

Web Technologies – Assignment 1

Batch 9

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Questions

1. Write a Javascript Program to Calculate Sum & Average of an Array using functions. Use dialog boxes to get the input.
2. Create an XML document consisting of details of employees in an `organization. Validate the document using XML Schema

Solution

Question 1

Code

```
<html>
<head>
<title>Javascript</title>
</head>
<body style="padding-left:6px">
<h1>JavaScript</h1>

<p style="font-weight:bold">Array Size</p>
<p id=array_size></p>

<p style="font-weight:bold">Array</p>
<p id=array></p>

<p style="font-weight:bold">Sum of Array</p>
<p id=sum_array></p>

<p style="font-weight:bold">Average of Array</p>
<p id=avg_array></p>
```

```
<script>

var inputarr = [];

var size;

var sum=0;

var avg=0;


size = prompt('Enter array size ');

document.getElementById("array_size").innerHTML = size;


for(var a=0; a<size; a++)
{
    inputarr[a] = prompt('Enter array Element ' + (a+1));
}

document.getElementById("array").innerHTML = inputarr;


for(var a=0; a<size; a++)
{
    sum = sum + parseInt(inputarr[a]);
}

document.getElementById("sum_array").innerHTML = sum;


for(var a=0; a<size; a++)
{
    avg = sum/size;
}

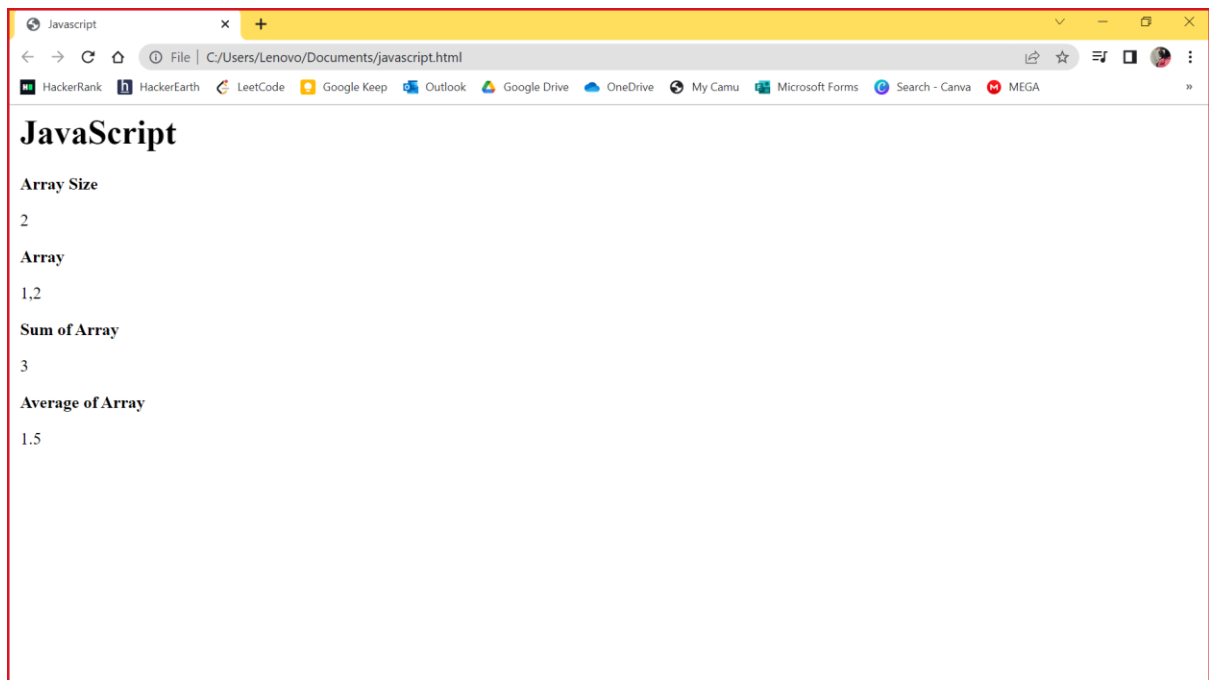
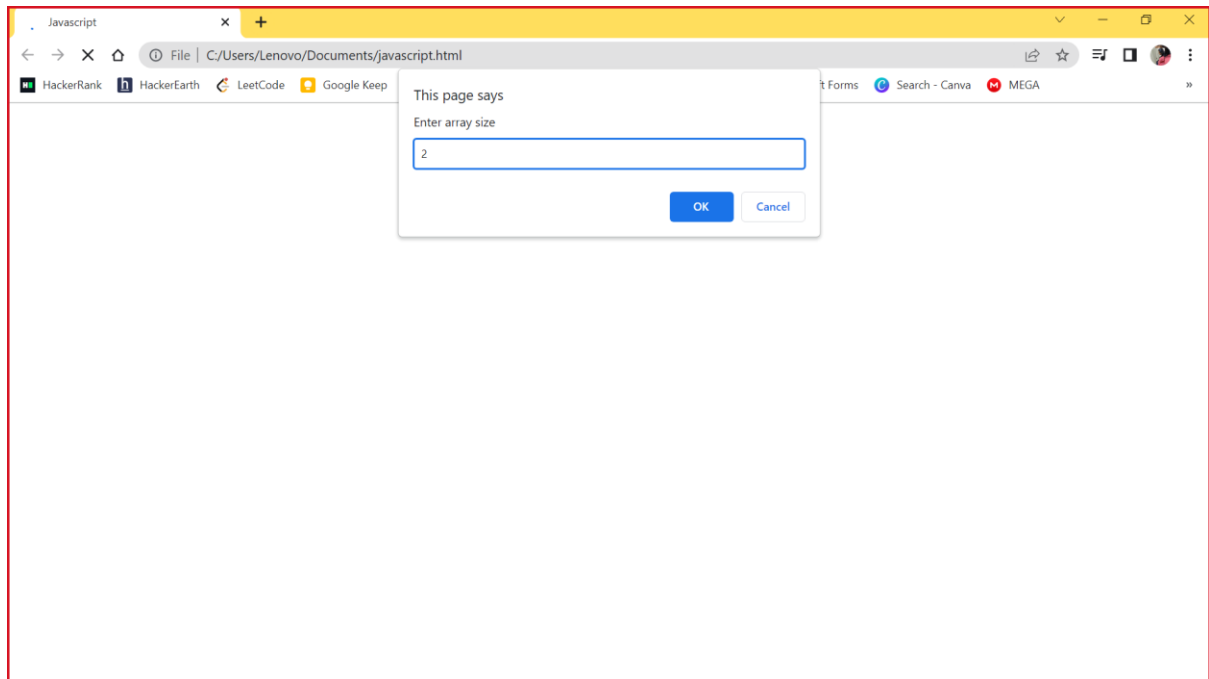
document.getElementById("avg_array").innerHTML = avg;


</script>

</body>

</html>
```

Screenshot



Question 2

Code

employee.xml

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<class>
```

```

<employee>
  <id>001</id>
  <name>Sruthi</name>
  <department>Testing</department>
  <salary>10000</salary>
</employee>
<employee>
  <id>002</id>
  <name>Dhivya</name>
  <department>Testing</department>
  <salary>10000</salary>
</employee>
<employee>
  <id>003</id>
  <name>Ranjith</name>
  <department>Development</department>
  <salary>15000</salary>
</employee>
</class>

```

employee.xsd

```

<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="class">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="employee" maxOccurs="unbounded" minOccurs="0">
          <xs:complexType>
            <xs:sequence>
              <xs:element type="xs:byte" name="id"/>
              <xs:element type="xs:string" name="name"/>

```

```

<xs:element type="xs:string" name="department"/>

<xs:element type="xs:short" name="salary"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

```

XML – XSD Validator

The screenshot shows the 'Free Online XML Validator XSD' website. A green notification bar at the top states 'The XML document is valid.' The left sidebar contains various tools categorized under 'JSON Validator', 'HTML Validator', 'XPath Tester', 'Encoders & Decoders', 'Code Minifiers / Beautifier', 'Converters', and 'Cryptography & Security'. The main content area is divided into 'XML Input' and 'XSD Input' sections. The 'XML Input' section shows an XML document with an employee record. The 'XSD Input' section shows an XSD schema for the employee record. Both sections have options to copy-paste or upload files, and a dropdown menu to select the encoding (UTF-8).

XML Input

Option 1: Copy-paste your XML document here

```
<?xml version="1.0" encoding="UTF-8"?>
<class>
  <employee>
    <id>001</id>
    <name>Sruthi</name>
    <department>Testing</department>
  </employee>
</class>
```

Option 2: Or upload your XML document

Choose File No file chosen UTF-8

XSD Input (Optional if XSD referred in XML using schemaLocation)

Option 1: Copy-paste your XSD document here

```
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="class">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="employee" maxOccurs="unbounded" minOccurs="0">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="id" type="xs:string" />
              <xs:element name="name" type="xs:string" />
              <xs:element name="department" type="xs:string" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

Option 2: Or upload your XSD document

Choose File No file chosen UTF-8