

UNIT- 4

Q.1) What is multidimensional arrays in PHP?
Explain with Simple PHP code?

→ A multidimensional array is an array containing one or more arrays.

Sometimes you want to store values with more than one key. For this we have multidimensional arrays.

e.g. <?php

```
$emp = array  
(
```

```
    array(1, "Sonoo", 40000),
```

```
    array(2, "john", 50000),
```

```
    array(3, "rahul", 30000)  
);
```

```
for($row=0; $row<3; $row++){
```

```
    for($col=0; $col<3; $col++){
```

```
        echo $emp[$row][$col]. " ";  
    }
```

```
    echo "<br/>";  
}
```

```
?>
```

Output :-

1 Sonoo 40000

2 john 50000

3 rahul 30000

Q.2) classify data types of PHP & describe various data types in each type.

→ 1. Scalar types

- Boolean
- Integer
- Float
- String

2. compound types

- Array
- Object

3. Special types

- Resource
- NULL

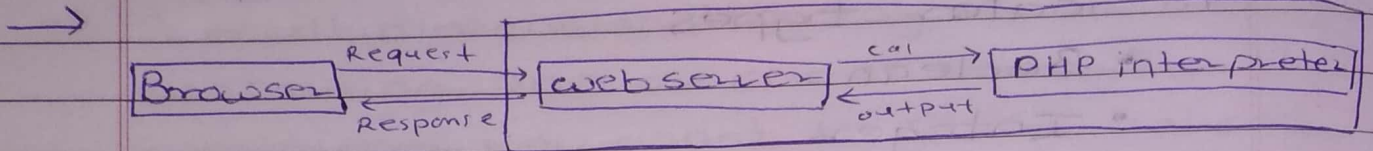
Integer :- Integer is stored as Signed integer with 32 bits

Float :- A floating point number is a number with decimal point

String :- String is a data type representing textual data in computer programs.

Boolean :- It has two literal values 'True' and 'False'

(Q.3) Explain Server side include in PHP with Sample code



We always start with a browser making a request for web page. This request is going to hit the web server. The web server will then analyze it & determine what to do with it.

- If the web server determines that the request is for php file it'll pass that file to php interpreter.
- The php interpreter will read the file, parse it & then execute it once the php interpreter finishes executing the php file it'll return an output.

e.g

hello.php

```
<html> <head>
```

```
<title> PHP test </title>
```

```
</head>
```

```
<body>
```

```
<? php echo <p> Hello world </p> ?>
```

```
</body>
```

```
</html>
```

Q.4) What is an associative array? Explain it with the help of simple PHP code.

→ Associate arrays are arrays that use named keys that you assign to them. Associative array will have their index as string so that you can establish a string association betⁿ key of values.

- Both the keys and values can be of any datatype in the same array.

e.g. `<html><body><?php
$stories=array('ABC'=>20000,'LMN'=>500,'XYZ'=>2000);
echo 'Salary of LMN is: ' . $salaries[LMN]

';`

Second method

`$salaries['LMN'] = 'high';`

`$salaries['ABC'] = 'medium';`

`$salaries['XYZ'] = 'low';`

`echo 'Salary of LMN is: ' . $salaries[LMN]
?>`

`</body>`

`</html>`

Output :-

Salary of LMN is 500

Salary of LMN is high

UNIT - 5

Q.1) Write a short note on NodeJS

→ NodeJS is a runtime library environment which is cross platform & used for creating running Javascript applications outside the browser.

- It is free and open source & utilized for creating server side JS applications.
- NodeJS allows developers to execute their code on the server side. It provides a faster way to write scripts that are scalable & light. Developers can write real-time applications and at the same time, it provides scope for mobile application development.
- One can easily utilize NodeJS for the front end as well as for back-end development as it allows the use of the same Javascript.

Q.2) What are the different configuration files are required to develop any struts applications. Explain each configuration file.

→ Below are the files where we can do configuration for Struts2 application. It also states relative location of file w.r.t. webapp & purpose of it.

i) web.xml - /web-inf/

→ web deployment descriptor to include

all necessary framework component

ii) Struts.xml - /web-inf/classes/

→ main configuration contains results/view, types, action, mappings, interceptors & so forth.

iii) default properties - /web-inf/classes/

→ Framework properties

iv) Struts-plugin.xml - At the root of plugin Jar.

→ Optional configuration files for plugin in the same format as struts.xml

v) velocity properties - /web-inf/classes/

→ override the default velocity configuration.

Q.3) Identify & explain different data tags from struts which are used to manipulate display on web application page.

→ 1. Action tag :- This tag enables developers to call actions directly from a JSP page by specifying in the action name & an optional namespace.

2. The include tag :-

These include will be used to include JSP file in another JSP page.

3. The bean tag :-

These bean tag instantiates a class that conforms to the java beans Specification.

4. The date tag

These date tag will allow you to format a date in a quick & easy way.

5. The param tag

These param tag can be used to parenthesise other tag. This tag has following two parameters.

1. name (string)
2. value (object)

6. The property tag :-

These property tag is used to get the property of value, which will default to the top of the stack if none is specified.

Q 4) List & explain different directives of Angular Js

- There are two types of directives.
- a) Built in directive - These directives in a framework we can directly use it to offer functionality to our application.

b) Custom directives :- Custom directives are self created directives. They are not predefined but we can define it on our own.

Built in directives are:

- i) ng-app directive
- ii) ng-init directive
- iii) ng-model directive
- iv) ng-bind
- v) ng-if
- vi) ng-repeat
- vii) ng-controller
- viii) ng-disable
- ix) ng-readonly etc.

UNIT 6

Q. 10) What are the different types of EJB? Identify & explain situations about when to use Session beans.

→ There are several types of EJB

- i) Session beans
- ii) Entity beans
- iii) Message driven beans

Session beans :- These are non-persistent enterprise beans. Session beans encapsulates business logic only it can be invoked by local, remote & web service client. It can be used for calculations, database access etc. The life cycle of Session bean is maintained by application server.

When to use Session beans? -

- In general you should use a Session bean ~~the~~ if the following circumstance held:

1. At any given time, only one client has access to the bean instance.
2. The state of the bean is not persistent, existing only for a short period.
3. The bean implements a web service.

Q.2) Identify & justify the benefits of using web services

→ Web services have the following special behavioral characteristics

1. They are xml based.
2. Loosely coupled
3. Synchronous & asynchronous functionality
4. Ability to support remote procedure calls
5. Supports Document exchange
6. Coarse-grained

Advantages of web service

1. Interoperability - Web services are accessible over network & runs on HTTP/ SOAP protocol & uses xml/JSON to transport data, hence it can be developed in any programming language
2. Reusability - One web services can be used by many client applications at the same time
3. Loose coupling - Web services client code is totally independent with server code so we have achieved loose coupling in our application
4. Easy to deploy & integrate, just like web applications

Q.3) Write a short note on Bootstrap?

→ Bootstrap is a free open source & an amazing front end web development framework containing the perfect blend of CSS & HTML based design templates to be used for forms typography, navigations & buttons & other interface component. Bootstrap is mainly based on design templates written in HTML & CSS using different forms extensions based on Javascript & other language.

Bootstrap is HTML, CSS & Javascript based ~~first~~ framework for developing responsive, mobile first websites. It helps to build attractive websites. Bootstrap is a powerful, front-end framework for faster & easier web development. Bootstrap provide clean & uniform solution for building on interface for developers.

Q.4) Write a short note on Spring.

→ Spring framework is one of the most popular Java based framework & it was developed by Rod Johnson back in 2002. Spring framework is an open source framework that we use to develop java application with very ease & with a rapid pace.

It is lightweight framework which provides well defined infrastructure support for developing Java application. In other words you can say that Spring handles the infrastructure so that you can focus more on developing your application.

Spring framework features:-

1. lightweight
2. Aspect oriented programming (AOP)
3. Transaction management
4. container
5. Dependency injection
6. Integration with other frameworks