**MODULE – 4(Advance PHP)**

**OOPS:**

1. **What is Object Oriented Programming?**

* Object Oriented Programming itself suggests that it uses objects in the programming.
* The main aim of OOPs is to bind together the data and functions that are operated on them so that no other part of code can access this data except that functions.
* The Characteristics of OOPs are:
* Class
* Objects
* Inheritance
* Data Hiding/Encapsulation
* Abstraction
* Polymorphism

1. **What are the properties of the Object Oriented Programming System.**

* The Characteristics of OOPs are:
* Class
* Objects
* Inheritance
* Data Hiding/Encapsulation
* Abstraction
* Polymorphism

1. **What is the difference between Class and Interface.**

* The basic difference between class and an interface is that class can be call using object and interface cannot be called using object because interface can only create a method and definition of method must be defined in other class.

1. **What is Overloading?**

* Method name are same and Parameters are different is called Overloading.
* In PHP, Overloading is the ability to create multiple functions of the same name with different implementations.
* In PHP, there are two types of Overloading:

1. ***Member Overloading*:** This type of Overloading is done with the help of magic functions like \_\_set(),\_\_get().
2. ***Method Overloading*:** This type of Overloading is done with the help of magic functions like \_\_call().

Example of Member Overloading:

1. **What Is T\_PAAMAYIM\_NEKUDOTAYIM (Scope Resolution Operator (::) with an example.**

* When we have static, Constant, and overrriden method we can use Scope Resolution Method.
* Example:

<?php

 class Myclass

 {

    static $var = "This is static Variable";

    const a = "This is constant Variable";

    static function Demo()

    {

        echo "This is a Static Demo Function";

    }

 }

 class Newclass extends Myclass

 {

    static $a = "This is a static Variable of Newclass";

     static function Test()

     {

        echo "This is a Static Test Function";

        echo "<br>";

        echo parent::$var;

        echo "<br>";

        echo parent::a;

        echo "<br>";

        echo parent::Demo();

        echo "<br>";

        echo self::$a;

     }

 }

 //echo Myclass::$var;

 //echo "<br>";

 //echo Myclass::a;

 //echo Newclass::$a;

 echo Newclass::Test();

?>

1. **What are the differences between abstract classes and interfaces?**

* An abstract class is declared using Abstract keyword where there is no need to write “class” word while declaring interface only keyword interface and class name is required to declare the class.
* Abstract method is declared using Abstract keyword and this method are not defined within the same class, also the simple method can be defined in the same class. The Abstract methods are defined in another class which extends the abstract class. While, in Interface, we can only declare each and every function, we cannot define them with in the same class. The methods declared in an Interface are defined in the other class which uses IMPLEMENT Keyword to call an Interface.

1. **Define Constructor and Destructor.**

* *Constructor*: Class name and Method name are same in PHP is called Constructor.

In PHP, Constructor is defined as *\_\_Construct*.

* *Destructor*: In PHP, Destructor is used to destroy the constructor.

1. **How to load Classes in PHP?**

<?php

class MyClass

{

    public $var = "Tops";

    Public $a = "Technologies";

    public function Demo(){

        echo "This is a Demo Function";

        echo "<br>";

        echo $this->var;

        echo "<br>";

        echo $this->a;

    }

  public function Test()

    {

        echo $this->Demo();

        echo "<br>";

        echo "This is a Test Method or Test Function";

    }

}

$obj= new MyClass;

//echo $obj->var;

//echo $obj->a;

echo "<br>";

echo $obj->Demo();

echo "<br>";

echo $obj->Test();

?>

1. **How to call Parent Constructor?**

<?php

class A

{

    function \_\_construct()

    {

        echo "This is a Test Function";

    }

}

class B extends A

{

    function \_\_construct()

    {

        echo "This is a Constructor of class B";

        echo "<Br>";

        echo parent::\_\_construct();

    }

}

$obj= new B;

?>

1. **Are Parent Constructor Called Implicitly When Create An Object Of Class?**

* Parent constructor are not called implicitly if the child class defines a constructor. In order to run a Parent Constructor we have to call: ***parent::\_\_construct()*** within the child constructor is required.

1. **What Happen, If Constructor Is Defined As Private Or Protected?**

* If Constructor is defined as Private than it must be used in class only and if Constructor is defined as Protected than it must be inherited in other class.

1. **What are PHP Magic Methods/Functions? List them**

* In PHP, Magic Method are special method that are aimed to perform certain tasks.
* This methods are named with double underscore (\_\_) as prefix.
* PHP Magic Methods are:

1. \_\_get()
2. \_\_set()
3. \_\_call()
4. \_\_isset()
5. \_\_unset()
6. \_\_invoke()
7. **Write program for Static Keyword in PHP?**

<?php

class A

{

    static $a = "This is class A";

    static function Demo()

    {

        echo "This is static demo function";

    }

}

class B extends A

{

    static $b = "This is class B";

    static function Test()

    {

        echo parent::$a;

        echo "<br>";

        echo parent::Demo();

        echo "<br>";

        echo self::$b;

        echo "<br>";

        echo "This is static Test Function";

    }

}

$obj = new B;

$obj->Test();

?>

1. **Create multiple Traits and use it in to a single class?**

<?php

trait A

{

    function Test()

    {

        echo "This is trait A";

    }

}

trait B

{

    function Demo()

    {

        echo "This is trait B";

    }

}

trait C

{

    function foo()

    {

        echo "This is trait C";

    }

}

class MyClass

{

    use A,B,C;

}

$obj = new Myclass;

$obj->Test();

echo "<br>";

$obj->Demo();

echo "<br>";

$obj->foo();

?>

1. **Write PHP Script of Object Iteration?**

<?php

class demo

{

    public $a = "Public Variable";

    private $b = "Private Variable";

    protected $c = "Protected Variable";

    function Test(){

        foreach($this as $key)

        {

            echo $key;

            echo "<br>";

        }

        echo "<br>";}

}

$obj = new demo;

$obj->Test();

foreach($obj as $val)

{ echo $val;

}

?>

1. **Use of The $this keyword.**

<?php

class Demo

{

    public $var = "This is a variable";

    public $a = "This is a value";

    function Test()

    {

        echo $this->var;

        echo "<br>";

        echo $this->a;

        echo "<br>";

        echo "This is Test Function";

    }

}

$obj=new Demo;

$obj->Test();

?>