

1) What Is Javascript Objects?

Answer :

JavaScript is an Object Oriented Programming (OOP) language. A programming language can be called object-oriented if it provides four basic capabilities to developers –

- Encapsulation – the capability to store related information, whether data or methods, together in an object.
- Aggregation – the capability to store one object inside another object.
- Inheritance – the capability of a class to rely upon another class (or number of classes) for some of its properties and methods.
- Polymorphism – the capability to write one function or method that works in a variety of different ways.

Objects are composed of attributes. If an attribute contains a function, it is considered to be a method of the object, otherwise the attribute is considered a property.

2) What Are Object Properties?

Answer :

Object properties can be any of the three primitive data types, or any of the abstract data types, such as another object. Object properties are usually variables that are used internally in the object's methods, but can also be globally visible variables that are used.

The syntax for adding a property to an object is:

```
objectName.objectProperty = propertyValue;
```

For example – The following code gets the document title using the "title" property of the document object.

```
var str = document.title;
```

3) What Is Object Methods?

Answer :

Methods are the functions that let the object do something or let something be done to it. There is a small difference between a function and a method – at a function is a standalone unit of statements and a method is attached to an object and can be referenced by the this keyword.

Methods are useful for everything from displaying the contents of the object to the screen to performing complex mathematical operations on a group of local properties and parameters.

For example – Following is a simple example to show how to use the write() method of document object to write any content on the document.

```
document.write("This is test");
```

4) What Is User-defined Objects?

Answer :

User-Defined Objects: All user-defined objects and built-in objects are descendants of an object called Object.

The new Operator: The new operator is used to create an instance of an object. To create an object, the new operator is followed by the constructor method. In the following example, the constructor methods are Object(), Array(), and Date(). These constructors are built-in JavaScript functions.

```
var employee = new Object();
var books = new Array("C++", "Perl", "Java");
var day = new Date("August 15, 1947");
```

The Object() Constructor: A constructor is a function that creates and initializes an object. JavaScript provides a special constructor function called Object() to build the object. The return value of the Object() constructor is assigned to a variable. The variable contains a reference to the new object. The properties assigned to the object are not variables and are not defined with the var keyword.

Example 1: Try the following example; it demonstrates how to create an Object.

```
<html>
  <head>
    <title>User-defined objects</title>

    <script type="text/javascript">
      var book = new Object(); // Create the object
      book.subject = "Perl"; // Assign properties to the object
      book.author = "Mohtashim";
    </script>

  </head>

  <body>

    <script type="text/javascript">
      document.write("Book name is : " + book.subject + "<br>");
      document.write("Book author is : " + book.author + "<br>");
    </script>

  </body>
</html>
```

5) Write a program to display values of object using for loop in

6) **What are the data types supported by JavaScript?**

The **data types** supported by JavaScript are:

- Undefined
- Null
- Boolean
- String
- Symbol

- Number
- Object

7) How can you create an object in JavaScript .give example?

8) Write a JavaScript program to delete the rollno property from the following object. Also print the object before or after deleting the property.

Sample object:

```
var student = {
  name : "David Rayy",
  sclass : "VI",
  rollno : 12 };
```

9) Write a JavaScript program to display the reading status (i.e. display book name, author name and reading status) of the following books.

```
var library = [
  {
    author: 'Bill Gates',
    title: 'The Road Ahead',
    readingStatus: true
  },
  {
    author: 'Steve Jobs',
    title: 'Walter Isaacson',
    readingStatus: true
  },
  {
    author: 'Suzanne Collins',
    title: 'Mockingjay: The Final Book of The Hunger Games',
    readingStatus: false
  }
];
```

10) Write a JavaScript program to get the volume of a Cylinder using object.

Volume of a cylinder : $V = \pi r^2 h$

where r is the radius and h is the height of the cylinder.

12) Write a JavaScript program to calculate the area and perimeter of a circle Using object.

13) Write a JavaScript program to retrieve all the values of an object's properties.

14) Write a JavaScript program to retrieve all the keys of an object's properties.

15) Create the object log with 3 function named info,error, warning with one parameter displaying that parameter in console