PHP

Introduction to PHP, basic syntax and variable declaration, expressions and control flow in PHP, PHP array, inbuilt and user defined PHP functions, creating classes, constructors and objects. assessing functions using objects, implementing inheritance, using MySQL with PHP for database related operations, advantages of PHP framework and basic knowledge about industry used frameworks, features of CodeIgniter framework .

Practicals:

1. Setup of development server like XAMP/ WAMP in Windows and Linux.
2. Creating web pages using PHP. (Create a web application *of* student profile for data entry and view of student record. Write PHP, HTML, CSS code to display the data on web page and insert into MySQL database.)
3. Handling database queries with PHP.
4. Setup of CodeIgniter framework and to study its different components.

Questions:

2 Marks:

1. How you can import a file in PHP? / Write syntax to include PHP file?
2. How comments are written in PHP?
3. Discuss basic syntax and variable declaration in PHP5.
4. What is the role of php.ini file?
5. What are various control flow statements in PHP?
6. Define inheritance in PHP.
7. Briefly state the role of static keyword in PHP.
8. Compare **echo** and **print** PHP statements.
9. How error notices and warnings are controlled using php.ini?
10. Give an example of sort() on single dimensional array.
11. What is the role of Apache web server in web application? / Write short note on Apache Web Server.
12. List the features of Codeigniter Framework.
13. Differentiate between web design and web development.
14. List down basic advantages of PHP framework.

5 Marks:

1. List the basic advantages of PHP framework.
2. What are the advantages of PHP over HTML ?
3. Write a short note on PHP & MySQL.
4. Write a short note on tools for Website creation.
5. Explain the procedure to install and setup the development server to run PHP and MySOL for Linux/Windows.
6. Explain the concept of assessing functions using objects in PHP with the help of an example.
7. Discuss Arrays, Inbuilt and User defined PHP Functions.
8. Discuss the concept of single dimensional, multi dimensional and associative arrays in PHP with an example.
9. Explain the various file handling modes in PHP. With the help of an example explain how a text file can be created in PHP in w+ mode.

10. What are various components of Apache server configuration file?
11. How sessions are created in PHP? How to set a value in session?
12. Explain the Components of Apache server configuration file and php.ini file with example
13. Write code snippets to demonstrate asort, ksort, arsor and ,*krsort* PHP functions.
14. With the help of example (s) explain the difference between include and require PHP statements.
15. Explain the basic features of Codeigniter Framework.

10 Marks:

1. Using MySQL with PHP, perform database related operations like insertion, deletion, updation and selection. /OR

   Design a code to demonstrate any two DML operations using MySQL and PHP.

2. Design an application for an Online Blood Bank using PHP with MySQL to perform insertion, deletion, updation, selection and other basic database related operations.

3. Design and develop a login web page for student information portal using PHP validation. Also demonstrate database connectivity for at least any one DML operation.

4. Create a web application *of* student profile for data entry and view of student record. The profile should include the basics parameters, previous/current academic records extra curricular activities, etc. Write PHP, HTML, CSS code to display the data on web page and insert into MySQL database.

5. a) State the various features of Codeigniter Framework.

   b) Write down the steps to install and setup the development server to run PHP and MySQL for Linux/Windows.

6. Consider an Employee Management System. Design a Web page using PHP, MySQL, jQuery (for validation), HTML, CSS to create a login page and authentication module for different types of employees based on PHP sessions.

7. Explain the features of using PHP, MySQL, JavaScript, CSS , HTMLS, and The Apache Web Server

8. Realtor is a person whose job is to arrange the sale, renting or management of homes, land and buildings for the owners. He is in need of a website to manage various real estate operations. The Real Estate Web Site shall provide the ability to showcase and manage their property listings, while allowing potential clients a conclse and structured way of searching properties. The web site will be set up in a way the realtor will have total administrative rights to their listings. This web site will be developed for one realtor. **How as a Web developer can you help him by making use of all technologies that you have learnt?**

What is PHP? What Can PHP Do? Why PHP?

https://www.w3schools.com/php/php_intro.asp

To start using PHP, you can:

- Find a web host with PHP and MySQL support (A web host, or web hosting service provider, provides the services needed for the website or webpage to be viewed in the Internet. If you are planning on starting a website, you will need to invest in your own domain name and web hosting).
  /OR
- Install a web server on your own PC, and then install PHP and MySQL. (If you are developing a new website, hosting your own site on a local machine may be the best option. A WAMP/LAMPP server is the primary necessity to consider for hosting a website on your own system.) https://makeawebsitehub.com/host-website-computer/

Setup of development server like XAMP/ WAMP in Windows and Linux:

https://blog.templatetoaster.com/install-xampp-on-windows/

https://techtunes007.wordpress.com/2014/07/30/how-to-install-xampp-for-linux-in-ubuntu-14-04-lts/

PHP basics (syntax and variable declaration)

PHP Syntax	https://www.w3schools.com/php/php_syntax.asp
PHP Comments	https://www.w3schools.com/php/php_comments.asp
PHP Variables	https://www.w3schools.com/php/php_variables.asp
PHP echo/ print	https://www.w3schools.com/php/php_echo_print.asp
Data Types	https://www.w3schools.com/php/php_datatypes.asp
Strings	https://www.w3schools.com/php/php_string.asp
Numbers	https://www.w3schools.com/php/php_numbers.asp
Constants	https://www.w3schools.com/php/php_constants.asp

Expressions and control flow in PHP

PHP Operators https://www.w3schools.com/php/php_operators.asp

if...else Statements https://www.w3schools.com/php/php_if_else.asp

switch Statement https://www.w3schools.com/php/php_switch.asp

Loops (while, do, for, foreach) https://www.w3schools.com/php/php_looping.asp

Inbuilt and user defined PHP functions

https://www.w3schools.com/php/php_functions.asp

PHP array

https://www.w3schools.com/php/php_arrays.asp

In PHP, there are three types of arrays:

- **Indexed arrays**
- **Associative arrays**
- **Multidimensional arrays**

Sort Functions For Arrays

- sort()
- rsort()
- asort()
- ksort()
- arsort()
- krsort()

Creating classes, constructors and objects, Assessing functions using objects

PHP - What is OOP? https://www.w3schools.com/php/php_oop_what_is.asp

Classes and Objects https://www.w3schools.com/php/php_oop_classes_objects.asp

Constructor https://www.w3schools.com/php/php_oop_constructor.asp

Inheritance

https://www.w3schools.com/php/php_oop_inheritance.asp

Using MySQL with PHP for database related operations

MySQL Database:	https://www.w3schools.com/php/php_mysql_intro.asp
Connect to MySQL:	https://www.w3schools.com/php/php_mysql_connect.asp
Create a Database:	https://www.w3schools.com/php/php_mysql_create.asp
Create Table:	https://www.w3schools.com/php/php_mysql_create_table.asp
Insert Data:	https://www.w3schools.com/php/php_mysql_insert.asp
Select Data:	https://www.w3schools.com/php/php_mysql_select.asp
Delete Data:	https://www.w3schools.com/php/php_mysql_delete.asp
Update Data:	https://www.w3schools.com/php/php_mysql_update.asp

* Note: In order to execute the php programms: (we have also used xampp in the topic “AJAX” for executing php programs, so you must have installed it.)

https://www.youtube.com/watch?v=TjFRTkw6GDQ

- *Is your localhost working? can you access it via http://localhost*

  If not, install a local server via: https://www.apachefriends.org/index.html
- *Now, create your html or php files; place it in the root folder of XAMPP (which in my PC is /opt/lampp/htdocs) , which is likely to have its folder on your C: hard drive path, unless you moved it elsewhere.*
- *Start XAMPP Apache server. Now you can access your output via web browser at "localhost/program.php".*

1. **Connect to MySQL and creating a Database:**

```php
<?php
$servername = "localhost";
$username = "root";
$password = "";              //if no password is used.

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

// Check connection
if (!$conn) {
   die("Connection failed: " . mysqli_connect_error());
}

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

mysqli_close($conn);
?>
```

2. **Create Table:**

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

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

3. Insert Data:

```php
// SQL to Insert Record

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

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

4. Select Data:

```php
// SQL to Select Record

$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";
}
```

5. Delete Data:

```php
// SQL to Delete a Record

$sql = "DELETE FROM MyGuests WHERE lastname='Doe'";

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

6. Update Data:

```php
// SQL to Update a Record

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

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

Advantages of PHP framework

https://www.omkarsoft.com/blog/top-5-advantages-disadvantages-php-framework/

https://www.synapseindia.com/top-advantages-and-disadvantages-of-php-framework/359

Features of CodeIgniter framework

What is CodeIgniter: https://www.javatpoint.com/what-is-codeigniter

Features of CodeIgniter: https://www.javatpoint.com/features-of-codeigniter

Installation: https://www.javatpoint.com/codeigniter-installation