

Assignment 2

Q1 Write the full form of PHP. Which version of PHP you are using?

Ans PHP Full Form is Hypertext pre processor.

- We are using PHP version 7.0 which is released at 3rd dec 2015

- PHP is Hypertext Preprocessor earlier called personal home page.

- PHP is a HTML embeded server side scripting language designed for web development

- PHP is also used for general purpose programming language.

- It was created by Rasmus Lerdorf in 1994 but appeared in market in 1995.

Q2 List and Explain strengths of PHP

Ans. ① Performance:

PHP is very fast. Using a single inexpensive server you can serve millions of hits per day.

② Scalability:

PHP has "shared nothing" architecture. This means that you can efficiently and cheaply implement horizontal scaling with large number of commodity servers.

③ Database Integration:

PHP has native connection available to many database system. In addition to MySQL you can directly connect to PostgreSQL, Oracle, dbm, FirePro.

④ Built in Libraries:

Because PHP was designed for use on the web, it has many built in functions for performing many useful web related task. You can generate

image on the fly. Connect to web service and other network services, Parse XML send work with cookie.

(5) Cost :

PHP is free, you can download the latest version any time.

(6) Object oriented support :

PHP version 5 has well designed object oriented features. If you learned to program in Java or C++, you will find the feature that you expect, such as inheritance, private, protected attributes and methods, abstract class and methods interfaces, constructors & destructors.

Q3 List and Explain strengths of MySQL?

Ans

MySQL is free to use, open source database that facilitates effective management of database by connecting them to software.

① Data Security:-

MySQL is globally renowned for being the most secure & reliable database management system used in popular web application like WordPress, Drupal, Joomla, Facebook and Twitter. The data security and support for transactional processing that accompany the recent version of MySQL, can greatly benefit any business especially if it is an e-commerce business that involves frequent money transfers.

② Performance:-

MySQL is Undeniable fast you can see the developer's benchmark page at <http://Lpb.mysql.com/whymysql/benchmarks>.

③ Low cost :

Mysql is available at no cost under an open source licence or at low cost under a commercial licence.

④ Easy to use :

Most modern database use SQL. If you have used another RDBMS. You should have no trouble adapting to this one.

⑤ Portability :

MySQL can be used on many different Unix systems as well as under Microsoft Windows.

⑥ Source code :-

As with PHP, you can obtain and modify source code for MySQL. This point is not important to most users most of the time, but it provides you with excellent peace of mind and giving you option in emergency.

② Availability of support:-

Not all open source products have a parent company offering support, training, consulting and certification.

Ques List & Explain various PHP Tag Style!
Which is most recommended why?

Ans

The PHP code in preceding example began with `<?php` & end with `?>`

This is similar to all HTML Tags because that all the begin with (`<`) symbol and end with (`>`) symbol.

These are actually four different style of PHP Tag

① XML style:

```
<?php echo '<p>order processed</p>' ; ?>
```

This is the tag style that we use in this book it is preferred PHP tag style. This tag style can be used with Extensible markup language (XML) document.

② Short style:

```
<? echo '<p>order processed</p>' ; ?>
```

- It is simplest and it follows the style of standard Generalised markup language (SGML) processing instruction.
- To use this type of tag which is shortest to type you either need to enable the short open tag setting in your config file or compile PHP with short tag enabled.

③ Script style :

```
<script language = 'PHP'>  
echo '

Order processed

';  
</script>
```

- This style is longest and familiar to Java script or VB script you might use if you are using HTML editor that gives you problems with other tag styles.

④ Asp style

```
<% echo '

Order processed

' %>
```

- This tag style is the same as use in Active server Pages.

- ~ You probably have no reason to use this style tag unless you are using an editor that is geared to work ASP.
- ⇒ We recommend style is XML Because the server administrator cannot be turn off so you can guarantee it will available on all servers. which is especially important if you are writing application that may be used on different installations.

Q.S.

What do you mean by variables? Write the rules for defining variables.

Ans

Variable is nothing, it is just name of the memory location. A variable is simply a container.

Rules

- Variable in PNP starts with a dollar sign followed by the name of the variable.
- The variable name must begin with a letter or underscore character.
- A variable name can contain only numeric number, character and underscore.
- A variable name should not contain space.

Q6 List the main data types provided by PHP

Ans

- ① String
- ② Integer
- ③ float
- ④ Boolean
- ⑤ Array
- ⑥ Object
- ⑦ NULL
- ⑧ Resource.

Q17 Explain == and === operators with eg.

Ans (i) == equal operators

The equal operator enables you to test whether two values are equals.

$\therefore \$a == \b

- This will check the value stored is \$a and \$b are same or not. The result returns true or False.

(ii) === operator

- It check the value of two variable are same and also check the datatype is same or not.
- It Return the boolean value (True or False)
- Name for === is identical.

Q8 Explain the use of isset and empty function.

Ans

⇒ isset()

It is determine the variable is declared and it is not NULL.

⇒ Syntax :

isset (mixed \$var[, mixed \$...])

- Determine if a variable is considered set this means if a variable is declared and set the NOT NULL value.

- If multiple parameters are supplied then isset() will return true if and only if the parameters are considered set evaluation goes from left to right and stops as soon as an unset variable is encountered.

⇒ empty()

It determines the value of variable is empty or not.

Syntax :

empty (mixed \$var) : bool

A variable is considered empty if it does not exist or its value equals false empty () does not generate warning

<? php

\$var =

if (empty(\$var))

{

echo 'empty';

}

if (isset(\$var))

{

echo 'isset';

}

?>

O/P : empty = 1

Q9 what choice you have to make when opening a file.

Ans for open the file by using fopen().
In this case you open the file for reading only so you have use mode 'rb'.

* \$fp = fopen ("\$document_root /.. /order
order.txt", "rb");

⇒ List and explain various file mode.

Mode	Modename	Meaning
r	Read	open the file for reading from the start of file.
w	write	open file for writing file pointer at set beginning of the file
a	append	open file for appending only starting from end of the file. If file does not exist it creates the file.

Mode	Mode name	Meaning
4. x	Create write	Create a new file. Write only return false and an error if file already exists.
5. rt	Read	Opens the file in read/write mode. File pointer starts at the beginning of the file.
6. wt	write	Opens the file in read/write mode. If the contents are present in the file it will be erased and write new content from the starting.
7. at	append	Opens the file for read/write mode and starts from E.O.F.
8. xt	Create write	Create a new file for read/write return false and error if file does not exists.

Q10 List and explain various flock() operation values.

Ans flock()

It is used for the locks and release a file.

Syntax:

flock(file, lock, block)

Parameters:

It requires specifies an open file to lock or release.

lock:

It required what kind of lock we

Block:

It's optional set to 1 block other process will wait while locking

C. PhP

```
$file = fopen("text.txt", "r");
if (flock($file, LOCK_EX))
{
    fwrite($file, "Add some txt");
    fflush($file);
    flock($file, LOCK_UN);
}
fclose($file);
```

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Assignment 2

Q1 What do you mean by array? Explain with example various ways to define array in PHP?

Ans - Array is datatype in PHP

- Array is datatype which can store multiple items of same datatype or different types.
- The items in array is known as element.
- You can create an array in single statement or multiple statement as per requirement.

⇒ Create array using single statement
`$arrayname = array(value1, value2, value3);`

⇒ Create array using multiple statement.

- a. `$arrayname = array();`
- b. `$arrayname [index] = value;`

Eg.

```

$ name = array();
$name[0] = 'Pradip';
$name[1] = 'Nirav';
$name[2] = 'Lakshya';
$name[3] = 'Ajinkya';

```

\$names = array('Pradip', 'Nirav', 'Lakshya',
'Ajinkya');

echo * \$name[0];

O/P : Pradip

Q2 What do you understand by regular expression? what are two main technique for regular expression.

Ans

Regular expression are nothing more than a sequence or pattern of character itself. They provide the function for pattern matching functionality.

- Using regular expression we can search a particular string inside a another string you can replace one string by another string into many chunks.
- PNP offers functions specific of the sets regular expression function, each corresponding to a certain type of regular expression. You can use any term based on your comfort.
 - POSIX Regular Expression
 - PERL style regular expression.

Q3 Explain preg_match with its prototype and example.

Ans

Preg match():

This function is used to perform a pattern match on a string. It returns true if a match is found and false if a match is not possible.

function syntax:

<?php

function_name ('/Pattern/'; subject);

?>

e.g.,

<?php

\$name = "Pradeep";

if (preg_match ("/Pradeep/"; \$name))

{

 echo "True";

} else

{

 echo "False";

}

?>

O/P:- True

Q4 List the meaning of POSIX character class.

Ans

	Class	Meaning
①	[[:alnum:]]	Alpha - Numeric character
②	[[:alpha:]]	Alphabetic character
③	[[:lower:]]	Lowercase letters.
④	[[:upper:]]	Uppercase letters.
⑤	[[:digit:]]	Decimal digit
⑥	[[:xdigit:]]	Hexadecimal digit
⑦	[[:punct:]]	Punctuation.
⑧	[[:blank:]]	Tab and spaces.
⑨	[[:space:]]	White space character
⑩	[[:ctrl:]]	Control characters.
⑪	[[:print:]]	All Printable characters
⑫	[[:graph:]]	Printable char, excluding Space.

Q5 List the meaning of special characters used in POSIX regular expression outside square brackets.

Ans These many special characters are used in regular expression.

Character

Meaning

\n

it denotes a new line

\r

it denotes a carriage return

\t

tab.

\v

vertical tab

\f

form feed.

\xxx

octal character xxx

\xhh

hexadecimal character hh

Q6

What is the difference between require and include function?

Ans

⇒ Include():

The include a file using include function you simply call the function and insert the file path as a parameter.

Syntax:

```
include ('filename');
```

⇒ Require()

Usage of require() function is same as the include function simply call the function and pass the path of including file.

Syntax:

```
require ('filepath');
```

The difference between require() and include() function is in the way they handle errors.

- If the include file can't be located the include() function will still display the rest of the page. The require function on the other hand will simply display error.

Q7 Explain variables scope with appropriate example.

Ans The term scope refers the place within a script where a particular variable is visible.

- Built-in super global variables are visible anywhere within a script.
- Constant are declared are always globally that is can be used inside or outside the function.
- Global variables declared in a script are visible throughout the script but not inside the function.
- static variables:

It is the characteristics of PHP to delete the variable once it completes its execution and the memory is freed. But sometimes we need to store the variable even after the completion of function execution. To do this we use static keyword and the variables are then called as static variables.

Q8 Explain the following OOP concepts in your word.

Ans ① object:

Object is an instant of class.
Object created from the class. Many objects created from one class.

② class:

Class is considered as program define data type. A class is blueprint or prototype of a object. Object can't create without class.

③ polymorphism:

Polymorphism is Greek word. The meaning of Poly in Greek is more and morph means form / shape. That means Polymorphism is an ability to use a single function in many different ways upon the usage.

Q9. What do you mean by overriding? Now you can make a method which cannot be override?

Ans

Function overriding is same as other OOPS Programming language.

- In function overriding, both parent and child classes should have same function name with same number of arguments.
- It is used to replace parent method in child class.
- The purpose of overriding is to change the behaviour of parent class method.
- The two methods with the same name and same parameter is called overriding.

<?php
class P {
function name() {

 echo "parent";

}

}

class C extends P {

```
function name() {  
    echo "child";  
}
```

\$P = new P;
\$C = new C;
\$P => name();
\$C -> name();

??

O/P:

parent
child.

Q10 Why you create abstract class and abstract method.

Ans

- An abstract class is class which cannot be used to create an object
- An abstract class is used to create a superclass which can be inherited by other classes but an object from superclass cannot be created.
- An abstract method is a method which has only method name and parameters, but does not have code blocks which implements the method has defined but its cannot have implementation.
- An abstract method can only defined in abstract class.
- A abstract class can have abstract and non - abstract method.

Assignment 3

Q1

Explain in brief with example of MySQL

Ans

(1) Tables.

Relational database are made up of relations, most commonly called tables.

→ Tables is exactly what it sounds to a table of data. If you are used an electronic spreadsheet you are have already used a table.

(2) Columns:

Each columns in the table has unique name and contains different data additionally each column has abstracted data types.

- For instance in the customers table has customer Id, name, address etc.

- Column are sometimes called field or attributes.

(3) Rows:

Each row in the table represent a different customer because of the tabular format each row has the same

attributes

→ Row is also called records or tuples.

② Values:

Each row consists of set of individual values that correspond to column each value must have data type specified by its column.

③ key:

- The identifying column in a table is called the key or primary key.
- A key can also multiple columns.

- The relational databases items for this relationship is foreign key

④ Schema:

The complete set of table design for database is called the database schema.

② Relationship :

foreign key represents a relationship between data into two tuples.

- They classified according to the number of elements of each side of the relationship. It can be one to one, one to many and many to many relations.

Q2 What do you mean by anomalies?

Ans Various anomalies in a relation.

What you have to do reduce anomalies.

Ans

There are different types of anomalies which can occur in referenced relation which can be discussed as:

⇒ There are 2 tables: student and course:

① Insertion anomaly:

If a tuple is inserted in referencing relation and referencing attribute value is not present in referenced attribute, it will not allow inserting in referencing relation.

② Deletion and updation Anomaly:

If a tuple is deleted and updated from referenced relation and referenced attribute value is used by referencing attribute in referenced relation, it will not allow deleting the tuple from referenced relation.

→ To avoid the anomalies, we do following.

(i) ON Delete / Update set NULL;

- If a tuple is updated from referenced attribute value is used by referencing attribute in referencing relation, it will delete / update the tuple from referenced relation and set the value of referencing attribute to NULL.

(ii) ON Delete / update cascade:

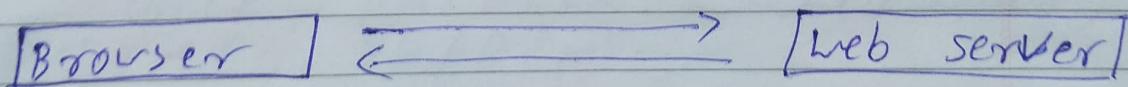
If a tuple is deleted or updated relation and referenced attribute value is used by referencing attribute in referencing relation, it will delete / update the tuple from referenced relation and referencing relation as well.

Q3 Draw and explain web Database Architecture.

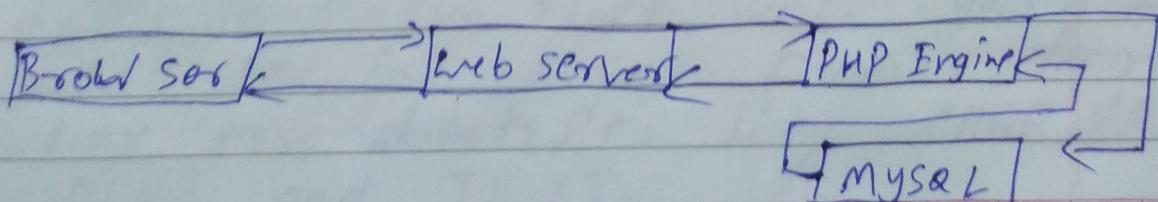
Ans Web application is a client /server architecture in typical web application client / server architecture consists of two objects

- (i) Web browser and
- (ii) Web server

Web browser and Web server communicate via a communication link generally internet or through HTTP protocol. A web browser sends the request to server. The web server sends the request to server. The web server sends the respond on the Browser this architecture is used for a server sends static web pages. which following figure shows. the simple client / server architecture.



→ following figure shows the client /server architecture which is used database



Q4

Write the commands to give privileges on database movie to user spider man.

Ans

In MySQL has issue grant command for give privileges

→ MySQL → GRANT ALL PRIVILEGES
on database name TO 'username@localhost';

→ MySQL → GRANT ALL PRIVILEGES
ON Movie TO 'spiderman @ localhost'

Q5 List and explain main advantages of MySQL.

Ans

→ MySQL supports a number of SQL standard data type in ~~variable~~ various categories.

→ MySQL has numeric type, the DATETIME, the DATE and TIME STAMP type and string type.

(i) MySQL numeric types:

MySQL supports all standard SQL numerical datatype which include INTEGER, SMALLINT, DECIMAL, and NUMERIC.

(ii) Date and Time types:

→ The MySQL date and time datatype as follows:

DATE, DATETIME, TIMESTAMP,
TIME, YEAR(m)

(iii) String type:

Although the numeric and date types are for most data you'll store will be in string format there are many datatypes like CHAR, VARCHAR, BLOB and TEXT.

Q6

What is the use of explain statement?

Ans

Explain is used to obtain query execution plan.

- The Explain statement provides information about how mysql execute statements.
- Explain works with select, delete, insert, replace and update table.
- When Explain is used with an explainable statement, mysql display information from the optimizer about the statement execution plan. That is mysql explain how it would process the statement, including information about how tables are joined in which order.
- At for information about using Explain obtaining the execution plan information.

Q7 What are the different types of backup?

Ans The three types of backup have different levels of requirements for CPU overhead and disk space.

(i) full backup

Includes the complete data from the database.

(ii) A differential backup.

Includes all changes to the data since the last full backup. It is faster than full backup. Saves storage space on the database server and saves on network traffic when the backup is being transferred to different server.

(iii) An incremental backup.

Includes all changes to the data since the last backup. It offers similar advantages over full backup as a differential backup does, and often to a even greater extent by further decreasing the backup size.

Q8

Compare various storage engines available in mysql.

Ans

MySQL provides various storage engines for its table is follows.

- MYISAM
- INNODB
- MERGE
- MEMORY
- ARCHIVE
- CSV
- FEDERATED

(i) MYISAM

- MyISAM extends the former ISAM storage engine. The MyISAM tables are optimized for compression and speed. ~~Also~~ MyISAM tables are also portable between platforms and operating system.

(ii) INNODB

The InnoDB tables fully support ACID compliant and transaction. They are also optimal for performance. InnoDB table supports foreign keys, commit, roll back, roll-forward operation. The size of an InnoDB

table can be up to 64TB

(iii) MERGE

A MERGE engine/table is virtual that combine multiple MyISAM tables that have a similar structure to one table. The MERGE storage engine is also known as MRG-MYISAM engine. The MERGE table does not have its own indexes, it uses indexes of the component table instead.

(iv) MEMORY

The memory tables are stored in memory and use hash indexes so that they are faster than MyISAM tables. The life time of the data of the memory tables depends on the uptime of database.

(v) ARCHIVE:

The archive storage engine allows you to store a large no. of records which for archiving purpose, into a compressed format to save disk space. The archive storage engine compresses a record when it is inserted and decompress it using the ZLIB library as it need.

Q9 What do you mean by transaction?

Ans

Transaction :

Transaction are mechanism for ensuring database consistency especially in event of error or server crash.

→ Properties of transaction.

(i) Atomicity:

A transaction should be atomic that is it should either be completely executed or not.

(ii) Consistency:

A transaction should leave the database in consistent state.

(iii) Isolation:

Uncompleted transaction should not be visible to other user of the database that is until the transaction are complete they should remain isolated.

(iv) Durability :

Once written in the database a transaction should be permanent or durable.

- A transaction that has been permanently written to the database is said to be committed.

Q10 When you prefer load Data in file,

Ans One useful feature of MySQL that we have not discussed in the LOAD DATA INFILE statement you can use it to load data in form a file it execute very quickly.

— The flexibility command has many options but typical usage is something like the following.

Syntax :

LOAD DATA INFILE "new.txt" into
table books.

The line reads row data from the file new file new books by default data field in the file. Most be separated by tabs and enclosed in single quotation marks and each row must be separated by newline (\n) special characters must be accept act slashed.

All the characters are configurable with the various option of the LOAD statement.

(Assignment 4)

Q1 List and explain file upload configuration setting with their default value in PHP.

Ans At the time of PHP installation, php.ini is a special file provided as a default configuration file. It's very essential configuration file which controls what a user can or cannot do with the website.

Each time PHP is initialized the php.ini file is read by system.

→ To check file path use the following program.

```
<?php  
echo phpinfo();  
??
```

→ Important setting or common parameters of the PHP ini file

(i) enable safe_mode on.

Its default setting to ON whenever PHP is compiled safe mode is most relevant to CGI use.

(ii) Register global on.

Its default setting to ON which

tells that the content of EGPCs.

(iii) upload_max_filesize:

This setting is for the maximum allowed size for upload files in the scripts.

(iv) upload_tmp_dir = [DIR]

Don't uncomment this settings.

(v) display_errors = off

This setting will not allow showing errors while PHP Project in the specified host.

(vi) error_reporting = E_ALL & ~E_NOTICE

This setting the default values is E_ALL & ~E_NOTICE which shows all errors except notice.

(vii) auto_prepend_file = [File Path]

This setting is done when we need to automatically includes it at the end of every PHP file.

(viii) auto_append_file = [file path].

This setting is done when we need to automatically include it at the end of every PHP file.

(ix) doc_root = [DIR]

This setting is done if we want to apply PHP to a portion of our website.

(x) file_uploads = [ON/OFF]

This flag is set to on if the file uploads are included in PHP file.

Q2 What do you mean by RFCs? Who define it? What is the use of RFCs?

Ans

RFCs is Request for Comments.

RFCs in information and communication technology is a type of text document from the technology community.

- An RFC document may come from many bodies including from the IETF (IRTR) and Internal Architecture Board or Independent authors.
- The RFC system is supported by the Internet Society (ISOC)
- The RFC system was invented by Steve Cooker in 1989. To help record unofficial notes on the development of ARPANET.
- Requests for comments are produced in a non-reflowable document format, but work began to change the format to a reflowable one, so that document can be viewed on devices with restricted size.

Q3

Differentiate the function of following protocols.

Ans (i) SMTP :

→ simple mail transfer protocol is a standard protocol for sending emails across the internet.

→ By default SMTP works on three ports

- (i) PORT 25,
- (ii) PORT 2525
- (iii) PORT 465

(ii) IMAP :

- The internet message Access protocol is a Mail Protocol used for accessing email on a remote web server from a local client.

- IMAP and POP3 are two most commonly used internet mail protocols for receiving mails.

- IMAP allows simultaneous access by multiple clients, while POP3 assures that your email is being accessed only from one application.

- This is why IMAP is more suitable for us.
- By default IMAP works on two ports.
- Port 143, Port 993.

(iii) POP3:

- Post Office Protocol version 3, is a standard mail protocol to receive mails from a remote server to a local email client
- POP3 Your message are stored on your local computer, which reduces the space, your email account uses on your web browser.
- By default POP3 protocol work on two ports = Port 110, Port 995.

Qs write the full form of JPG, PNG,
WBMP, GIF.

Ans

JPG : Joint Photographic Group

PNG : Portable Network Graphics.

WBMP : Wireless Bitmap

GIF : Graphic Interchange format

JPEG : Joint Photographic Expert group

Q6 What do you mean by session?

Ans

- Session Tracking is a technique to keep track of user's movement around the website.
- Session tracking is used to maintain the state in web application.
- HTTP is a stateless protocol so once a browser send request to the server and server responds to the browser, the connection between browser and server.
- cookie is used to store session ID in each browser by default. Then the cookie is passed by the browser to server of each request.
- URL encoding is used to store session ID in the URL of each page in the application when cookie is disabled.

Q7

What is cookie?

Ans

- In any web application, it is essential to keep track of user as he/she move in a web pages of a web-application to keep track of user's movement within a web application session and cookie are used.
- Cookie provides a way for web application to store information in user's web browser and can retrieve the information of cookie everytime as and when the user requires request a page.
- Cookie can gather data like username, password, address or credit card detail, By storing stored data, user can skip login and registration forms data.

Q8 Only write name and description of the session set cookie params function.

Ans To control, how session cookie ~~looks~~ works, session_set_cookie_params function is used.

- session_set_cookie_params is used to set the parameters of the session cookie.
- Syntax:

session_set_cookie_params(\$lifetime, \$path, \$domain, \$secure, \$httponly)

- lifetime is the timespan of session cookie in second in which cookie will live default.
- lifetime is the only compulsory parameters. All other parameters are optional for set-session-cookie-params function.

Q9. write only steps to use session.

Ans

→ Before you can store any session variables, you ~~are~~ must first startup the session.

→ To begin a new session, simply call the PHP session_start() function.

→ It will create a new session.

→ You can store all your session data as key value pairs in the session [] superglobal array. The stored data can be accessed during lifetime of a session.

→ If you want to remove certain session data simply unset corresponding key of the session associative array, as shown in the following example.

C9.php

```
session_start(); // start session.
$_SESSION["firstname"] = "Peter"; // the
```

// Removing session data.

```
if (unset($_SESSION["firstname"]))
```

```
{
```

```
    unset($_SESSION["firstname"]);
```

```
}
```

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Q10 Explain the use of following function

Ans (i) eval.

The eval() function in PHP is an inbuilt function evaluate a string as PHP code.

Syntax : ~~eval~~

eval [string]

e.g

C:\PHP
\$equation = "5+10";
eval (\$equation);

?> ~~echo~~

Output :

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(ii) die();

The die() is an inbuilt function in PHP. It is used to print message and exit from the current PHP script. It is equivalent to exit() function in PHP.

e.g.

```
<?php  
$site = "1.1";  
fopen($site, "r");  
or die ("unable to connect");
```

??

O/P :

unable to connect.

(iii) exit()

- The exit() function in PHP is an inbuilt function which is used to output a message and terminate the current script.
- The exit() only terminate the execution of script.
- The shutdown function and object destructor will always be executed even if exit() function is called.

e.g. <?php

```
$link = "google.com";  
fopen ($link, "r");  
or exit ("unable to open");
```

??

O/P

unable to open.