**Middle/Senior Developer**

PHP

1. How can you download an html file with PHP?

The readfile() function reads a file and writes it to the output buffer.

A better method to open files is with the fopen() function. This function gives you more options than the readfile() function.

The fopen() function is also used to create a file. Maybe a little confusing, but in PHP, a file is created using the same function used to open files.

1. How do you cast data types in PHP?

String; Integer; Float (floating point numbers - also called double); Boolean; Array; Object; NULL; Resource

1. What is the difference between isset() & empty()?

Empty checks if the variable is set and if it is it checks it for null, "", 0, etc

Isset just checks if is it set, it could be anything not null

1. How can you check that a key in an array exists with PHP?

array\_key\_exists()

1. How do you loop through an associative array in PHP?

foreach ($arr as $key => $value) {

echo $key;

}

1. How do you create a constructor in PHP?

<?php  
class Fruit {  
  public $name;  
  public $color;  
  
  function \_\_construct($name) {  
    $this->name = $name;  
  }  
  function get\_name() {  
    return $this->name;  
  }  
}  
  
$apple = new Fruit("Apple");  
echo $apple->get\_name();  
?>

1. What is the purpose of “$$variable”?

Reference $$variable that store the value of $variable inside it.

1. What actions will you undertake when there is a PHP error which gives you the message “PHP Fatal error:Out of memory”?

require will produce a fatal error (E\_COMPILE\_ERROR) and stop the script

include will only produce a warning (E\_WARNING) and the script will continue

1. What is a trait and when do you use it?

PHP implements a way to reuse code called Traits.

Traits are a mechanism for code reuse in single inheritance languages such as PHP. A Trait is intended to reduce some limitations of single inheritance by enabling a developer to reuse sets of methods freely in several independent classes living in different class hierarchies. The semantics of the combination of Traits and classes is defined in a way which reduces complexity, and avoids the typical problems associated with multiple inheritance and Mixins.

A Trait is similar to a class, but only intended to group functionality in a fine-grained and consistent way. It is not possible to instantiate a Trait on its own. It is an addition to traditional inheritance and enables horizontal composition of behavior; that is, the application of class members without requiring inheritance.

1. Explain everything that you know about the MVC architecture and its benefits?
2. Explain and declare a singleton.

Singleton is a creational design pattern, which ensures that only one object of its kind exists and provides a single point of access to it for any other code.

<?php

class DBConn {

private static $obj;

private final function \_\_construct() {

echo \_\_CLASS\_\_ . " initializes only once\n";

}

public static function getConn() {

if(!isset(self::$obj)) {

self::$obj = new DBConn();

}

return self::$obj;

}

}

$obj1 = DBConn::getConn();

$obj2 = DBConn::getConn();

var\_dump($obj1 == $obj2);

?>

1. What is an interface and how do you use it?

Interfaces allow you to specify what methods a class should implement.

Interfaces make it easy to use a variety of different classes in the same way. When one or more classes use the same interface, it is referred to as "polymorphism".

PHP has abstract classes and methods. Classes defined as abstract cannot be instantiated, and any class that contains at least one abstract method must also be abstract. Methods defined as abstract simply declare the method's signature; they cannot define the implementation.

Interfaces cannot have properties, while abstract classes can;

All interface methods must be public, while abstract class methods is public or protected;

All methods in an interface are abstract, so they cannot be implemented in code and the abstract keyword is not necessary;

Classes can implement an interface while inheriting from another class at the same time;

1. What is composer?

Composer is a tool for dependency management in PHP. It allows you to declare the libraries your project depends on and it will manage (install/update) them for you.

1. What does it mean when a class inherits from another class and why it is used?

Inheritance in OOP = When a class derives from another class.

The child class will inherit all the public and protected properties and methods from the parent class. In addition, it can have its own properties and methods.

1. How do you throw and catch exceptions in php?

<?php  
function divide($dividend, $divisor) {  
  if($divisor == 0) {  
    throw new Exception("Division by zero");  
  }  
  return $dividend / $divisor;  
}  
  
echo divide(5, 0);  
?>

1. How do you replace a substring with another substring from string in PHP?

substr\_replace()

SQL

1. Write down the types of joins in SQL and explain them.
2. What is a pivot table in SQL?
3. Write an SQL query with the following conditions:

-Table `users` which contains the columns name, email, order\_id

-Table `orders` which has `user\_id`, `name` & `price` columns

-Select the orders with price > 100 for the fifth user

1. How can you import “excel” file into SQL table?

5. Which query is faster executed. Write them from fastest to slowest:

-SELECT \* FROM `users` WHERE `email` LIKE `%.com%`;

-SELECT \* FROM `users` WHERE `email` = `mail@mail.com`;

-SELECT \* FROM `users` WHERE `id` = 5;

JS, JQuery & Ajax

1. You have a <ul> and a <button> below it with “id=my\_button”. There is an SQL table `users` in which is stored `name`. When the button is clicked in the <ul>element, <li> elements are added, which contain the `name` property from the database.

-You must use ajax to make a call to the server and then use JavaScript (JQuery) to manipulate the <ul> element without page refresh.

1. Make a client-side validation of an html <form> using JS or JQuery. The form contains input name, email, password, repeat password and a button.

HTML & CSS

1.What are the newly introduced tags in HTML5?

2.Which of the following “background-color” property is with a priority?

3.Which html attribute do you use to access data in the back-end after a form has been submitted?