PHP

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PHP

CO5: Apply the server side technologies for web development
CO6: Create the effective web applications for business functionalities using latest web development platforms

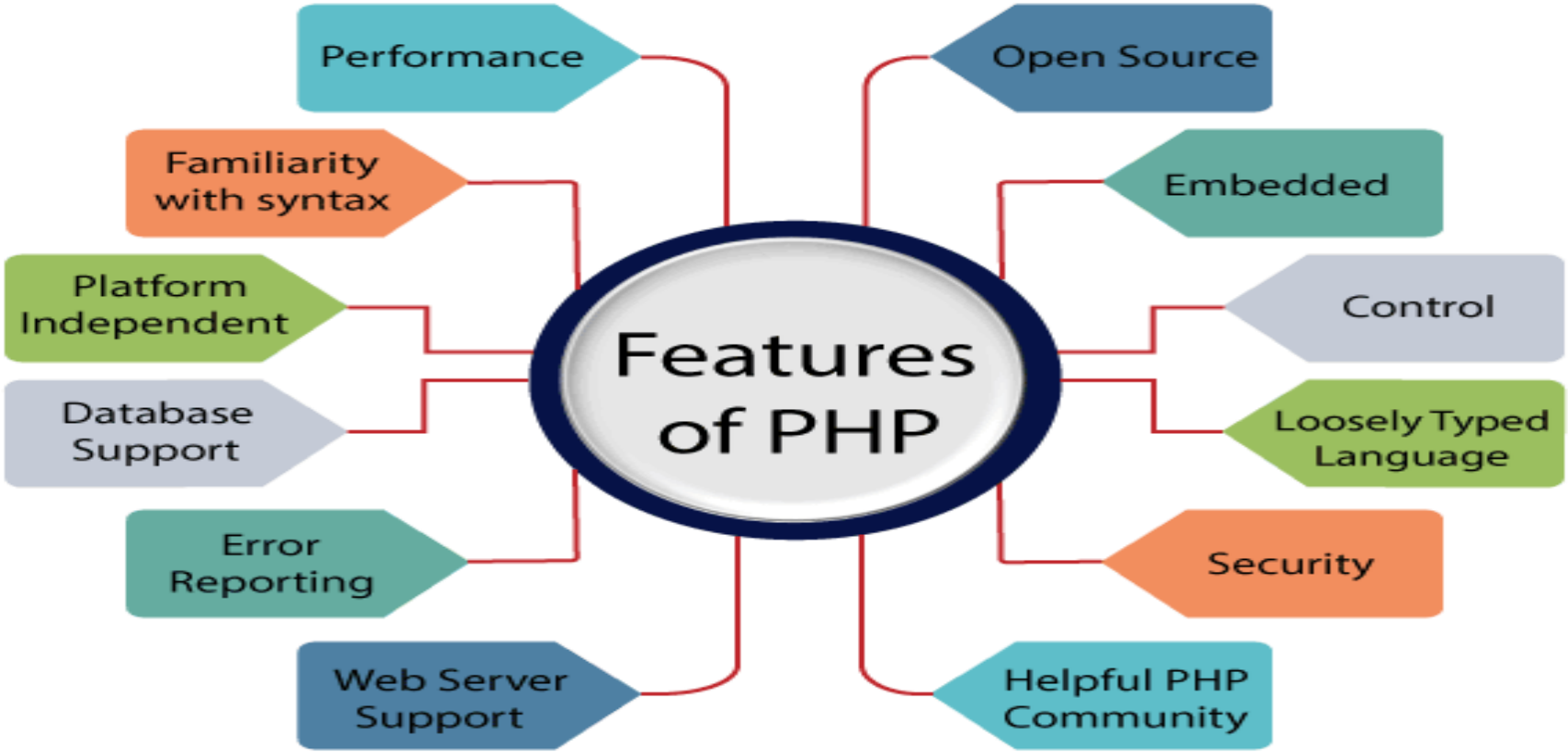
Introduction

- **PHP: Hypertext Preprocessor**
- **PHP is a server side scripting language that is embedded in HTML.**
- **It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.**
- **PHP supports a large number of major protocols such as POP3(Post Office Protocol), IMAP(Internet Message Access protocol), and LDAP.**
- **PHP Syntax is C-Like.**
- **1994 Rasmus Lerdorf**

Common Uses of PHP

- **PHP performs system functions**
- **PHP can handle forms**
- **You add, delete, modify elements within your database through PHP.**
- **Access cookies variables and set cookies.**
- **Using PHP, you can restrict users to access some pages of your website.**
- **It can encrypt data.**

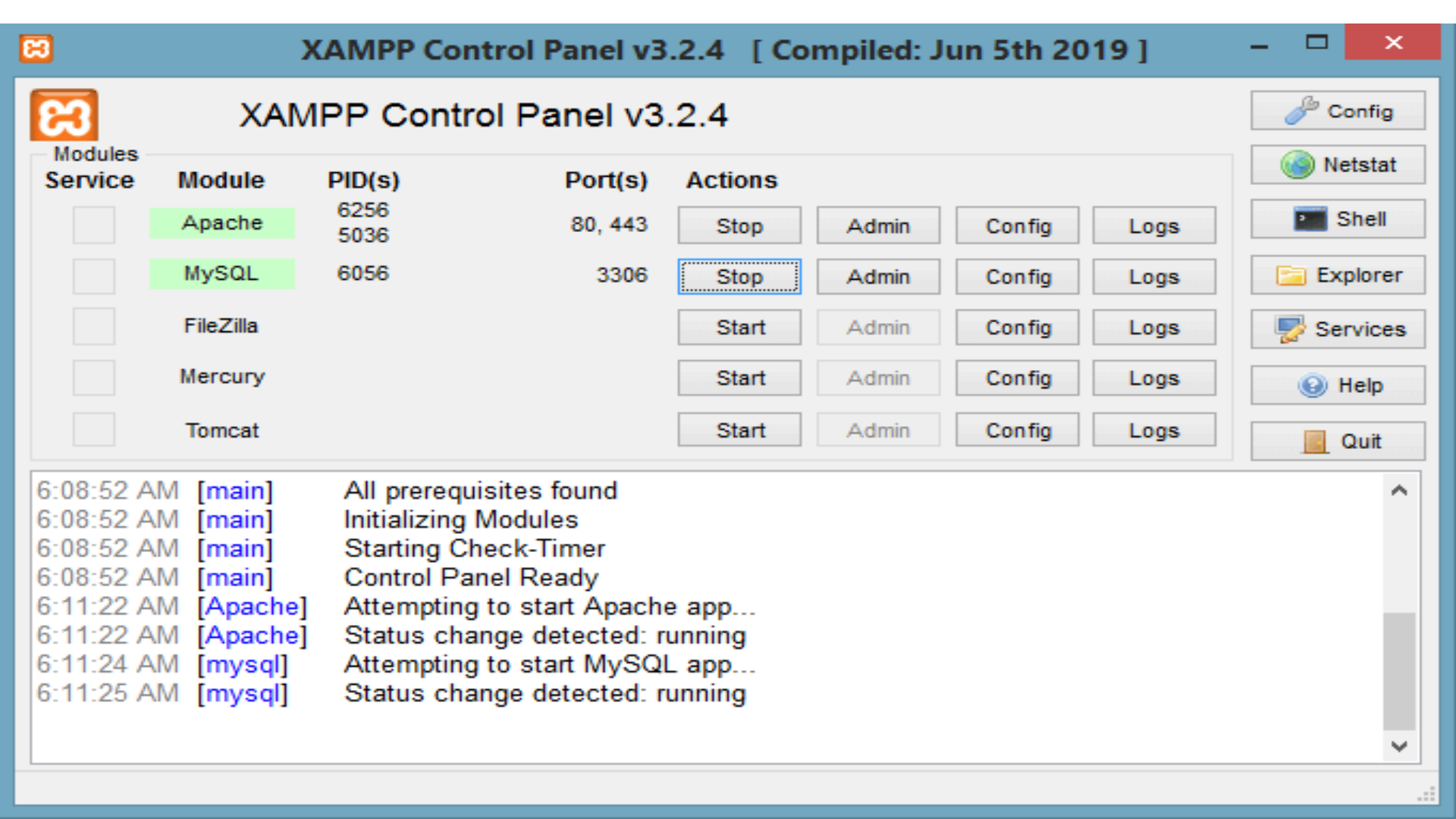
Characteristics of PHP



Install PHP

To install PHP, we will suggest you to install AMP (Apache, MySQL, PHP) software stack. It is available for all operating systems. There are many AMP options available in the market that are given below:

- **WAMP** for Windows
- **LAMP** for Linux
- **MAMP** for Mac
- **SAMP** for Solaris
- **FAMP** for FreeBSD
- **XAMPP (Cross, Apache, MySQL, PHP, Perl) for Cross Platform: It includes some other components too such as FileZilla, OpenSSL, Webalizer, Mercury Mail, etc.**


XAMPP Control Panel v3.2.4 [Compiled: Jun 5th 2019]
XAMPP Control Panel v3.2.4
Modules
Service
Module
PID(s)
Port(s)
Actions
Apache
6256
5036
80, 443
Stop
Admin
Config
Logs
MySQL
6056
3306
Stop
Admin
Config
Logs
FileZilla
Start
Admin
Config
Logs
Mercury
Start
Admin
Config
Logs
Tomcat
Start
Admin
Config
Logs
Config
Netstat
Shell
Explorer
Services
Help
Quit
6:08:52 AM [main] All prerequisites found
6:08:52 AM [main] Initializing Modules
6:08:52 AM [main] Starting Check-Timer
6:08:52 AM [main] Control Panel Ready
6:11:22 AM [Apache] Attempting to start Apache app...
6:11:22 AM [Apache] Status change detected: running
6:11:24 AM [mysql] Attempting to start MySQL app...
6:11:25 AM [mysql] Status change detected: running

A **PHP file contains HTML tags and some PHP scripting code.**

It is very easy to create a simple PHP example.

To do so, create a file and write HTML tags + PHP code and save this file with .php extension.

PHP programs can be written on any editor, such as - Notepad, Notepad++, etc

These programs save with .php extension,

filename.php inside the htdocs folder. (Otherwise it will generate an error - Object not found.)

Step 1: Create a simple PHP program like hello world.

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

Step 2: Save the file with hello.php name in the htdocs folder, which resides inside the xampp folder.

Step 3: Run the XAMPP server and start the Apache and MySQL.

Step 4: Now, open the web browser and type localhost *http://localhost/hello.php* on your browser window.

Example

```
<html>
 <head>
   <title>Hello World</title>
  </head>
   <body>
    <?php echo "Hello, World!";?>
  </body>
</html>
```

Ways to Write PHP

- **<?php PHP code goes here ?>**
- **<? PHP code goes here ?>**
- **<script language="php"> PHP code goes here </script>**

Syntax

- **Canonical PHP tags**
  - **<?php...?>**
- **Short-open (SGML-style) tags**
  - **<?...?>**
- **ASP-style tags**
  - **<%...%>**
- **HTML script tags**
  - **<script language="PHP">...</script>**

Commenting PHP Code

- **Single-line comments (#)**
- **Multi-lines comments (/*.....*/)**
- **PHP is whitespace insensitive**
- **PHP is case sensitive**
- **Statements are expressions terminated by semicolons**
- **Expressions are combinations of tokens**
- **Braces make blocks**

Data Types

- **Integers**
- **Doubles**
- **Booleans**
- **Strings**
- **Arrays**
- **Objects**
- **Resources**

Conditions

- **If...Else Statement**

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

```
<html>
  <body>

    <?php
      $d = date("D");

      if ($d == "Fri")
        echo "Have a nice
weekend!";

      else
        echo "Have a nice day!";
    ?>

  </body>
</html>
```

ElseIf Statement

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

```
<html>
  <body>

    <?php
      $d = date("D");

      if ($d == "Fri").
        echo "Have a nice weekend!";

      elseif ($d == "Sun")
        echo "Have a nice Sunday!";

      else
        echo "Have a nice day!";
    ?>

  </body>
</html>
```

The Switch Statement

```
switch (expression)
{
  case label1:
    code to be executed if expression = label1;
    break;

  case label2:
    code to be executed if expression = label2;
    break;
    default:

  code to be executed
  if expression is different
  from both label1 and label2;
}
```

```
<html>
  <body>

    <?php
      $d = date("D");

      switch ($d){
        case "Mon":
          echo "Today is Monday";
          break;

        case "Tue":
          echo "Today is Tuesday";
          break;
default:
          echo "Wonder which day is this ?";
      }
    ?>
  </body>
</html>
```

Looping Statement

- for
- while
- do……..while
- foreach

for

```
<html>
  <body>

    <?php
      $a = 0;
      $b = 0;

      for( $i = 0; $i<5; $i++ ) {
        $a += 10;
        $b += 5;
      }

      echo ("At the end of the loop a = $a and b = $b"
);
    ?>
    </body>
</html>
```

while

```
<html>
   <body>

      <?php
         $i = 0;
         $num = 50;

         while( $i < 10) {
            $num--;
            $i++;
         }

         echo ("Loop stopped at i = $i and num = $num" );
      ?>

   </body>
</html>
```

do.....while

```
<html>
   <body>

      <?php
         $i = 0;
         $num = 0;

         do {
            $i++;
         }

         while( $i < 10 );
         echo ("Loop stopped at i = $i" );
      ?>

   </body>
</html>
```

foreach

```
<html>
   <body>

      <?php
         $array = array( 1, 2, 3, 4, 5);

         foreach( $array as $value ) {
            echo "Value is $value <br />";
         }
      ?>

   </body>
</html>
```

Arrays

- **Numeric array**
- **Associative array**
- **Multidimensional array**

Numeric Array

```
<html>
  <body>

    <?php
      /* First method to create array. */
      $numbers = array( 1, 2, 3, 4, 5);

      foreach( $numbers as $value )
{
         echo "Value is $value <br />";
      }
```

```
/* Second method to create array. */
      $numbers[0] = "one";
      $numbers[1] = "two";
      $numbers[2] = "three";
      $numbers[3] = "four";
      $numbers[4] = "five";

      foreach( $numbers as $value ) {
         echo "Value is $value <br />";
      }
    ?>

  </body>
</html>
```

Associative Array

```
<html>
   <body>

      <?php
         /* First method to associate create
array. */
         $salaries = array("mohammad" =>
2000, "qadir" => 1000, "zara" => 500);

         echo "Salary of mohammad is ".
$salaries['mohammad'] . "<br />";
         echo "Salary of qadir is ".
$salaries['qadir']. "<br />";
         echo "Salary of zara is ".
$salaries['zara']. "<br />";
```

```
/* Second method to create array. */
         $salaries['mohammad'] = "high";
         $salaries['qadir'] = "medium";
         $salaries['zara'] = "low";

         echo "Salary of mohammad is ".
$salaries['mohammad'] . "<br />";
         echo "Salary of qadir is ".
$salaries['qadir']. "<br />";
         echo "Salary of zara is ".
$salaries['zara']. "<br />";
      ?>

   </body>
</html>
```

Multidimensional Array

```
<html>
  <body>

    <?php
      $marks = array(
        "mohammad" => array (
          "physics" => 35,
          "maths" => 30,
          "chemistry" => 39
        ),

        "qadir" => array (
          "physics" => 30,
          "maths" => 32,
          "chemistry" => 29
        ),
```

```
/* Accessing multi-dimensional array values
*/
        echo "Marks for mohammad in physics
: " ;
        echo $marks['mohammad']['physics'] .
"<br />";

        echo "Marks for qadir in maths : ";
        echo $marks['qadir']['maths'] . "<br />";

                              ?>


  </body>
</html>
```

PHP && Mysql database Connection

Setting PHP (In Linux Environment)

- install a web server (Apache 2)

```
sudo apt-get update
sudo apt-get install apache2
```

- install PHP

```
sudo  apt-get install php
```

- install MySQL

https://www.digitalocean.com/community/tutorials/a-basic-mysql-tutorial

Open a connection in Mysql

Before we can access data in the MySQL database, we need to be able to connect to the server:

```php
<?php
$servername = "127.0.0.1:3306";
$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";
?>
```

Close the connection

The connection will be closed automatically when the script ends. To close the connection before, use the following:

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

Create a MySQL Database

The CREATE DATABASE statement is used to create a database in MySQL.

The following examples create a database named "myDB":

```php
<?php
$servername = "127.0.0.1:3306";
$username = "username";
$password = "password";

// Create connection
$conn = mysqli_connect($servername, $username, $password);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

// Create database
$sql = "CREATE DATABASE myDB";
if (mysqli_query($conn, $sql)) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . mysqli_error($conn);
}

mysqli_close($conn);
?>
```

d tempor incididunt ut labore et dolore magna aliqua

Create a MySQL Table

The CREATE TABLE statement is used to create a table in MySQL.

The SQL query must be quoted in PHP

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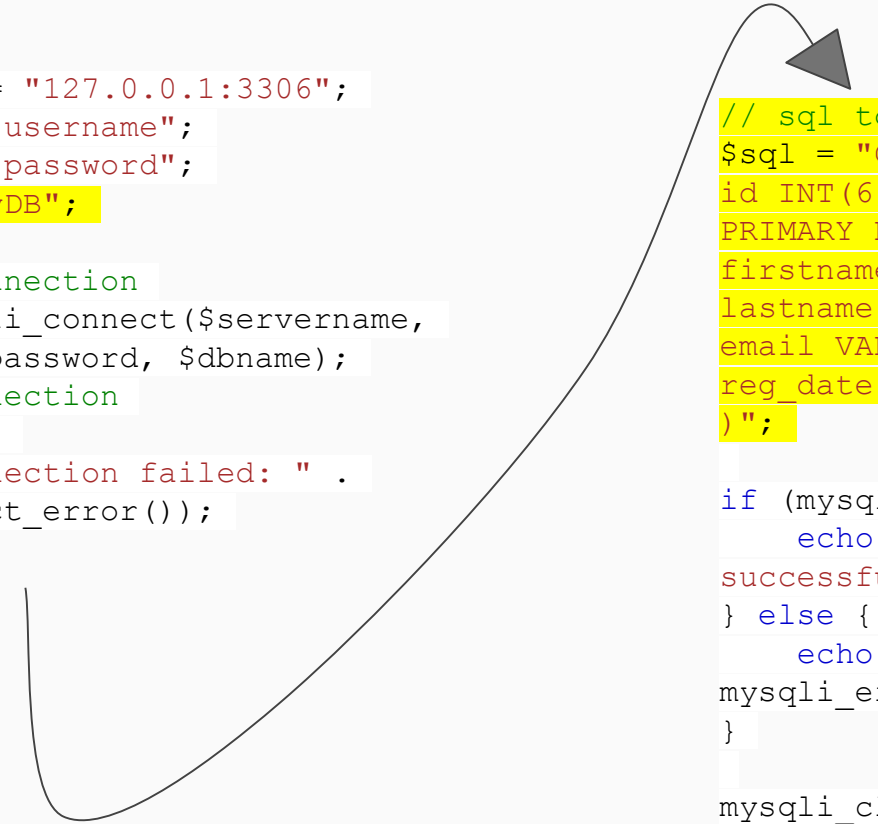
Incididunt ut labore et dolore

Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua

```php
<?php
$servername = "127.0.0.1:3306";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = mysqli_connect($servername,
$username, $password, $dbname);
// Check connection
if (!$conn) {
    die("Connection failed: " .
mysqli_connect_error());
}
```



```php
// 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 (mysqli_query($conn, $sql)) {
    echo "Table MyGuests created
successfully";
} else {
    echo "Error creating table: " .
mysqli_error($conn);
}

mysqli_close($conn);
?>
```

Insert Data Into MySQL

```php
<?php
$servername = "127.0.0.1:3306";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = mysqli_connect($servername, $username, $password,
$dbname);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

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

if (mysqli_query($conn, $sql)) {
    echo "New record created successfully";
} else {
    echo "Error: " . $sql . "<br>" . mysqli_error($conn);
}

mysqli_close($conn);
?>
```

Select Data

```php
<?php
$servername = "127.0.0.1:3306";
$username = "username";
$password = "password";
$dbname = "myDB";
// Create connection
$conn = mysqli_connect($servername, $username,
$password, $dbname);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

$sql = "SELECT id, firstname, lastname FROM MyGuests";
$result = mysqli_query($conn, $sql);
if (mysqli_num_rows($result) > 0) {
    // output data of each row
    while($row = mysqli_fetch_assoc($result)) {
        echo "id: " . $row["id"]. " - Name: " .
$row["firstname"]. " " . $row["lastname"]. "<br>";
        }
} else {
    echo "0 results";
}
mysqli_close($conn);
?>
```

Delete Data

```php
<?php
$servername = "127.0.0.1:3306";
$username = "username";
$password = "password";
$dbname = "myDB";

// Create connection
$conn = mysqli_connect($servername, $username,
$password, $dbname);
// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}

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

if (mysqli_query($conn, $sql)) {
    echo "Record deleted successfully";
} else {
    echo "Error deleting record: " .
mysqli_error($conn);
}

mysqli_close($conn);
?>
```

Cookies

- Server script sends a set of cookies to the browser. For example name, age, or identification number etc.
- Browser stores this information on local machine for future use.
- When next time browser sends any request to web server then it sends those cookies information to the server and server uses that information to identify the user.

Setting Cookies with PHP

PHP provided setcookie() function to set a cookie.

setcookie(name, value, expire, path, domain, security);

```
<?php
   setcookie("name", "John Watkin", time()+3600, "/","", 0);
   setcookie("age", "36", time()+3600, "/", "",  0);
?>
<html>

   <head>
      <title>Setting Cookies with PHP</title>
   </head>

   <body>
      <?php echo "Set Cookies"?>
   </body>

</html>
```

Accessing Cookies with PHP

$_COOKIE or $HTTP_COOKIE_VARS

```
88<body>

    <?php
      echo $_COOKIE["name"]. "<br />";

      /* is equivalent to */
      echo $HTTP_COOKIE_VARS["name"]. "<br />";

      echo $_COOKIE["age"] . "<br />";

      /* is equivalent to */
      echo $HTTP_COOKIE_VARS["age"] . "<br />";
    ?>

  </body>
```

Deleting Cookie with PHP

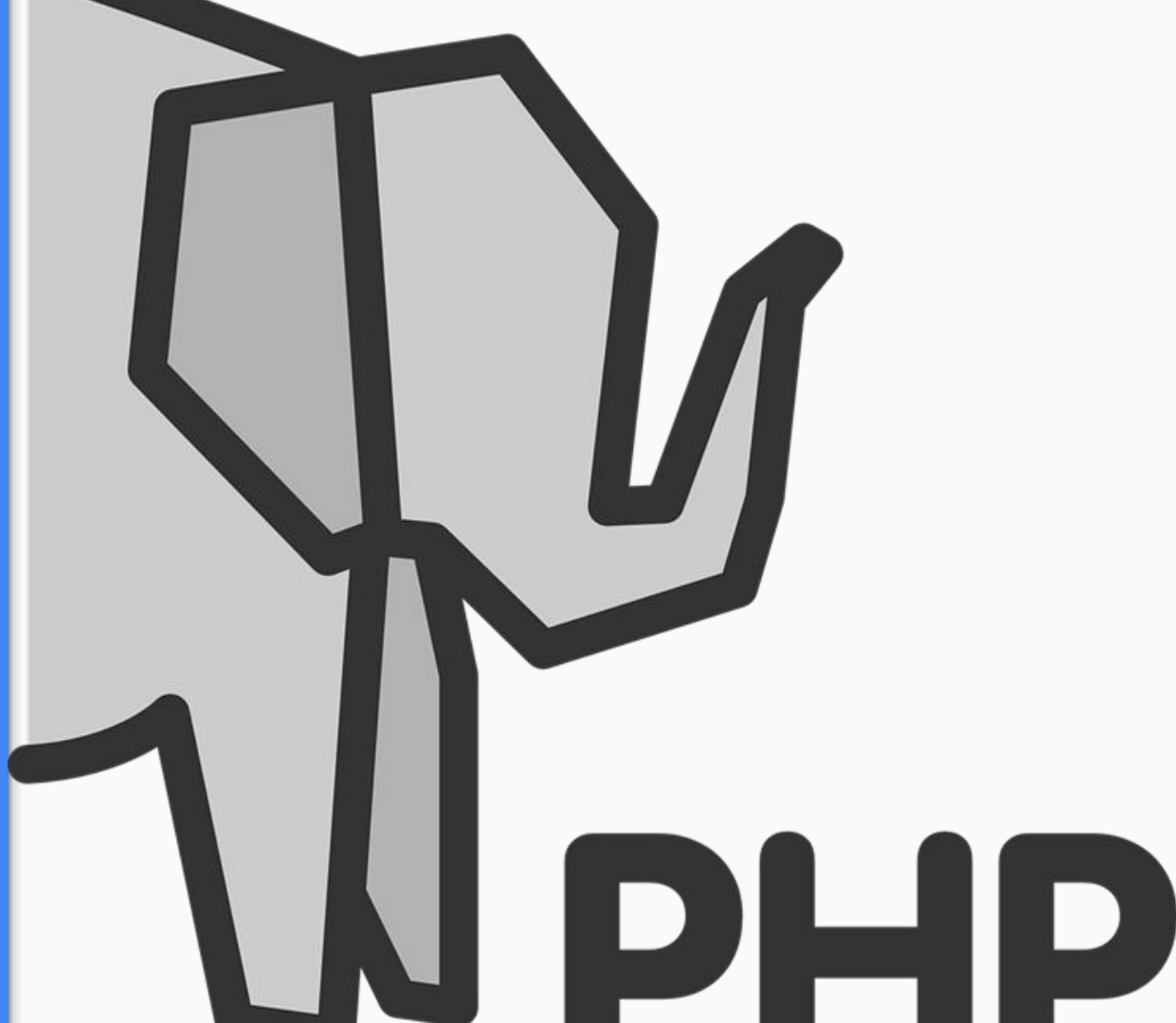
```
<?php
   setcookie( "name", "", time()- 60, "/","", 0);
   setcookie( "age", "", time()- 60, "/","", 0);
?>
<html>

   <head>
      <title>Deleting Cookies with PHP</title>
   </head>

   <body>
      <?php echo "Deleted Cookies" ?>
   </body>

</html>
```

Thanks!



WAP

WAP – Wireless Application Protocol

– It was created by WAP forum 1998

– It is a standard for application-layer network communication in mobile world

– It allows the transportation of information between a device and the Internet via WAP gateway

– WAP has two versions 1.1 & 2.0

It uses mark -up language WML

WAP 2.0

The first WAP 2.0 devices appeared in 2002

- Now every device on market is WAP 2.0 compatible
- It allows HTTP communication between the device and server
- WAP gateway acts only as a proxy in operator network
- m sub domain

WML

WML – Wireless Markup Language

– It is HTML type formatting language

– Defined as XML document type

– It is case-Sensitive

– It supports the character set of ISO-10646

– It supports Alphanumeric and numeric character entities

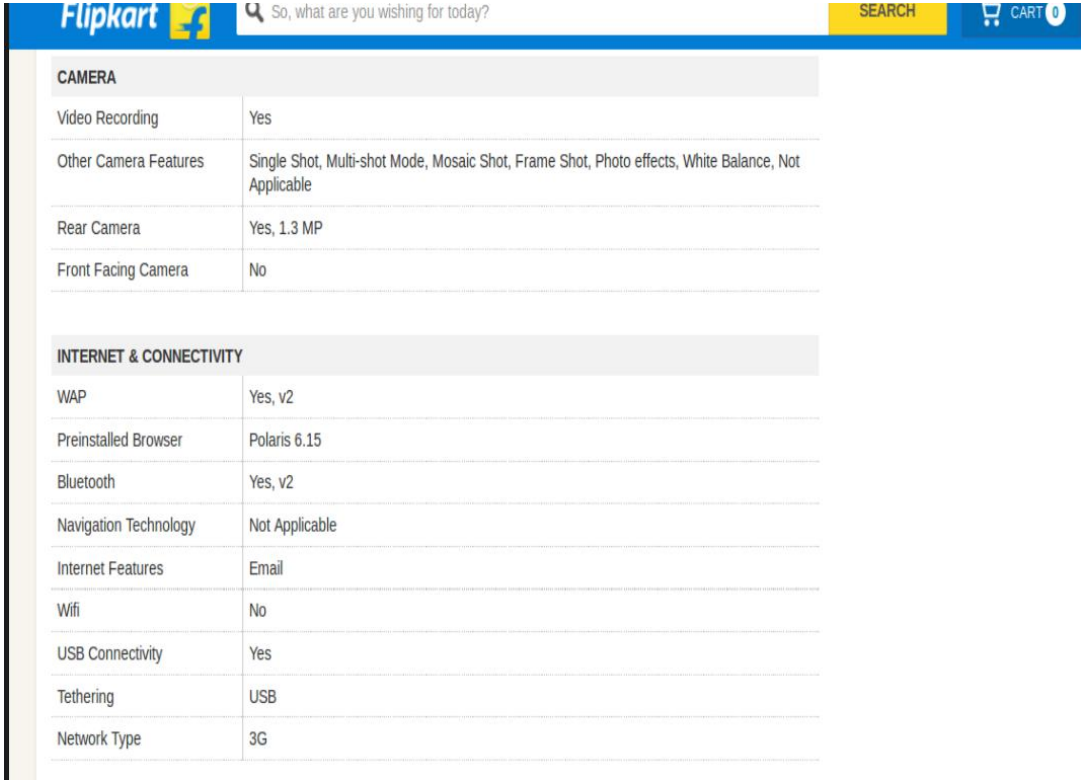
WML

WML does not generally support GIF,JPEG,PNG

- WML images were WBMP
- WML supports scripting i.e WML Script
- WBMP file is size is 1-bit-per-pixel bitmap file
- WML & WML Script files were compiled by WAP gateway
- Nokia Mobile Internet Tool Kit is used to compile WMLScript file

Example

```
<?xml version="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
   "http://www.wapforum.org/DTD/wml_1.1.xml" >
<wml>
   <card id="home" title="Welcome to Old Mobile">
      <p mode="wrap">This is a <b>typical</b> paragraph in WML</p>
      <p mode="wrap">It can include images,
         <a href="http://wap.yahoo.com">External Links</a> and
         <a href="#two">Internal Links</a>.
      </p>
   </card>
   <card id="two" title="Second screen">
      <p>This is like a second page in the same document</p>
   </card>
</wml>
```



CAMERA	
Video Recording	Yes
Other Camera Features	Single Shot, Multi-shot Mode, Mosaic Shot, Frame Shot, Photo effects, White Balance, Not Applicable
Rear Camera	Yes, 1.3 MP
Front Facing Camera	No

INTERNET & CONNECTIVITY	
WAP	Yes, v2
Preinstalled Browser	Polaris 6.15
Bluetooth	Yes, v2
Navigation Technology	Not Applicable
Internet Features	Email
Wifi	No
USB Connectivity	Yes
Tethering	USB
Network Type	3G

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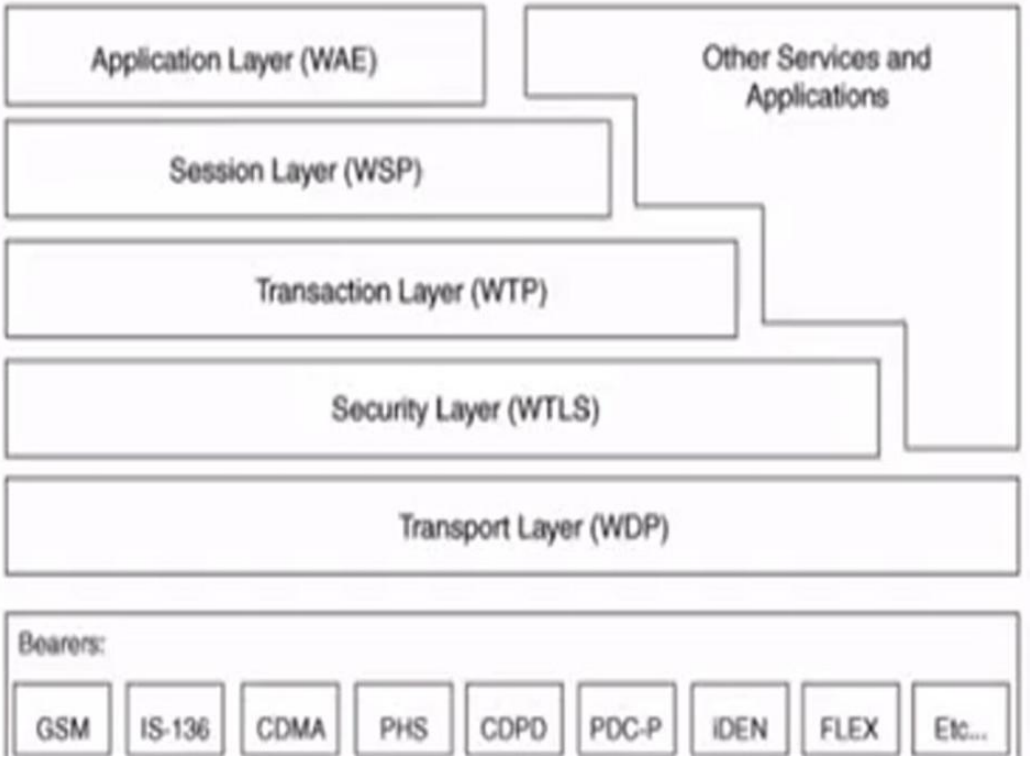
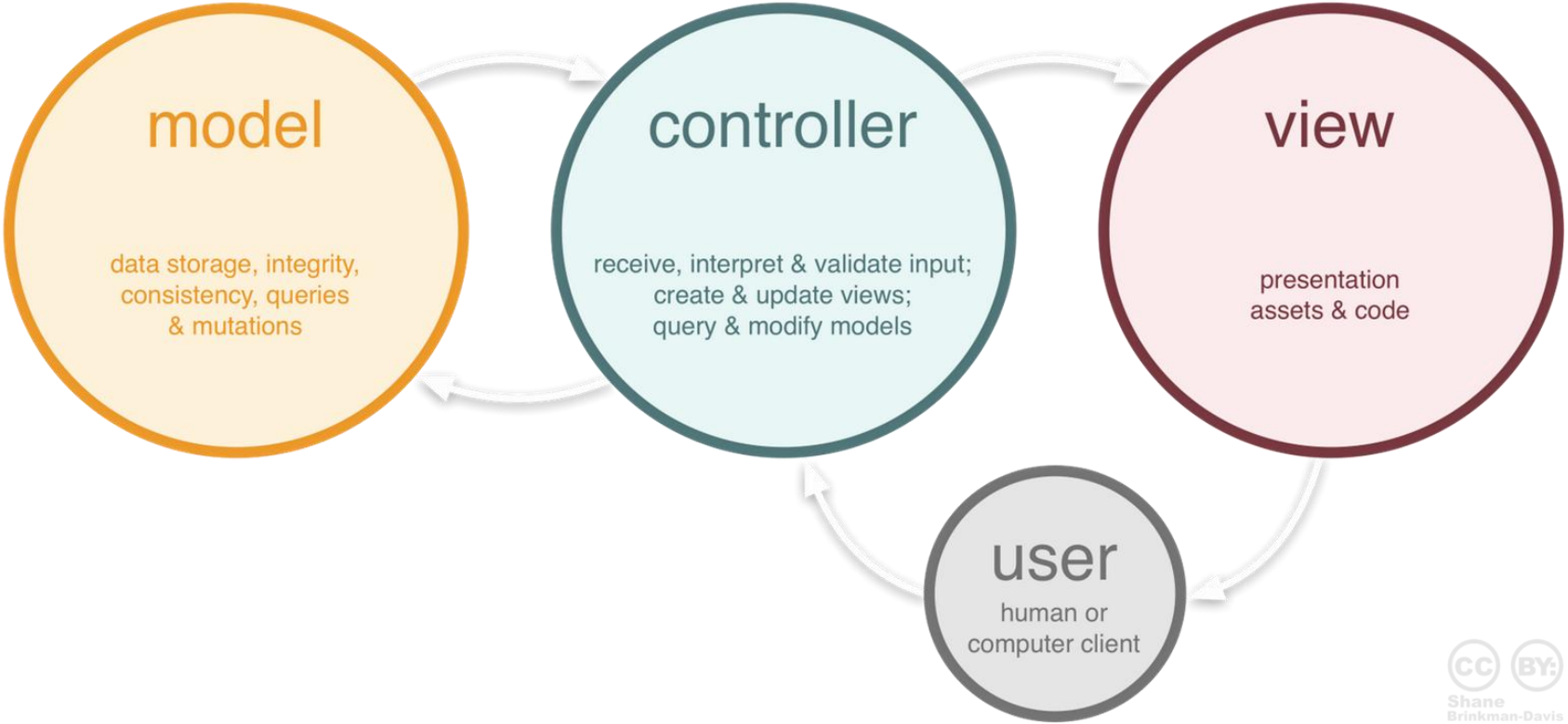
WAP Architecture



MVC Architecture



Use of PHP in developing blogging application.

- Top 20 Mobile Apps for Bloggers: You Shouldn’t Miss These Blogging Apps1. 1.WordPress
- 2. Blogger
- 3. Gmail
- 4. Google Analytics
- 5. Evernote
- 6. Quora
- 7. YouTube Studio App
- 8. Mailchimp
- 9. Any.do
- 10. Canva
- 11. Twitter
- 12. Upwork
- 13. Buffer
- 14. WhatsApp
- 15. Telegram
- 16. Pocket
- 17. Google Docs
- 18. Facebook Pages Manager
- 19. LastPass Password Manager
- 20. IFTTT