

Summer Internship: GROUP A

Take Again

Candidate's Information

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OOP

What is object-oriented programming? *

a) A programming paradigm that focuses on objects and their interactions.

b) A programming paradigm that focuses on functions and procedures. ✖

c) A programming language developed by PHP Group.

d) A programming language that supports only procedural programming.

Which keyword is used to instantiate an object of a class?

a) Object

b) New ✔

c) Instance

d) Create

What is the visibility modifier "protected"?

a) The property or method can only be accessed within the same class.

b) The property or method can be accessed within the same class and its subclasses. ✔

c) The property or method can be accessed from anywhere.

d) The property or method cannot be accessed outside the class.

What is the difference between an abstract class and an interface?

An abstract class can have constructors, while an interface cannot.

An abstract class can have multiple inheritance, while an interface cannot. ❌

An abstract class can have method implementations, while an interface cannot.

An abstract class can be instantiated, while an interface cannot.

What is method overloading?

Defining multiple methods with the same name but different parameters in a class. ✔️

Calling a method from within another method of the same class.

Changing the behavior of a method in a subclass.

Declaring a method as private or protected.

What is a static variable?

A variable that can be accessed only within the same class.

A variable that can be accessed without creating an object of the class. ✔️

A variable that is automatically initialized by the compiler.

A variable that cannot be modified after initialization.

What is encapsulation?

Combining multiple classes into a single file.

Hiding the internal details of an object and providing access through methods.

Storing data in a class and accessing it through properties.

Grouping related properties and methods into a class.



What is the purpose of the "abstract" keyword?

To prevent a class from being instantiated.

To prevent a method from being overridden.

To define a blueprint for a class that cannot be instantiated directly.



To define a constant that cannot be modified.

Which design pattern is used to ensure that a class has only one instance and provides a global point of access to it?

Singleton

Factory

Observer

Prototype



General Programming

What is the purpose of the "if" statement in programming?

a) To execute a block of code only if a certain condition is true ✓

b) To define a variable

c) To declare a function

d) To assign a value to a variable

What is the purpose of the "while" loop in programming?

a) To make decisions based on conditions

b) To repeat a block of code a fixed number of times

c) To define a function

d) To repeat a block of code as long as a condition is true ✓

What is the purpose of the "switch" statement in programming?

a) To make decisions based on conditions

b) To repeat a block of code a fixed number of times

c) To define a function

d) To perform different actions based on different values of a variable



What is the purpose of the "else" statement in an if-else construct?

It is executed when the condition in the if statement is true.

It is executed when the condition in the if statement is false.



It is always executed, regardless of the condition.

It is executed before the if statement.

HTML/CSS/JS

What does CSS stand for?

Cascading Style Sheet



Central Style System

Creative Style Selector

Computerized Style Solution

Which of the following is not a valid way to define a function in JavaScript?

`function add(a, b) { return a + b; }`

`const add = (a, b) ⇒ a + b;`

`const add = function(a, b) {
return a + b; }`

`const add(a, b) { return a + b; }`



What is the purpose of the "this" keyword in JavaScript?

It refers to the current object. ✓

It is used to define a new object.

It refers to the global object.

It is used to create a class.

What does the acronym HTML stand for?

Hyperlink Markup Language

Hypertext Markup Language ✓

Home Text Markup Language

Hypermedia Text Markup Language

Which HTML tag is used to define the document type?

<DOCTYPE>



<DOCTYPE HTML>

<HTML>

<HEAD>

Which HTML tag is used to insert an image into a web page?



<IMAGE>

<PICTURE>

<SRC>

Which attribute is used to specify the destination URL of a hyperlink?

url

src

href



link

Which HTML tag is used to create a hyperlink?

<LINK>

<URL>

<A>



<HYPERLINK>

Which HTML tag is used to create a line break?

<break />

<linebreak />

 ✓

<newline />

Which HTML tag is used to create a numbered list?

 ✓

<LIST>

<NUMBEREDLIST>

Which HTML tag is used to define a table row? *

<TR> ✓

<TABLE>

<TD>

<TH>

Which HTML tag is used to create a checkbox?

<CHECKBOX>

<INPUT type="checkbox">



<SELECT>

<OPTION>

Which HTML tag is used to create a radio button?

<RADIO>

<INPUT type="radio">



<SELECT>

<OPTION>

Which HTML tag is used to create a submit button?

<BUTTON>

<SUBMIT>

<INPUT type="submit">



<FORM>

Which HTML tag is used to create a heading?

<H>

<HEADING>

<HEAD>

<H1>, <H2>, ..., <H6>



Databases

Which of the following is an example of a NoSQL database?

MySQL

PostgreSQL

MongoDB ☒

Oracle

General Computer Science

What does the acronym API stand for?

Application Programming Interface ☒

Application Protocol Interface

Advanced Program Interface

Advanced Protocol Interface

Which of the following is not a valid type of HTTP request method?

GET

POST

DELETE

PUTT 

Data Structure

Which data structure is best suited for implementing a dictionary?

Stack

Queue

Hash Table

Binary Search Tree 

Which data structure is used for efficient search, insert, and delete operations with a sorted collection of elements?

Array



Linked List

Stack

Binary Search Tree

Algorithm

What is an algorithm?

A programming language

A step-by-step procedure for
solving a problem

A hardware component

An operating system

What is the time complexity of searching for an element in a binary search tree (BST)?

 $O(1)$ $O(\log n)$ $O(n)$  $O(n \log n)$

Which data structure allows constant-time insertion and deletion operations?

Array

Linked List

Stack

Queue



Which data structure is used for implementing recursion?

Stack



Queue

Linked List

Array

Which data structure is used to implement Depth-First Search (DFS)?

Stack

Queue

Linked List

Tree



Which data structure uses two pointers, a "front" and a "rear" pointer?

Stack

Queue

Linked List



Tree

Which HTML tag is used to create a paragraph?

<P>



<PARAGRAPH>

<TEXT>

<LINE>

Which data structure is used to implement Breadth-First Search (BFS)?

Stack



Queue

Linked List

Tree

Which of the following is not a sorting algorithm?

Quick Sort

Bubble Sort

Insertion Sort

Merging Sort



Which CSS property is used to add a border to an element?

border

border-style

border-width

border-color

Which of the following is not a JavaScript framework

Angular

React

jQuery

Django

HTML/CSS/JS

Which HTML tag is used to define a table header cell?

<TH>

<TR>

<TABLE>

<TD>

Which attribute is used to specify the alignment of an image in the tag? *

align



position

center

float

Which HTML tag is used to create a form? *

<FORM>



<INPUT>

<FIELDSET>

<BUTTON>

Which attribute is used to specify the input type in the <INPUT> tag? *

type



input-type

input

input-type

Which HTML tag is used to create a drop-down list?

`<SELECT>`

`<INPUT type="dropdown">`



`<DROPDOWN>`

`<LIST>`

Which HTML tag is used to create a text input field?

`<TEXT>`

`<INPUT type="text">`



`<TEXTFIELD>`

`<FORM>`

Which attribute is used to specify the background color of an element?

`bbgcolor`

`background-color`



`color`

`style`

Which CSS property is used to change the font size of an element?

text-size

size

font-size ✓

font-style

Which CSS property is used to change the text color of an element?

text-color

color ✓

font-color

text-style

Which attribute is used to specify the placeholder text in an input field?

placeholder ✓

text

value

input-text

Which data structure follows the Last-In-First-Out (LIFO) principle?

Queue

Stack ✓

Linked List

tree

Which attribute is used to specify the width of a table cell? *

size

width ✓

style

colspan

General Programming

What is the purpose of recursion in programming?

To optimize the runtime of an algorithm

To avoid using loops ✗

To solve complex problems by breaking them into smaller subproblems

To allocate memory dynamically

Which of the following is an example of a logical operator?

+

&&



%

/

OOP

Which of the following is NOT a fundamental concept of Object-Oriented Programming?

Inheritance

Encapsulation

Polymorphism



Abstraction

What is the process of creating an object from a class called?


Inheritance

Polymorphism

Abstraction

Instantiation



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