

📖 PHP Interview Questions and Answers (1–50)

1. What is PHP?

Answer: PHP (Hypertext Preprocessor) is a server-side scripting language used for web development.

2. Is PHP a case-sensitive language?

Answer: Variable names are case-sensitive; function names are not.

3. What are the differences between `echo` and `print`?

Answer: Both output text. `echo` can take multiple parameters and is slightly faster; `print` returns a value (1), so it can be used in expressions.

4. How do you declare a variable in PHP?

Answer: `$variable_name = value;`

5. How do you write comments in PHP?

Answer: `//` single-line, `/*` multi-line `*/`, or `#` shell-style.

6. What is a PHP array?

Answer: A collection of data. Types: indexed, associative, and multidimensional arrays.

7. How do you create an associative array?

Answer: `$arr = array("key1" => "value1", "key2" => "value2");`

8. What is the difference between `==` and `===`?

Answer: `==` checks value; `===` checks value and type.

9. What are superglobals in PHP?

Answer: Predefined variables like `$_POST`, `$_GET`, `$_SERVER`, `$_FILES`, etc.

10. What is the use of `isset()` and `empty()`?

Answer: `isset()` checks if a variable is set and not null; `empty()` checks if a variable is empty.

11. What are sessions in PHP?

Answer: Mechanism to store user information across multiple pages.

12. What is the difference between `session` and `cookie`?

Answer: Sessions store data on the server; cookies on the client's browser.

13. How do you start a session in PHP?

Answer: `session_start();`

14. How do you connect PHP to MySQL?

Answer: Using `mysqli_connect()` or PDO.

15. What is the difference between `mysqli` and `PDO`?

Answer: `mysqli` is specific to MySQL; PDO supports multiple DBs and has a better OOP approach.

16. What is a constructor in PHP?

Answer: A special function called automatically when an object is created: `__construct()`.

17. What is the use of `require` and `include`?

Answer: Both insert content from one file to another. `require` causes a fatal error if the file is missing, `include` gives a warning.

18. What is `require_once` and `include_once`?

Answer: Ensures the file is included only once to prevent redeclaration errors.

19. What is the difference between `GET` and `POST`?

Answer: `GET` appends data to URL; `POST` sends data in the request body (more secure).

20. What is a class in PHP?

Answer: A blueprint for objects, containing properties and methods.

21. What are magic methods in PHP?

Answer: Special methods with double underscores like `__construct()`, `__destruct()`, `__get()`, `__set()`.

22. What is inheritance in PHP?

Answer: A class can inherit methods/properties from another using `extends`.

23. What is an interface?

Answer: Defines a contract for classes; all methods must be implemented.

24. What is the difference between `abstract class` and `interface`?

Answer: Abstract classes can have defined methods; interfaces cannot.

25. What is the use of `final` keyword?

Answer: Prevents class inheritance or method overriding.

26. What is error handling in PHP?

Answer: Use `try-catch`, `error_reporting()`, `set_error_handler()`, etc.

27. What are the different error types in PHP?

Answer: Notices, Warnings, Fatal errors, Parse errors.

28. What is the use of `die()` and `exit()`?

Answer: Terminates the script immediately.

29. What is a callback function?

Answer: A function passed as an argument to another function.

30. What is the purpose of `json_encode()` and `json_decode()`?

Answer: Converts PHP arrays/objects to JSON and vice versa.

31. How do you handle file uploads in PHP?

Answer: Use `$_FILES`, and functions like `move_uploaded_file()`.

32. What is the use of `header()` function?

Answer: Sends raw HTTP headers (e.g., redirects).

33. What is the scope of variables in PHP?

Answer: Local, Global, Static, and Function parameters.

34. What are traits in PHP?

Answer: Reusable code that can be inserted into multiple classes.

35. What is a namespace?

Answer: A way to encapsulate classes/functions to avoid name conflicts.

36. How do you define constants in PHP?

Answer: `define("CONSTANT_NAME", "value");`

37. What is the difference between `explode()` and `implode()`?

Answer: `explode()` splits a string into an array; `implode()` joins array elements into a string.

38. What is a ternary operator in PHP?

Answer: Short form of `if...else`: `condition ? value_if_true : value_if_false;`

39. What is type hinting in PHP?

Answer: Enforcing data types for function arguments and return types.

40. What is constructor overloading in PHP?

Answer: PHP does not support multiple constructors. You simulate overloading with default arguments.

41. What are static methods and properties?

Answer: Belong to the class rather than an instance. Access with `ClassName::method()`.

42. What is output buffering in PHP?

Answer: Temporarily stores output to be sent later using `ob_start()`, `ob_get_clean()`.

43. What are anonymous functions?

Answer: Functions without a name, often used as callbacks:

```
$greet = function($name) { echo "Hi $name"; };
```

44. How can you prevent SQL injection in PHP?

Answer: Use prepared statements with PDO or MySQLi.

45. What are the main features of PHP 8?

Answer: JIT compiler, union types, nullsafe operator, match expression.

46. What is the difference between `array_merge()` and `+` operator?

Answer: `array_merge()` overwrites duplicate keys; `+` does not.

47. What is the difference between `unset()` and `null` assignment?

Answer: `unset()` deletes the variable; assigning `null` only clears its value.

48. How do you define default parameters in functions?

Answer:

```
function greet($name = "Guest") { echo "Hi $name"; }
```

49. What is the difference between `foreach` and `for`?

Answer: `foreach` is used for arrays; `for` works with any counter-based loop.

50. What are design patterns in PHP?

Answer: Standardized solutions like Singleton, Factory, MVC, etc., used to solve common problems.