enumerari

**Exemple enumerari:**

**-enumerari tip sir indexat:**

Ex. 1:

$cars = array("Volvo", "BMW", "Toyota");

Echivalent cu :

Ex. 2

$cars[0] = "Volvo";

$cars[1] = "BMW";

$cars[2] = "Toyota";

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:      **Exemple: enumerari tip sir indexat afisare**

PHP Variables

PHP Echo / Print

PHP Data Types

PHP Strings

PHP Constants

PHP Operators

PHP If...Else...Elseif

PHP Switch

PHP While Loops

PHP For Loops

PHP Functions

PHP Arrays        -enumerari

```php
<?php
$cars = array("Volvo", "BMW", "Toyota");
echo $cars[0] ."<br>". $cars[1]."<br>".$cars[2];
?>
```

Volvo
BMW
Toyota

```php
<?php
$cars = array("Volvo", "BMW", "Toyota");
$length = count($cars);
for($x = 0; $x < $length; $x++) {
    echo $cars[$x];
    echo "<br>";}
?>
```

```php
<?php
$cars = array("Volvo", "BMW", "Toyota");
echo count($cars);
?>
```

3

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
**PHP Arrays**        -enumerari

**Exemple enumerari:**

**-enumerari asociative:**

Ex. 1:

$varsta= array("Peter"=>"25", "Ion"=>"27", "Ana"=>"23");

Ex. 2:

$varsta['Peter'] = "25";

$varsta['Ion'] = "27";

$varsta['Ana'] = "23";

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:     **Exemple: enumerari asociative afisare:**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
**PHP Arrays**        -enumerari

```php
<?php
$age = array("Peter"=>"25", "Ion"=>"27", "Ana"=>"23");
echo "Peter are " . $age['Peter'] . " ani.";
?>
```

Peter are 25 ani.

```php
<?php
$age = array("Peter"=>"25", "Ion"=>"27", "Ana"=>"23");
foreach($age as $x => $x_value) {
    echo "Nume=" . $x . ", Varsta=" . $x_value;
    echo "<br>";
}
?>
```

Nume=Peter, Varsta=25
Nume=Ion, Varsta=27
Nume=Ana, Varsta=23

# LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables

PHP Echo / Print

PHP Data Types

PHP Strings

PHP Constants

PHP Operators

PHP If...Else...Elseif

PHP Switch

PHP While Loops

PHP For Loops

PHP Functions

PHP Arrays    -enumerari

**Exemple enumerari:**

**-enumerari multidimensionale:**

| Name | Stock | Sold |
|------|-------|------|
| Volvo | 22 | 18 |
| BMW | 15 | 13 |
| Saab | 5 | 2 |
| Land Rover | 17 | 15 |

```
$cars = array  (
    array("Volvo",22,18),
    array("BMW",15,13),
    array("Saab",5,2),
    array("Land Rover",17,15)  );
```

---

# LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables

PHP Echo / Print

PHP Data Types

PHP Strings

PHP Constants

PHP Operators

PHP If...Else...Elseif

PHP Switch

PHP While Loops

PHP For Loops

PHP Functions

PHP Arrays    -enumerari

**Exemple enumerari:**

**-enumerari multidimensionale afisare:**

```php
<?php
$cars = array(
  array("Volvo",22,18),
  array("BMW",15,13),
  array("Saab",5,2),
  array("Land Rover",17,15)
  );
echo $cars[0][0].": In stock: ".$cars[0][1].", sold: ".$cars[0][2].".<br>";
echo $cars[1][0].": In stock: ".$cars[1][1].", sold: ".$cars[1][2].".<br>";
echo $cars[2][0].": In stock: ".$cars[2][1].", sold: ".$cars[2][2].".<br>";
echo $cars[3][0].": In stock: ".$cars[3][1].", sold: ".$cars[3][2].".<br>";
?>
```

```
Volvo: In stock: 22, sold: 18.
BMW: In stock: 15, sold: 13.
Saab: In stock: 5, sold: 2.
Land Rover: In stock: 17, sold: 15.
```

## LIMBAJUL PHP

Elemente ale limbajului PHP:

**Functii de sortare enumerari:**

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays        -enumerari

- sort() - sort arrays in ascending order
- rsort() - sort arrays in descending order
- asort() - sort associative arrays in ascending order, according to the value
- ksort() - sort associative arrays in ascending order, according to the key
- arsort() - sort associative arrays in descending order, according to the value
- krsort() - sort associative arrays in descending order, according to the key

---

## LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables
PHP Echo / Print
PHP Data Types
PHP Strings
PHP Constants
PHP Operators
PHP If...Else...Elseif
PHP Switch
PHP While Loops
PHP For Loops
PHP Functions
PHP Arrays        -enumerari

**Exemple sortare enumerari indexabile: siruri caractere**

```php
<?php
$cars = array("Volvo", "BMW", "Toyota");
sort($cars);
$l = count($cars);
for($x = 0; $x < $l; $x++) {
    echo $cars[$x];
    echo "<br>";
}
?>
```

BMW
Toyota
Volvo

29

# LIMBAJUL PHP

Elemente ale limbajului PHP:

| PHP Variables |
| PHP Echo / Print |
| PHP Data Types |
| PHP Strings |
| PHP Constants |
| PHP Operators |
| PHP If...Else...Elseif |
| PHP Switch |
| PHP While Loops |
| PHP For Loops |
| PHP Functions |
| PHP Arrays    -enumerari |

**Exemple sortare enumerari indexabile =siruri numere:**

```php
<?php
$sir = array(4, 6, 2, 22, 11);
sort($sir);
$l = count($sir);
for($x = 0; $x < $l; $x++) {
    echo $sir[$x];
    echo "<br>";}
?>
```

```
2
4
6
11
22
```

```php
<?php
$sir = array(4, 6, 2, 22, 11);
rsort($sir);
$l = count($sir);
for($x = 0; $x < $l; $x++) {
    echo $sir[$x];
    echo "<br>";}
?>
```

```
22
11
6
4
2
```

---

# LIMBAJUL PHP

Elemente ale limbajului PHP:

| PHP Variables |
| PHP Echo / Print |
| PHP Data Types |
| PHP Strings |
| PHP Constants |
| PHP Operators |
| PHP If...Else...Elseif |
| PHP Switch |
| PHP While Loops |
| PHP For Loops |
| PHP Functions |
| PHP Arrays    -enumerari |

**Exemple sortare enumerari asociative : asort**

Ex.1 **sortare dupa Varsta**
$age= array (''Nume''=>''Varsta'')
asort() – sorteaza tabloul dupa valoarea  asociata(''Varsta'')

```php
<?php
$age = array("Peter"=>"25", "Ion"=>"27", "Ana"=>"23");
asort($age);
foreach($age as $x => $x_value) {
    echo "Nume=" . $x . ", Varsta=" . $x_value;
    echo "<br>";}
?>
```

```
Nume=Ana, Varsta=23
Nume=Peter, Varsta=25
Nume=Ion, Varsta=27
```

### LIMBAJUL PHP

Elemente ale limbajului PHP:

PHP Variables

PHP Echo / Print

PHP Data Types

PHP Strings

PHP Constants

PHP Operators

PHP If...Else...Elseif

PHP Switch

PHP While Loops

PHP For Loops

PHP Functions

PHP Arrays     -enumerari

**Exemple sortare enumerari asociative : ksort**

Ex.2 sortare dupa Nume:
$age= array (''Nume''=>''Varsta'')
ksort() – sorteaza tabloul dupa cheie (key ='' Nume'' )

```php
<?php
$age = array("Peter"=>"25", "Ion"=>"27", "Ana"=>"23");
ksort($age);
foreach($age as $x => $x_value) {
    echo "Nume=" . $x . ", Varsta=" . $x_value;
    echo "<br>";}
?>
```

Nume=Ana, Varsta=23
Nume=Ion, Varsta=27
Nume=Peter, Varsta=25

---

### EXEMPLE PHP: 1. Afisare text simplu, variabile case senzitive

```html
<!DOCTYPE html>
<html>
<body>

<h1>My first PHP page</h1>

<?php
echo "Hello World!";
?>

</body>
</html>
```

## My first PHP page

Hello World!

```html
<!DOCTYPE html>
<html>
<body>

<?php
$color = "red";
echo "My car is " . $color . "<br>";
echo "My house is " . $COLOR . "<br>";
echo "My boat is " . $coLOR . "<br>";
?>

</body>
</html>
```

My car is red
My house is
My boat is

Obs: nu se afiseaza valoarea variabilei $color daca se introduce numele acesteia case insenzitive

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### EXEMPLE PHP: 2.Comentarii+ afisare rezultat expresie

```
<!DOCTYPE html>
<html>
<body>

<?php
// This is a single-line comment

# This is also a single-line comment

/*
This is a multiple-lines comment block
that spans over multiple
lines
*/

// You can also use comments to leave out parts of a code line
$x = 5 /* + 15 */ + 5;
echo $x;
?>

</body>
</html>
```
10

### EXEMPLE PHP: 3.Tiparire cu echo sau print

```
<!DOCTYPE html>
<html>
<body>

<?php
echo "<h2>PHP is Fun!</h2>";
echo "Hello world!<br>";
echo "I'm about to learn PHP!<br>";
echo "This ", "string ", "was ", "made
", "with multiple parameters.";
?>

</body>
</html>
```

**PHP is Fun!**

Hello world!
I'm about to learn PHP!
This string was made with multiple parameters.

```
<!DOCTYPE html>
<html>
<body>

<?php
print "<h2>PHP is Fun!</h2>";
print "Hello world!<br>";
print "I'm about to learn PHP!";
?>

</body>
</html>
```

**PHP is Fun!**

Hello world!
I'm about to learn PHP!

## EXEMPLE PHP: 4.Siruri /enumerari indexate

```html
<!DOCTYPE html>
<html>
<body>

<?php
echo str_word_count("Hello world!");
?>

</body>
</html>
```

2

```html
<!DOCTYPE html>
<html>
<body>

<?php
$cars = array("Volvo", "BMW", "Toyota");
$arrlength = count($cars);

for($x = 0; $x < $arrlength; $x++) {
    echo $cars[$x];
    echo "<br>";
}
?>

</body>
</html>
```

Volvo
BMW
Toyota

## EXEMPLE PHP: 5.Siruri asociative

```html
<!DOCTYPE html>
<html>
<body>

<?php
$age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");
echo "Peter is " . $age['Peter'] . " years old.";
?>

</body>
</html>
```

Peter is 35 years old.

## EXEMPLE PHP: 6.Data calendaristica sistem

```
date - Notepad
File  Edit  Format  View  Help
<!DOCTYPE html>
<html>
<body>

<?php
date_default_timezone_set("Europe/Bucharest");
echo "Today is " . date("Y/m/d") . "<br>";
echo "Today is " . date("Y.m.d") . "<br>";
echo "Today is " . date("Y-m-d") . "<br>";
echo "Today is " . date("l");
?>

</body>
</html>
<!DOCTYPE html>
<html>
<body>
```

← → C ⌂  🔒 et.utcluj.ro/PHP/date.php

▦ Aplicații  💗  🛡 Universitatea Tehni…  🛡 com

Today is 2019/11/13
Today is 2019.11.13
Today is 2019-11-13
Today is Wednesday

Test: http://et.utcluj.ro/PHP/date.php

## LIMBAJUL PHP: Functii matematice predefinite

| | | | |
|---|---|---|---|
| lcg_value() | sqrt() | Returns the square root of a number | nber |
| log() | srand() | Seeds the random number generator | y number |
| log10() | tan() | Returns the tangent of a number | decimal numbe |
| log1p() | tanh() | Returns the hyperbolic tangent of a number | l number |
| max() | | Returns the highest value in an array, or the highest value of several specified values | alue |
| min() | | Returns the lowest value in an array, or the lowest value of several specified values | |
| mt_getrandmax() | | Returns the largest possible value returned by mt_rand() | |
| mt_rand() | | Generates a random integer using Mersenne Twister algorithm | t integer |
| mt_srand() | | Seeds the Mersenne Twister random number generator | |
| octdec() | | Converts an octal number to a decimal number | urned by rand( |
| pi() | | Returns the value of PI | decimal numbe |
| pow() | | Returns x raised to the power of y | ngle triangle |
| rad2deg() | | Converts a radian value to a degree value | t |
| rand() | | Generates a random integer | ot |
| round() | | Rounds a floating-point number | ber' |

## LIMBAJUL PHP: Constante matematice predefinite

### PHP 5 Predefined Math Constants

| Constant | Value | Description | PHP Version |
|---|---|---|---|
| INF | INF | The infinite | PHP 4 |
| M_E | 2.7182818284590452354 | Returns e | PHP 4 |
| M_EULER | 0.57721566490153286061 | Returns Euler constant | PHP 4 |
| M_LNPI | 1.14472988584940017414 | Returns the natural logarithm of PI: $\log_e(pi)$ | PHP 5.2 |
| M_LN2 | 0.69314718055994530942 | Returns the natural logarithm of 2: $\log_e 2$ | PHP 4 |
| M_LN10 | 2.30258509299404568402 | Returns the natural logarithm of 10: $\log_e 10$ | PHP 4 |
| M_LOG2E | 1.4426950408889634074 | Returns the base-2 logarithm of E: $\log_2 e$ | PHP 4 |
| M_LOG10E | 0.43429448190325182765 | Returns the base-10 logarithm of E: $\log_{10} e$ | PHP 4 |
| M_PI | 3.14159265358979323846 | Returns Pi | PHP 4 |
| M_PI_2 | 1.57079632679489661923 | Returns Pi/2 | PHP 4 |
| M_PI_4 | 0.78539816339744830962 | Returns Pi/4 | PHP 4 |
| M_1_PI | 0.31830988618379067154 | Returns 1/Pi | PHP 4 |
| M_2_PI | 0.63661977236758134308 | Returns 2/Pi | PHP 4 |
| M_SQRTPI | 1.77245385090551602729 | Returns the square root of PI: sqrt(pi) | PHP 5.2 |
| M_2_SQRTPI | 1.12837916709551257390 | Returns 2/square root of PI: 2/sqrt(pi) | PHP 4 |
| M_SQRT1_2 | 0.70710678118654752440 | Returns the square root of 1/2: 1/sqrt(2) | PHP 4 |
| M_SQRT2 | 1.41421356237309504880 | Returns the square root of 2: sqrt(2) | PHP 4 |

## Operatii si expresii matematice in PHP
### Calcul cos(PI/2)

```
<!DOCTYPE html>
<html>
<body>
<?php
echo cos(M_PI_2);
?>
</body>
</html>
```

www.et.utcluj.ro/PHP/cosinus.php

6.1232339957368E-17

Test: http://et.utcluj.ro/PHP/cosinus.php

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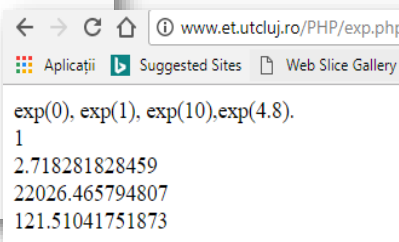## Operatii si expresii matematice in PHP
### Afisare functia exponential

```
exp - Notepad
File  Edit  Format  View  Help
<!DOCTYPE html>
<html>
<body>
<?php
echo "exp(0), exp(1), exp(10),exp(4.8).<br>";
echo(exp(0) . "<br>");
echo(exp(1) . "<br>");
echo(exp(10) . "<br>");
echo(exp(4.8));
?>
</body>
</html>
```

www.et.utcluj.ro/PHP/exp.php

Aplicaţii    Suggested Sites    Web Slice Gallery

exp(0), exp(1), exp(10),exp(4.8).
1
2.718281828459
22026.465794807
121.51041751873

Test: http://et.utcluj.ro/PHP/exp.php

## LIMBAJUL PHP

Variabile globale – superglobals introduse din versiunea PHP 4.1.0

- $GLOBALS
- $_SERVER
- $_REQUEST
- $_POST
- $_GET        -utilizate pentru formulare on line in HTML5
- $_FILES
- $_ENV
- $_COOKIE
- $_SESSION

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## FORMULARE ON LINE – METODA HTTP POST

Exemplu: **Formular cu nume si email METODA POST**



Test: http://et.utcluj.ro/PHP/form.php

## FORMULARE ON LINE – METODA HTTP POST

```
form - Notepad
File  Edit  Format  View  Help
<!DOCTYPE HTML>
<html>
<body>
<form action="welcome1.php" method="post">
Name: <input type="text" name="name"><br>
E-mail: <input type="text" name="email"><br>
<input type="submit">
</form>
</body>
</html>
```



Rezultat: datele completate sunt trimise prin metoda HTTP POST in fisierul *welcome1.php* si browserul client afiseaza:



Welcome Laura Grindei
Emailul tau este: laura.grindei@ethm.utcluj.ro Bun venit pe site-ul nostru!

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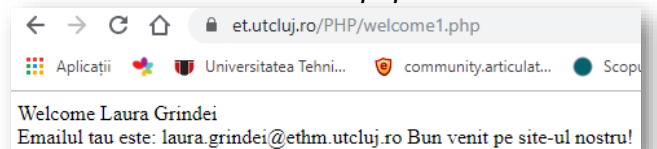
## FORMULARE ON LINE – METODA HTTP POST

Fisierul *welcome1.php* contine:

```
welcome1 - Notepad
File  Edit  Format  View  Help
<html>
<body>
Welcome <?php echo $_POST["name"]; ?><br>
Emailul tau este: <?php echo $_POST["email"];?>
<?php
echo " Bun venit pe site-ul nostru!";
?>
</body>
</html>
```
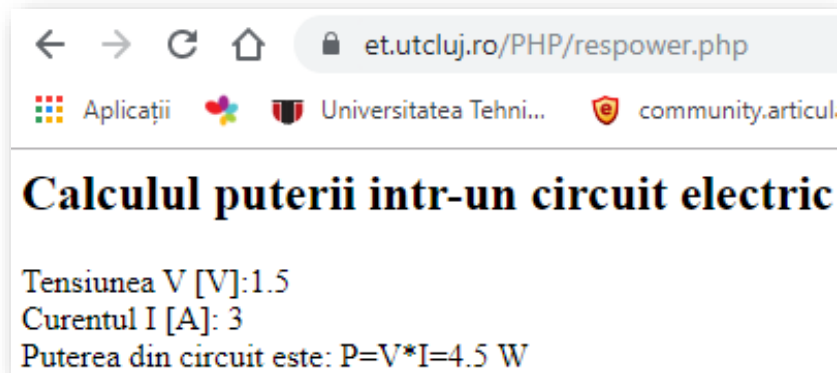
## FORMULARE ON LINE – METODA HTTP POST

```
power - Notepad
File  Edit  Format  View  Help
<!DOCTYPE HTML>
<html>
<body>
<form action="respower.php" method="post">
Tensiune: <input type="number" step="any"" name="tensiune"><br>
Curent: <input type="number" step="any"" name="curent"><br>
<input type="submit">
</form>
</body>
</html>
```

Rezultat: datele completate sunt trimise prin metoda HTTP POST in fisierul *respower.php* si browserul client afiseaza:

## FORMULARE ON LINE – METODA HTTP POST

Exemplu: **Formular interfata calcul putere METODA POST**

## FORMULARE ON LINE – METODA HTTP POST

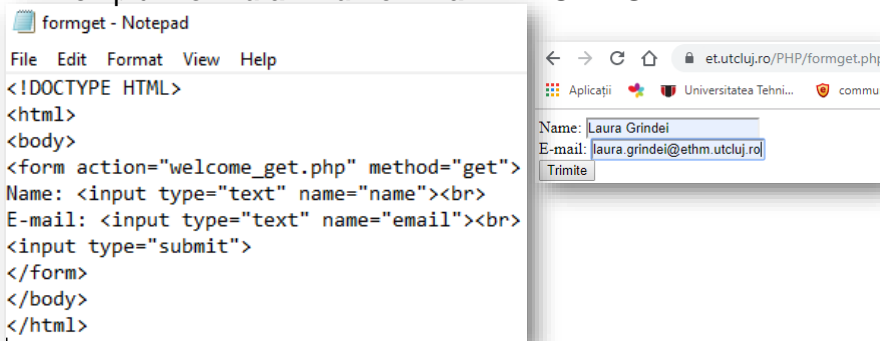Fisierul sursa este *respower.php:*

```
respower - Notepad
File  Edit  Format  View  Help
<html>
<body>
<h2> Calculul puterii intr-un circuit electric</h2>
Tensiunea V [V]:<?php echo $_POST["tensiune"]; ?><br>
Curentul I [A]: <?php echo $_POST["curent"];?>
<br>
<?php
echo " Puterea din circuit este: P=V*I=";
echo floatval($_POST["tensiune"]* $_POST["curent"]);
echo " W";
?>
</body>
</html>
```
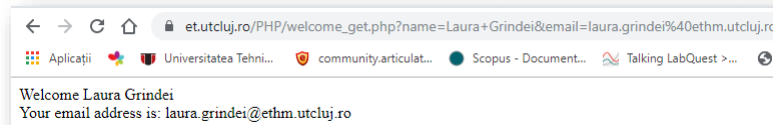
## FORMULAR ON LINE – METODA HTTP GET
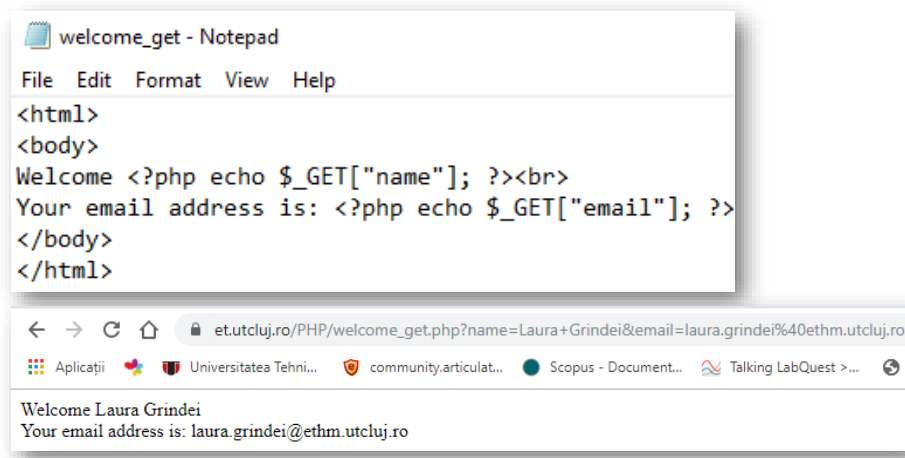
Exemplu: **Formular Nume Email METODA GET**

```
formget - Notepad
File  Edit  Format  View  Help
<!DOCTYPE HTML>
<html>
<body>
<form action="welcome_get.php" method="get">
Name: <input type="text" name="name"><br>
E-mail: <input type="text" name="email"><br>
<input type="submit">
</form>
</body>
</html>
```

Rezultat: datele completate sunt trimise prin metoda HTTP GET in fisierul *"welcome_get.php"* si browserul client afiseaza:

Welcome Laura Grindei
Your email address is: laura.grindei@ethm.utcluj.ro

## FORMULAR ON LINE – METODA HTTP GET

Fisierul *"welcome_get.php«* contine:

```
welcome_get - Notepad
File  Edit  Format  View  Help
<html>
<body>
Welcome <?php echo $_GET["name"]; ?><br>
Your email address is: <?php echo $_GET["email"]; ?>
</body>
</html>
```

Welcome Laura Grindei
Your email address is: laura.grindei@ethm.utcluj.ro

## FORMULARE ON LINE – ALEGEREA METODEI

Metoda HTTP GET se alege cand :

❑ informațiile trimise dintr-un formular cu metoda GET sunt publice .

❑ informatia trimisa prin formular : maxim 2000 caractere

Observatie: GET nu trebuie utilizat niciodată pentru trimiterea de parole sau alte informații sensibile!

Metoda HTTP POST este metoda mai des utilizata si se alege cand :

❑ informațiile trimise cu metoda POST sunt invizibile pentru alții

❑ informatia depaseste 2000 de caractere (nelimitat)

Observatie: POST e recomandata pentru trimiterea de parole sau alte informații sensibile

---

## Includere fisiere in PHP : Include

### Ex. 1 Include footer.php

footer.php

```
footer - Notepad
File  Edit  Format  View  Help
<!DOCTYPE html>
<html>
<body>
<?php
echo "<p>Copyright &copy; 2010-2019 utcn.ro</p>";
?>
</body>
</html>
```

← → C ⌂   🔒 et.utcluj.ro/PHP/inclfooter.php

⠿ Aplicații   🔴 Universitatea Tehni...   🛡 community.arti

## Welcome to my home page!

Aceasta pagina web include un footer

Copyright © 2010-2019 utcn.ro

inclfooter.php

```
File  Edit  Format  View  Help
<html>
<body>
<h1>Welcome to my home page!</h1>
<p>Aceasta pagina web include un footer</p>
<?php include 'footer.php';?>
</body>
</html>
```

## Includere fisiere in PHP : Include

### Ex. 2 Include menu.php

menu.php

```php
<?php
echo '<a href="/default.asp">Home</a> -
<a href="/html/default.asp">HTML Tutorial</a> -
<a href="/css/default.asp">CSS Tutorial</a> -
<a href="/js/default.asp">JavaScript Tutorial</a> -
<a href="default.asp">PHP Tutorial</a>';
?>
```

index.php

```html
<!DOCTYPE html>
<html>
<body>

<div class="menu">
<?php include 'menu.php';?>
</div>

<h1>Welcome to my home page!</h1>
<p>Some text.</p>
<p>Some more text.</p>

</body>
</html>
```

Home - HTML Tutorial - CSS Tutorial - JavaScript Tutorial - PHP Tutorial

# Welcome to my home page!

Some text.

Some more text.

---

## Includere fisiere in PHP : Include

### Ex. 3 Include menu.php, header.php

## Includere fisiere in PHP : Include

### Ex. 3 Include menu.php

menu.php

```html
<table width="188" border="0" cellpadding="0" cellspacing="0">
  <tbody>
    <tr>
      <td align=right valign="left" bgcolor="#FFFFFF"> </td>
    </tr>
    <tr>
      <td height="21" align=right valign="left" nowrap="nowrap" bgcolor="#E8E8E8"><font face=
"Arial, Helvetica, sans-serif"><strong> <a href="index.php">Home</a> </strong></font></td>
    </tr>
    <tr>
      <td height="21" align="right" valign="left" nowrap="nowrap" bgcolor="#E8E8E8"> </td>
    </tr>
    <tr>
      <td height="21" align="right" valign="left" nowrap="nowrap" bgcolor="#E8E8E8"><strong><font
face="Arial, Helvetica, sans-serif"><a href="descriere.php">Descriere</a></font> </strong></td>
    </tr>
    <tr>
      <td height="21" align="right" valign="left" nowrap="nowrap" bgcolor="#E8E8E8"><strong><font
face="Arial, Helvetica, sans-serif"><a href="obiective.php">Obiective</a></font></strong></td>
    </tr>
    <tr>
      <td height="21" align="right" valign="left" nowrap="nowrap" bgcolor="#E8E8E8"><strong><font
face="Arial, Helvetica, sans-serif"><a href="activitati.php">Activitati</a></font></strong></td>
    </tr>
    <tr>
      <td height="21" align="right" valign="left" nowrap="nowrap" bgcolor="#E8E8E8"><strong><font
face="Arial, Helvetica, sans-serif"><a href="echipa.php">Echipa</a></font></strong></td>
    </tr>
    <tr>
```

## Includere fisiere in PHP : Include

### Ex. 3 Include header.php , menu.php

index.php

```php
<?php include('header.php'); ?>
<TABLE width="99%" border=0 cellPadding=0 cellSpacing=0>
  <TBODY>
    <TR>
      <TD align=center valign="top" bgcolor="#FFFFFF"> <table width="100%" border="0">
        <tr>
          <td height="130" align="center"><img src="imag/siglaheader.JPG" width="1433" height=
"156" /></td>
        </tr>
      </table>
      <div align="center"><font size="2">A</font><font size="2">cest site este
        cofinantat din Fondul Social European prin Programul Operational Sectorial
        de Dezvoltarea Resurselor Umane 2007-2013. </font><font size="1">Pentru
        informatii detaliate despre celelalte programe <br />
        cofinantate de Uniunea
      Europeana , va invitam sa vizitati <a href="http://www.fonduri-ue.ro"><strong><u>
www.fonduri-ue.ro</u></strong></a></font></div></TD>

        <td width=209 valign=top>
          <?php include('menu.php'); ?>
           <p align="left"><br>
           </p></td>
```

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### Includere fisiere in PHP : Fisiere- open , read, close

Ex. 4 afiseaza text din fisier

webdictionary.txt

```
AJAX = Asynchronous JavaScript and XML
CSS = Cascading Style Sheets
HTML = Hyper Text Markup Language
PHP = PHP Hypertext Preprocessor
SQL = Structured Query Language
SVG = Scalable Vector Graphics
XML = EXtensible Markup Language
```

file.php

```php
<!DOCTYPE html>
<html>
<body>

<?php
$myfile = fopen("webdictionary.txt", "r")
or die("Unable to open file!");
echo
fread($myfile,filesize("webdictionary.txt
"));
fclose($myfile);
?>

</body>
</html>
```

AJAX = Asynchronous JavaScript and XML
CSS = Cascading Style Sheets HTML =
Hyper Text Markup Language PHP = PHP
Hypertext Preprocessor SQL = Structured
Query Language SVG = Scalable Vector
Graphics XML = EXtensible Markup
Language

---

### Includere fisiere in PHP : Fisiere- open , read, close

Ex. 5 afiseaza  o singura linie text din fisier cu fgets

webdictionary.txt

```
AJAX = Asynchronous JavaScript and XML
CSS = Cascading Style Sheets
HTML = Hyper Text Markup Language
PHP = PHP Hypertext Preprocessor
SQL = Structured Query Language
SVG = Scalable Vector Graphics
XML = EXtensible Markup Language
```

read.php

```php
<!DOCTYPE html>
<html>
<body>

<?php
$myfile = fopen("webdictionary.txt", "r")
or die("Unable to open file!");
echo fgets($myfile);
fclose($myfile);
?>

</body>
</html>
```

AJAX = Asynchronous JavaScript and XML

## Includere fisiere in PHP : Fisiere- open , read, close

### Ex.6 afiseaza  continutul unui fisier cu feof() si fgets()

webdictionary.txt

```
AJAX = Asynchronous JavaScript and XML
CSS = Cascading Style Sheets
HTML = Hyper Text Markup Language
PHP = PHP Hypertext Preprocessor
SQL = Structured Query Language
SVG = Scalable Vector Graphics
XML = EXtensible Markup Language
```

afis.php

```php
<!DOCTYPE html>
<html>
<body>

<?php
$myfile = fopen("webdictionary.txt", "r")
or die("Unable to open file!");
// Output one line until end-of-file
while(!feof($myfile)) {
  echo fgets($myfile) . "<br>";
}
fclose($myfile);
?>

</body>
</html>
```

```
AJAX = Asynchronous JavaScript and XML
CSS = Cascading Style Sheets
HTML = Hyper Text Markup Language
PHP = PHP Hypertext Preprocessor
SQL = Structured Query Language
SVG = Scalable Vector Graphics
XML = EXtensible Markup Language
```

---

## Includere fisiere in PHP : Fisiere- open , read, close

### Ex. 7 afiseaza  continutul unui fisier carácter cu caracter feof(),fgetc()

webdictionary.txt

```
AJAX = Asynchronous JavaScript and XML
CSS = Cascading Style Sheets
HTML = Hyper Text Markup Language
PHP = PHP Hypertext Preprocessor
SQL = Structured Query Language
SVG = Scalable Vector Graphics
XML = EXtensible Markup Language
```

afiseaza.php

```php
<!DOCTYPE html>
<html>
<body>

<?php
$myfile = fopen("webdictionary.txt", "r")
or die("Unable to open file!");
// Output one character until end-of-file
while(!feof($myfile)) {
  echo fgetc($myfile);
}
fclose($myfile);
?>

</body>
</html>
```

```
AJAX = Asynchronous JavaScript and
XML CSS = Cascading Style Sheets
HTML = Hyper Text Markup Language
PHP = PHP Hypertext Preprocessor SQL =
Structured Query Language SVG =
Scalable Vector Graphics XML =
EXtensible Markup Language
```

### Includere fisiere in PHP : Fisiere- open , write, close

Ex. 8 scrie intr-un fisier variabila sir  $txt:  fwrite()

index.php

```php
<?php
$myfile = fopen("newfile.txt", "w") or die("Unable to open file!");
$txt = "John Doe\n";
fwrite($myfile, $txt);
$txt = "Jane Doe\n";
fwrite($myfile, $txt);
fclose($myfile);
?>
```

newfile.txt

```
John Doe
Jane Doe
```

### Includere fisiere in PHP : Fisiere- open , read, close

Moduri de deschidere fisiere

| Modes | Description |
|-------|-------------|
| r | **Open a file for read only**. File pointer starts at the beginning of the file |
| w | **Open a file for write only**. Erases the contents of the file or creates a new file if it doesn't exist. File pointer starts at the beginning of the file |
| a | **Open a file for write only**. The existing data in file is preserved. File pointer starts at the end of the file. Creates a new file if the file doesn't exist |
| x | **Creates a new file for write only**. Returns FALSE and an error if file already exists |
| r+ | **Open a file for read/write**. File pointer starts at the beginning of the file |
| w+ | **Open a file for read/write**. Erases the contents of the file or creates a new file if it doesn't exist. File pointer starts at the beginning of the file |
| a+ | **Open a file for read/write**. The existing data in file is preserved. File pointer starts at the end of the file. Creates a new file if the file doesn't exist |
| x+ | **Creates a new file for read/write**. Returns FALSE and an error if file already exists |

## SGBD MySQL

MySQL : SGBD foarte rapid si robust permite accesul multi-user si multi-thread (mai multe fire de executie). Utilizeaza limbajul SQL.

Istoric MySQL:

❑ apare in 1979
❑ disponibil public din 1996

Adresa web MySQL: http://www.mysql.com

Caracteristici generale:

❑ gratuit
❑ Open Source, dar si cu licente comerciale.

## Clienti MySQL

| AEROSPACE, DEFENSE | EDUCATION | FINANCIAL SERVICES |
|---|---|---|
| » Los Alamos National Laboratory | » Ladok | » Wealthfront |
| » NASA | » College of William & Mary | » Bank of Finland |
| » US Navy | » Scholastic | » HypoVereinsbank |
| » MORE | » MORE | » MORE |
| **GOVERNMENT** | **HEALTHCARE, PHARMA** | **MEDIA & ENTERTAINMENT** |
| » WhiteHouse.Gov | » Sahlgrenska University Hospital | » MTV Networks |
| » United Nations FAO | » UCR | » Big Fish |
| » US Navy | » Candelis | » Netflix |
| » MORE | » MORE | » MORE |
| **RETAIL** | **SMALL & MEDIUM BUSINESS** | **TECHNOLOGY: HARDWARE** |
| » Glasses Direct | » Clickability | » Candelis |
| » The Phone House Telecom GmbH | » thePlatform | » Hitachi Data Systems |
| » Leader Price | » MORE | » Sandstorm Enterprises |
| » MORE | | » MORE |

## Clienti MySQL

| TECHNOLOGY: OPEN SOURCE PROJECTS | TECHNOLOGY: SOFTWARE | TELECOM |
|---|---|---|
| » Glassfish Open Message Queue (OpenMQ) | » DocQ | » The Phone House Telecom GmbH |
| » Amarok | » EMC | » Tellme Networks |
| » FreeRADIUS | » Intellitactics | » Italtel |
| » MORE | » MORE | » MORE |

| TRAVEL & HOSPITALITY | WEB: ECOMMERCE | WEB: GAMES |
|---|---|---|
| » LAN AIRLINES S.A. | » iStockphoto | » King Digital Entertainment - Candy Crush |
| » Datagest | » Airbnb | » LeoVegas |
| » Priceline.com (Europe) | » Uber | » Toto-Lotto Niedersachsen |
| » MORE | » MORE | » MORE |

| WEB: SAAS, HOSTING | WEB: SOCIAL NETWORKS | |
|---|---|---|
| » Clickability | » Tumblr | |
| » Magus | » LinkedIn | |
| » Atos Worldline | » Facebook | |
| » MORE | » MORE | |

## PHP si MySQL

PHP 5 (si versiunile ulterioare) se conecteaza cu baze de date MySQL prin:

❑ extensia MySQLi ( "i" de la improved): permite conectarea doar cu BD MySQL in 2 moduri:
  ▪ Object Oriented si
  ▪ Procedural

  http://php.net/manual/en/mysqli.installation.php

❑ PDO (PHP Data Objects): permite conectarea cu 12 tipuri diferite de BD

  http://php.net/manual/en/pdo.installation.php

## Deschidere conexiune la BD MySQL
## cu MySQLi Object-Oriented

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";

// Create connection
$conn = new mysqli($servername, $username, $password);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
?>
```

### Inchidere conexiune

```php
$conn->close();
```

### Deschidere conexiune la BD MySQL cu MySQLi Procedural

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";

// Create connection
$conn = mysqli_connect($servername, $username, $password);

// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}
echo "Connected successfully";
?>
```

### Inchidere conexiune

```php
mysqli_close($conn);
```

### Deschidere conexiune PHP la BD MySQL cu PDO

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";

try {
    $conn = new PDO("mysql:host=$servername;dbname=myDB", $username, $password);
    // set the PDO error mode to exception
    $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
    echo "Connected successfully";
    }
catch(PDOException $e)
    {
    echo "Connection failed: " . $e->getMessage();
    }
?>
```

### Inchidere conexiune

```php
$conn = null;
```

### Creare BD utilizand PHP si MySQLi Object-oriented

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";

// Create connection
$conn = new mysqli($servername, $username, $password);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Create database
$sql = "CREATE DATABASE myDB";
if ($conn->query($sql) === TRUE) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . $conn->error;
}

$conn->close();
?>
```

## Exemplu creare tabel in BD utilizand PHP si MySQLi Object-orien

Se creeaza un tabel "MyGuests", cu 5 coloane:
1. "id",
2. "firstname",
3. "lastname",
4. "email" si
5. "reg_date":

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// sql to create table
$sql = "CREATE TABLE MyGuests (
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
firstname VARCHAR(30) NOT NULL,
lastname VARCHAR(30) NOT NULL,
email VARCHAR(50),
reg_date TIMESTAMP
)";

if ($conn->query($sql) === TRUE) {
    echo "Table MyGuests created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}
```

## Exemplu inserare date in BD utilizand PHP si MySQLi Object-oriented

```php
// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('John', 'Doe', 'john@example.com')";

if ($conn->query($sql) === TRUE) {
    echo "New record created successfully";
} else {
    echo "Error: " . $sql . "<br>" . $conn->error;
}
```

## Exemplu inserare multipla date in BD utilizand PHP si MySQLi Object-oriented

```php
$sql = "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('John', 'Doe', 'john@example.com');";
$sql .= "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('Mary', 'Moe', 'mary@example.com');";
$sql .= "INSERT INTO MyGuests (firstname, lastname, email)
VALUES ('Julie', 'Dooley', 'julie@example.com')";

if ($conn->multi_query($sql) === TRUE) {
    echo "New records created successfully";
} else {
    echo "Error: " . $sql . "<br>" . $conn->error;
}
```

## Exemplu interogare date in BD cu SELECT utilizand PHP si MySQLi Object-oriented

```php
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT id, firstname, lastname FROM MyGuests";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    // output data of each row
    while($row = $result->fetch_assoc()) {
        echo "id: " . $row["id"]. " - Name: " . $row["firstname"]. " " . $row["lastname"]. "
<br>";
    }
} else {
    echo "0 results";
}
$conn->close();
?>
```

Rezultate afisate

id: 1 - Name: John Doe
id: 2 - Name: Mary Moe
id: 3 - Name: Julie Dooley

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## Exemplu stergere date din BD cu DELETE
## utilizand PHP si MySQLi Object-oriented

Fie tabelul "MyGuests": se sterge al 3-lea articol/linie

| id | firstname | lastname | email | reg_date |
|----|-----------|----------|-------|----------|
| 1 | John | Doe | john@example.com | 2014-10-22 14:26:15 |
| 2 | Mary | Moe | mary@example.com | 2014-10-23 10:22:30 |
| 3 | Julie | Dooley | julie@example.com | 2014-10-26 10:48:23 |

```php
// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}


// sql to delete a record
$sql = "DELETE FROM MyGuests WHERE id=3";

if ($conn->query($sql) === TRUE) {
    echo "Record deleted successfully";
} else {
    echo "Error deleting record: " . $conn->error;
}
```

---

## Exemplu modificare date din BD cu UPDATE
## utilizand PHP si MySQLi Object-oriented

Fie tabel "MyGuests": se modifica campul lastname pentru articolul 2 in Doe

| id | firstname | lastname | email | reg_date |
|----|-----------|----------|-------|----------|
| 1 | John | Doe | john@example.com | 2014-10-22 14:26:15 |
| 2 | Mary | Moe | mary@example.com | 2014-10-23 10:22:30 |

```php
$sql = "UPDATE MyGuests SET lastname='Doe' WHERE id=2";

if ($conn->query($sql) === TRUE) {
    echo "Record updated successfully";
} else {
    echo "Error updating record: " . $conn->error;
}
```

Rezultat

| id | firstname | lastname | email | reg_date |
|----|-----------|----------|-------|----------|
| 1 | John | Doe | john@example.com | 2014-10-22 14:26:15 |
| 2 | Mary | Doe | mary@example.com | 2014-10-23 10:22:30 |

## Validare cod PHP on line

- PHP Sandbox, test PHP online, PHP tester
- Write Code Online - PHP | start write and run php code online
- eval.in
- Execute PHP Script Online
- Nitrous.IO

## Validare cod PHP on line Sandbox

**Your script:**

```php
1   <?php
2           //Enter your code here, enjoy!
3
4   $array = array("1" => "PHP code tester Sandbox Online",
5               "foo" => "bar", 5 , 5 => 89009,
6               "case" => "Random Stuff: " . rand(100,999),
7               "PHP Version" => phpversion()
8               );
9
10  foreach( $array as $key => $value ){
11      echo $key."\t=>\t".$value."\n";
12  }
13
14
```
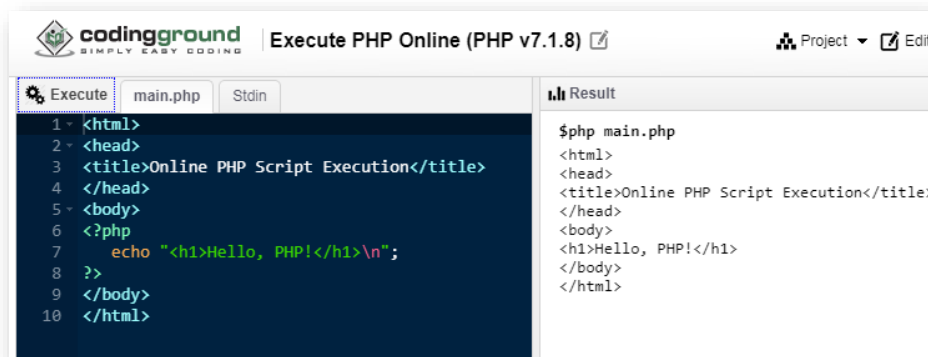
**Result:**

```
1          =>      PHP code tester Sandbox Online
foo        =>      bar
2          =>      5
5          =>      89009
case       =>      Random Stuff: 644
PHP Version  =>        7.0.3
```

**Run on PHP version:** 7.0.3 ▼

**Output:** Textbox ▼

Execute code    Save or share your code

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## Validare cod PHP on line

## Validare cod PHP on line

## Aplicatii complexe PHP

1. **E-Commerce**
2. **Graphical User Interface: desktop GUI** applications utilizand **PHP extensions:**
   - PHP GTK - This extension is a popular open source that implements the GIMP toolkit
   - ZZEE PHP GUI - A paid solution that allows you to turn your PHP scripts into Windows applications
3. **Forum de discutii**
   - php BB
   - vBulletin
   - Pun BB
4. **Aplicatii Facebook**
   - Facebook developer's wiki
5. **Liste de email : Mailing Lists**
6. **PHP Photo Gallery**
7. **CMS:**
   - Drupal
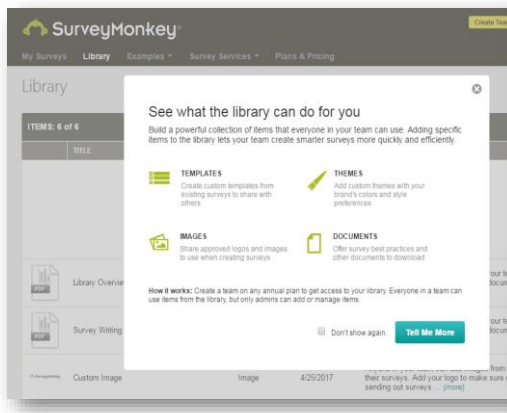   - Wordpress, Joomla
8. **Grafice web: PHPChart**

## Formulare si chestionare on line: Survey Monkey

Creare formular:
- ❑ usor, exista o serie de template-uri
- ❑ se pot creea intrebari cu logica
- ❑ nu se genereaza codul sursa doar



And here's our full list of sample survey questionnaires:

360 degree Feedback
Airline Passenger Feedback
Before They Were Famous Survey
Brand Awareness Survey
Bullying Survey
Business to Business Survey
Business Travel Form
CAHPS Dental Plan Survey
CAHPS Health Plan Survey 4.0
CAHPS Survey Template
CAHPS Visit Survey
Child Behaviors Survey

Commuting Survey

Customer Comments Feedback
Customer Satisfaction Survey
Customer Service Feedback
Customer Service Survey
Department Performance Poll
Diet & Exercise Survey
Do You Have Health Insurance?
Donor Feedback
Education Demographics Survey
Employee Benefits Survey
Employee Exit Survey
Employee Performance Review Template
Employment Feedback
Endurance Event Feedback
Entertainment Event Feedback
Environmental Issues Poll
Event Planning Questionnaire
Facebook Profile Questionnaire
Facebook Survey Template
Favorite Celebrities Poll
Firmographics Survey
Fundraising Feedback
General Event Feedback
General Internet Usage
HCAHPS Survey Template
Health Insurance Evaluation
Healthcare Expenses Feedback
Height & Weight Survey
High School Sports – Student Feedback
Hospital Performance Evaluation
Hotel Feedback

Makeup Products Feedback
Management Performance
Market Research—Product Feedback
Market Research—Service Feedback
Market Research Template
Mobile Apps Survey
Movie and TV Viewing Habit Surveys
Movie Viewing Survey
Music Listening Survey
Neighborhood Events Survey
Neighborhood Feedback Survey
Net Promoter Score Questionnaire Template
Non-profit Organization Information Template
NPS and Brand Loyalty Survey
Online Social Networking Survey
Parent Engagement Survey
Parental Support Survey
Personal Hygiene Questionnaire
Post-Visit Patient Satisfaction Survey
Pre K-12 Parent Survey Template
Professional Event Feedback
Real Estate Agent Evaluation
Recruitment Satisfaction Survey
Retail Customer Feedback

RSVP and Contact Information Form

School Climate Survey
School Program Fit Questionnaire
Employee Engagement Template
Skin Care Products Feedback
Smoking Survey
Social Support Survey
Software Evaluation
Supervisor Performance Evaluation
Target Market Analysis Questionnaire
Target Market Demographics Questionnaire
Team Performance Survey
TV Viewing Survey
Typical Customer Analysis Survey
Typical Customer Demographics Survey
University Faculty Satisfaction Survey
University Instructor Evaluation

University Student Graduation Form

University Student Satisfaction Survey
University Teaching Assistant Evaluation

# Aplicatie

**Enunt:** Creati o interfete pentru  calcul marimi electrice:

-calculul rezistentelor si capacitatilor conectate in serie, respectiv paralel

-calcule in circuite  electrice