Client Side Scripting

CO2	• Implement Arrays and functions in Java script
LO2	• Perform the specified string manipulation operation on the given String(s)

TEACHING AND EXAMINATION SCHEME

Teaching Scheme			Credit (L+T+P)	Examination Scheme											
				Theory						Practical					
				Paper	ESE		PA		Total		ESE		PA		Total	
L	T	P		Hrs.	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
3	-	2	5	3	70	28	30*	00	100	40	25#	10	25	10	50	20

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9. Changing the case of string
10.

DEFINING AND DECLARING A STRING

- In JavaScript , strings are used for storing and manipulating text.
- String is zero or more characters written inside quotes.

```
Var c = “india”;
```

- JavaScript strings are primitive values , created from literals.

```
Var fName  = “bom”;
```

- But strings can also be defined as objects with new keyword.

```
Var fName  = new String(“bom”);
```

STRING DECLARATION- EXAMPLE

Program : Write a Javascript code to declare a string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
var c = "India";
document. Write("string value="+c);
Var s = new String("india");
document. Write("<br>String as object="+s);
</script>
</head>
<body>
</body>
</html>
```

JOINING A STRING

- String concatenation means joining two strings to create a new string by placing the copy of second string behind a copy of first string.

- **Methods :** There are two methods
  i) Using concatenation (+) operator
  ii)Using concat()

i) Using concatenation (+) operator:

Syntax :

```
string 1 + string 2;
```

In this method, concatenation (+) operator is used to join two strings.

```
Var name = fName + Sname;
```

JOINING A STRING- USING CONCATENATION (+) OPERATOR

Program : Write a Javascript code to demonstrate string concatenation.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var year="TY";
Var branch="CM";
document. Write("String value="+ (year + branch));
document. Write("<br>local value="+1);
</script>
</head>
<body>
</body>
</html>
```

Output: String value = TYCM

JOINING A STRING - USING CONCAT( ) METHOD

ii) Using concat() method : This method combines one or more strings into the existing one and returns the combined string . Original string is not modified**.**

Syntax :

```
Concat(v1,v2,..)
Var message = “India”;
Var final = message.concat(“is my country”);
```

Program : Write a Javascript code to implement string concatenation using concat ( ) of string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language=“Javascript” type=“text/javascript”>
Var message=“India”;
Var result = message+ “is my country”;
document. Write(“string value=“+result);
</script>
</head>
<body>
</body>
</html>
```

RETRIEVING A CHARACTER FROM GIVEN POSITION

- **CharAt( ) :** Returns the character at the “x” position within the string.

Syntax :

```
String.charAt(x)
```

Program : Write a Javascript code to retrieve character at specified position from string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language=“Javascript” type=“text/javascript”>
Var myString=“Hello world”;
document. Write(“mystring.charAt(7));
</script>
</head>
<body>
</body>
</html>
```

RETRIEVING A POSITION OF CHARACTER IN A STRING

- **indexOf( ) :** This function searches and returns the index number of the character or substring within string.

Syntax :

```
indexOf (substr, [start]);
```

- **Substr** is a string/character that we want to search and start is an optional argument specifying the position within string to begin the search. Default value for start is 0.

Syntax :

```
String.indexOf (char/substring);
```

RETRIEVING A POSITION OF CHARACTER IN A STRING - EXAMPLE

Program : Write a Javascript code to retrieve the position of given character from string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var myString="Hello world";
document. Write("position="+mystring.indexOf("d"));
</script>
</head>
<body>
</body>
</html>
```

RETRIEVING A POSITION OF CHARACTER IN A STRING - EXAMPLE

Program : Write a Javascript code to implement indexOf( ) method of string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var myString="Hello world";
document. Write("position="+mystring.indexOf("o",5));
</script>
</head>
<body>
</body>
</html>
```

DIVING TEXT

- **Split( ) :** This function is used to split the given string into arrays of strings by separating it into substrings using a specified separator.

Syntax :

```
String.split(separator , limit);
```

- The separator specifies the points where the split has to take place.
- The separator specifies the points where the split has to take place .

  If the separator is not specified then entire string becomes one single array element.
- If the separator is an empty string(‘ ‘) then every character of the string is separated by commas.
- The limit specifies the upper limit on the number of splits to be found in the given string.

DIVING TEXT - EXAMPLE

Program : Write a Javascript code to implement split() method of string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var myString="welcome  to world of javascript";
document. Write("result= " + mystring.split(' ');
</script>
</head>
<body>
</body>
</html>
```

COPYING A SUB-STRING : SUBSTRING( )

- **substring( ) :** Returns the characters in a string between “from” and “to” indexes . ”To” is optional , and if it is omitted then it will search up to the end of the string.

Syntax :

```
String. Substring(from,[to]);
```

Program : Write a Javascript code to demonstrate the use of substring( ) method of string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language=“Javascript” type=“text/javascript”>
Var str1=“welcome to javascript”;
document. Write(“<br>result-=“ + str1.substring(5));
document. Write(“<br>result-=“ + str1.substring(5,10));
</script>
</head>
<body>
</body>
</html>
```

COPYING A SUB-STRING : SUBSTR ( )

- **substr( ) :** Returns the characters in a string beginning at “start” and through the specified number of characters , ”length” . “Length” is optional , and if omitted , up to the end of the string is assumed.

Syntax :

```
String. Substr(start,[length]);
```

Program : Write a Javascript code to implement substr( ) method of string.

```
<html>
<head>
<title>string demo</title>
</head>
<script language=“Javascript” type=“text/javascript”>
Var str1=“welcome to javascript”;
document. Write(“<br>result-=“ + str1.substr(2));
document. Write(“<br>result-=“ + str1.substr(2,5));
</script>
</head>
<body>
</body>
</html>
```

CONVERTING STRING TO NUMBERS AND NUMBERS TO STRING

1. **parseInt( ) :** The parseInt( ) parses a string and returns a whole number.

Program : Write a Javascript code to convert string to Integer Number.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var i = "25";
Var j = "15 years";
document. Write("<br>integer result 1 =" + parseInt(i));
document. Write("<br>integer result 2 =" + parseInt(j));
</script>
</head>
<body>
</body>
</html>
```

CONVERTING STRING TO NUMBERS AND NUMBERS TO STRING

2. parseFloat( ) : The parseFloat( ) parses a string and returns a number.

Program : Write a Javascript code to convert string to Float Number.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var i = "25.5";
Var j = "3.14f";
document. Write("<br>float result 1 =" + parseFloat(i));
document. Write("<br>float result 2 =" + parseFloat(j));
</script>
</head>
<body>
</body>
</html>
```

CONVERTING STRING TO NUMBERS AND NUMBERS TO STRING

3. Number( ) : This function converts the string to a number . If the string value is number then it will convert otherwise will return NaN as output.

Program : Write a Javascript code to string to number using Number( ).

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var i = "25.5";
Var j = "3.14f";
document. Write("<br>Number result 1 =" + Number(i));
document. Write("<br>Number result 2 =" + Number(j));
</script>
</head>
<body>
</body>
</html>
```

CONVERTING STRING TO NUMBERS AND NUMBERS TO STRING

4. tostring( ) : This function is used to convert number(Integer and decimal numbers) to string.

Program : Write a Javascript code to convert Number to string

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var i = "67";
document. Write("<br>String=" + i.toString());
</script>
</head>
<body>
</body>
</html>
```

CHANGING THE CASE OF STRING

1. **toUpperCase( ) :** This function will returns the string with all of it's characters converted to uppercase.

Syntax :

```
string.toUpperCase( );
```

Program : Write a Javascript code to display all characters from string in uppercase.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var str1="welcome to avascript";
document. Write("<br>result="+str1.toUpperCase());
</script>
</head>
<body>
</body>
</html>
```

CHANGING THE CASE OF STRING

2. toLowerCase( ) : This function will returns the string with all of it's characters converted to lowercase.

Syntax :

```
string.toLowerCase( );
```

Program : Write a Javascript code to display all characters of string in lowercase.

```
<html>
<head>
<title>string demo</title>
</head>
<script language="Javascript" type="text/javascript">
Var str1="welcome to avascript";
document. Write("<br>result="+str1.toLowerCase());
</script>
</head>
<body>
</body>
</html>
```

QUIZ TIME

Q1. How do you initialize an array in C?

a) int arr[3] = (1,2,3);
b) int arr(3) = {1,2,3};
c) int arr[3] = {1,2,3};
d) int arr(3) = (1,2,3);

- Ans. **C. int arr[3] = {1,2,3};**

Q2 . Types of Integers are

(a) short
(b) int
(c) long
(d) All the above

- Ans. **d. All the above**

QUIZ TIME

Q3. Choose a correct statement about C language arrays

a) An array address is the address of first element of array itself.

b) An array size must be declared if not initialized immediately.

c) Array size is the sum of sizes of all elements of the array.

d) All of the above

► Ans. **d. All of the above**

- **Q4. An array Index starts with.?**

a) -1

b) 0

c) 1

d) 2

► Ans. **b. -1**

Thank You